I INTRODUCTION

1. These submissions are made on behalf of the Department of Transport (DoT), which now incorporates the Roads Corporation (VicRoads) and Public Transport Victoria (PTV) (collectively, the Department) in response to the submissions made and evidence given thus far to the Inquiry and Advisory Committee (IAC).

2. The Department supports the North East Link Project (Project) and is supportive of the submissions made and evidence led by the Proponent for the Project (NELP) concerning traffic and transport, public transport, and relevant design matters.

3. The Project will provide a new motorway-standard connection between the M80 Ring Road and the Eastern Freeway, completing a missing link in Melbourne’s orbital motorway network. If implemented, Melbourne will have a complete orbital motorway for the first time. Extensive upgrades are also proposed for the Eastern Freeway, including the dedicated busway proposed for the Eastern Freeway from Hoddle Street to the Doncaster Park and Ride facility.

4. The proposal will significantly reduce the number of private and heavy vehicle trips which currently occur on local and arterial roads. This will have positive impacts for safety. Freeways are approximately 25 times safer to drive from a casualty crash perspective and 4 times safer from a fatality crash perspective when compared with arterial roads.\(^1\) Accordingly, the transference of travel from arterial roads to the proposed link will have a positive effect in reducing casualty and fatality crashes.

5. The reduction of traffic from local and arterial roads will also improve residents’ access to important local destinations such as schools, activity centres, recreational

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facilities and parks. The Project will also enable or support a range of complementary projects that are expected to result in social, economic and public transport benefits but which are outside the scope of this EES and the IAC’s terms of reference.

6. The Project should be understood as being one component of a broader transport planning approach to meet Victoria’s growing transport needs. To support growing movements in the North-East region, including the northern growth areas, road initiatives such as the Project and public transport initiatives such as the Mernda and Hurstbridge rail upgrades have been developed or are in the process of being delivered. The Project will achieve a number of benefits compared to the case without the project:

(a) first, it will contribute to a safer road network, reduce congestion and enhance connectivity between Melbourne’s north and east, including reducing travel times;

(b) second, the reduction of travel times will benefit both people and businesses, particularly those that rely upon the physical delivery of goods or who travel to employment and education hubs. These benefits will promote investment and industrial growth; and

(c) third, by reducing congestion and upgrading facilities, it will improve opportunities for walking and cycling, and utilisation of the public transport network more generally.

7. As to the first of these benefits, the new, more efficient, links that will be created by the Project will reduce the reliance on local and arterial roads, thereby reducing the number of private and heavy vehicles moving through many local and arterial roads. This will benefit residents and businesses by improving safety, including safety on local roads. Reducing non-local traffic from arterial and local roads will also improve residents’ access to important local destinations, including schools, recreational facilities and parks.

8. As to the second of the benefits, reduction in travel times will have positive impacts for businesses which rely on the physical delivery of goods and services. These
businesses will be able to take advantage of greater efficiency of supply chains and reductions in transport costs. The increased productivity that would likely result would tend to promote investment and industrial growth around Melbourne.

9. As to the third of the benefits, it is the Department’s view that reduced traffic volumes on many local and arterial roads and upgraded facilities will improve opportunities for walking and cycling and utilisation of the public transport network. Upgrades to the Eastern Freeway will allow for the addition of new, dedicated bus lanes, improving travel times on the Doncaster area bus services to the CBD. Pedestrians and cyclists would also experience enhanced connectivity and safety in the walking and cycling network paths along various parts of the corridor.

10. The achievement of these benefits is integral to Victoria meeting growing transport demands.

11. For these reasons, and those that follow, the Department invites the IAC to make recommendations that will facilitate the delivery of the Project.

II STRATEGIC TRANSPORT NETWORK

12. The business case for the Project identified the Project as forming part of a suite of multi-modal transport initiatives, including the Hurstbridge railway line upgrade, removal of level crossings, Mernda railway line extension, M80 Ring Road upgrade, widening of Chandler Highway and Plenty Road and Yan Yean Road upgrades. The collective implementation of these projects will improve the capacity and efficiency of the transport network in Melbourne’s north and east.

13. The preparation of the business case, and the Project, has been undertaken in the knowledge that Victorians use different transport modes for different types of trips. Victorians drive cars, use public transport, walk and/or cycle. We also depend on the movement of food and goods to and between agricultural areas, industrial areas, warehouses and ports to support our industries and meet our everyday needs, from daily deliveries to supermarkets to delivering our online shopping. Strategic planning in transport requires that proper and careful consideration be given to the way in which Victorians live and move.
14. The recent formation of the Department brings agencies together to form an integrated transport portfolio in order to plan, deliver and operate an integrated transport network for our growing State. The plan to achieve this is captured in a number of documents which describe the transport objectives that are intended to be achieved in order to realise Melbourne’s planned vision.

15. The key strategic documents include:

(a) Melbourne’s metropolitan planning strategy, Plan Melbourne 2017-2050, which outlines an integrated transport plan to support Melbourne’s planned development, including the Project;

(b) the Victorian Infrastructure Plan (2017), which provides a strategic perspective to the State’s infrastructure program (and a response to Infrastructure Victoria’s 30-Year Infrastructure Strategy), covering transport infrastructure, as well as setting out the principles guiding Victoria’s transport infrastructure program. The Project is included in this plan;

(c) Growing our Rail Network (2018-2025) and accompanying Rolling Stock Strategy and Level Crossing Removal Program. This program includes the recent improvements to the rail network in the North-East including the South Morang to Mernda Rail Extension, which included three new stations, several grade separations for road / rail crossings and accompanying bus network improvements. It also includes the recently completed Hurstbridge Stage 1 project, which includes a new rail tunnel between Rosanna and Heidelberg and removal of Lower Plenty and Grange Road Level Crossings, including a new elevated station at Rosanna. Hurstbridge Stage 2 is another project for which development is under way. This project will duplicate key sections of single track north of Greensborough to enable more services to Eltham and Hurstbridge, supporting traveller access to the CBD, inner Melbourne and other centres along these corridors;

(d) the Victorian Freight Plan, Delivering the Goods, Creating Victorian Jobs (2018), highlights the importance of the industry employing about 260,000 Victorians and contributing about $21 billion to Victoria’s
economy. The Project completes the link in the freeway network assisting in the safe and efficient movement of freight;

(e) the **Victorian Cycling Strategy 2018-2028**, which includes actions to review the Strategic Cycling Corridor network; and

(f) the **Towards Zero Road Safety Strategy 2016-2020**, which maps out how Victorian road safety partners will work towards reducing road trauma, through a range of measures addressing driver behaviour and importantly, through road design.

16. Among other things, these strategic documents identify initiatives and projects, including both road and other modes of transport, that are intended to develop the broader transport network. An analysis of these strategic documents reveals the Project as a key project for this State. It features in these plans and strategies as a major infrastructure project which is required to meet the city’s growing needs, including freight, and is to be developed to achieve safe road outcomes. In particular, the Victorian Infrastructure Plan states that North East Link is a State-shaping ‘catalyst’ project which will deliver positive, long-term benefits for Victorians.

**Departmental involvement in the reference design**

17. The Department’s functions require it to regularly monitor the transport network (incorporating road, freight, public transport and active transport) and to consider current and future network needs to inform the development of Projects. In this respect, the Department has had the following involvement in the preparation of the reference design:

(a) attending workshops to develop the reference design;

(b) providing guidance when sought on the application of State guidelines, standards and policies;

(c) membership of, and attendance at, regular coordination meetings to resolve issues;
(d) providing traffic speed, flow and occupancy data for the Eastern Freeway; and

(e) providing information to ensure that the Project’s Intelligent Transport Systems (ITS) are made compatible with the State system to ensure that the operation of the Project is consistent with broader network requirements.

The Department support the Project

18. As stated above, the Department is supportive of the Project.

19. It further supports the alternative reference designs as presented in the NELP Technical Notes:

   (a) Technical Note R32 – Watsonia alternative design including attachments A-B;

   (b) Technical Note R33 – Lower Plenty Road; and

   (c) Technical Note R34 – Potential Bulleen Road modification, subject to appropriate resolution of local access.

20. The IAC is asked to place weight on the Department’s support for the Project given that the Department has carefully considered:

   (a) the strategic merits of the Project;

   (b) the impact of the Project on the immediate and wider transport network; and

   (c) the achievement of Victoria’s integrated transport program and government policies,

in determining to support the Project.

21. These submissions are made to assist the IAC in assessing submissions on aspects of the Project which relate to or otherwise fall within the scope of the Department’s statutory obligations. The Department also relies on its prior written submission (Submission No.737).
Objects of the Department

22. In making these submissions, the Department is cognisant of its obligations imposed by section 32 of the Transport Integration Act 2010 (Vic) (Transport Integration Act). That section specifies that the objects of the Department include:

(a) to give effect to the vision statement which appears at section 6 of the Transport Integration Act. The vision statement ‘recognises the aspirations of Victorians for an integrated and sustainable transport system that contributes to an inclusive, prosperous and environmentally responsible State’;

(b) to give effect to the transport system objectives which are identified at sections 8 – 13 of the Transport Integration Act; and

(c) to give effect to the decision-making principles which are identified at sections 15 – 21 of the Transport Integration Act.

III THE PROJECT

23. The Project will result in a range of works that will improve network performance; facilitate integrated transport; provide more efficient and reliable travel; and improve the safety of the network transport system.

24. In 2016 the urban motorway network (including freeways and tollways but excluding arterial roads) carried 40% of all ‘arterial’ vehicle travel (where 100% represents all vehicle kilometres travelled on freeways, tollways and arterial roads). However, the motorway network represents only 7% of the overall lane length (physical space regularly utilised by traffic) of this broader ‘arterial’ road system.²

25. The Project represents a critical addition within the urban motorway network. Ensuring that the motorway can operate reliably and safely is important. The well-established approach to managing Melbourne’s urban motorway network has been applied to the Project. This is consistent with the VicRoads’ Managed Freeway Guidelines (August 2014) which identifies the control tools and warrants for their

application across urban motorways. This involves implementing the Managed Motorways systems and supporting infrastructure to operate the network so as to optimise throughput, travel times, reliability and safety. The desirability of these management systems are brought into focus in the context of a project which completes Melbourne’s orbital motorway network. There is also a need to manage unexpected incidents. This involves a combination of building new infrastructure and improving existing transport infrastructure to facilitate better systems.

26. To operate the network to meet user demands for reasonable and consistent travel times, reliability and safety, certain infrastructure and systems are required or are otherwise desirable. These are discussed in paragraphs 27 to 36 below.

**Managed Motorway Systems – General Approach**

27. There have been significant developments in motorway management technology and geometric design practices over recent years which improve the operation, safety and utility of our motorways.

28. At the core of managing our motorways is the Managed Motorway System which includes the Lane Use Management System (LUMS) and Co-ordinated Ramp Signalling (CRS).

29. The LUMS will be incorporated across the Project to control traffic access to lanes and manage traffic speeds, in response to incidents and to manage events. The LUMS is an intervention control tool that is used by operators (in real time) to manage the network and traffic conditions due to an incident, managed events or adverse weather. The use of the LUMS allows the road operator to achieve optimal use of the available lane capacity on the freeway having regard to relevant conditions and the ability to close or open lanes and manage speeds as conditions change. Application of the LUMS also provides a safe working environment for first responders and road workers and can support access to incidents by emergency vehicles.

30. CRS will incorporate ramp meters at each motorway entry point to manage incoming traffic and control flow breakdown by regulating the rate and spacing of traffic entering the freeway. Ramp queues are managed across coordinated entry
ramp meters along a motorway corridor, all dynamically working together in real time, to manage incoming traffic and congestion during peak travel periods. CRS delivered for the Project will be integrated into the managed motorway control system used across Melbourne’s urban motorway network.

31. The introduction of a coordinated managed motorway system using LUMS and CRS has proven safety benefits. A ‘before and after’ study on a 25 kilometre section of the Monash Freeway with CRS showed a decline in the crash rate over 5 years while crash rates on other freeways (which remained uncontrolled, or less controlled than the Monash Freeway) remained stable or rose over the same period. As Gaffney suggests, ‘[t]he evidence is emerging that a well “Managed Motorway” is also a safe motorway.’ Gaffney supports this proposition by examining crash rate statistics for the first two managed freeways in Victoria, the Monash Freeway and Princes Freeway West, observing that these two motorways have a much lower crash rate (in the order of 25-30% lower) when compared with other freeways.

32. The use of CRS and other related motorway management systems ensures greater safety for commuters for the following reasons:

(a) it manages traffic entering the motorway by significantly reducing traffic flow breakdown conditions which, in turn, reduces the exposure of traffic to stop-start conditions, optimising network productivity;

(b) it assists merging by reducing unnecessary lane changing, particularly in the vicinity of an entry ramp, (e.g. lane changing caused by drivers trying to avoid delays in the left lane when there is no metering) and reducing turbulence, particularly in areas of high weaving;

(c) it provides the intelligence and capacity to prevent or resolve long queues on exit ramps from extending back to lanes on the freeway mainline (those

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5 Ibid.
queues presenting a safety issue due to the potentially high differential speeds between vehicles in free-flowing lanes);

(d) exit ramp detection and associated systems provide the ability to dynamically adjust the operation of traffic signals (where present) at road intersections to clear or reduce exit ramp queues; and

(e) it permits the management of lanes in order to quickly respond to incidents and manage events (when compared to motorways without lane use controls).

33. Moreover, the use of a coordinated managed motorway system with CRS will reduce overall trip delays for users of high-volume freeways, provide more reliable traffic flows, enhance equitable access to traffic accessing the motorway network and result in improved overall road network outcomes (productivity and reliability).

34. The operation of a motorway management system needs to be supported by infrastructure designed to support it. The infrastructure required includes the features described below.

Braided ramps

35. The Project will utilise braided ramps\(^6\) at select entry points to the Project as well as on the Eastern Freeway. The use of braided ramps is important in optimising network capacity and reliability where interchanges are closely spaced and ensuring the safe and efficient operation of the freeway. Braiding of ramps removes traffic conflicts at key locations that can cause flow breakdown and congestion under peak traffic demands.

Dedicated carriageways with separation

36. The reference design for the Project provides dedicated carriageways separated by physical barriers on the Eastern Freeway and Metropolitan Ring Road. These

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\(^6\) Braided ramps are a freeway design feature where ramps are configured to cross over each other, using grade separation to avoid weaving or crossing of traffic movements on a common carriageway.
dedicated carriageways have been provided to optimise network capacity and to improve safety. The dedicated carriageways improve safety by:

(a) increasing the individual lane capacity that is possible from a carriageway cross section;
(b) managing turbulence from lane changing; and
(c) separating large volumes of through traffic from traffic entering and exiting the motorway.

**Freeway standard connection from the Metropolitan Ring Road to the Eastern Freeway.**

37. The freeway standard connection from the Metropolitan Ring Road to the Eastern Freeway will improve the efficient movement of persons and goods during all times of the day. It will also provide predictable service and journey times and will minimise any inconvenience caused by disruptions to the transport system. The new freeway connection will also help to separate local traffic from traffic associated with longer journeys in the Greensborough and Heidelberg area.

**Eastern Freeway road widening**

38. Road widening along sections of the Eastern Freeway and the Metropolitan Ring Road will be completed so as to provide additional traffic capacity while maintaining existing means of access. The modifications that would occur by reason of the Project would include widening to allow for more traffic lanes, in a manner that provides for safe and efficient connection of two major motorways (NEL with the Eastern Freeway), lane realignment for improved traffic flow and, in the case of the Eastern Freeway, the addition of the Doncaster Busway.

**Bulleen Road to Doncaster Road**

39. The reference design proposes separated lanes between Bulleen Road and Doncaster Road. This is primarily due to the multiple strategic movements that access the corridor between Bulleen Road and Doncaster Road. If these movements were incorporated into a single carriageway consisting of numerous
lanes, it would create a complex weave section, which would be compounded by tight geometry. This would require multiple and overlapping weaving movements to be undertaken on a curve with an undesirable and constrained radius. If an attempt were made to provide a radius that is less of a constraint in the network during periods of high demand, an increase in the curve radius from approximately 500m to 750m would be required. This increase is not possible given the urban and environmental constraints of the Project. The Department is satisfied that that the reference design will appropriately manage this section of the motorway, having regard to the application of managed motorway technologies and the separation of carriageways.

40. The work undertaken by the Department to understand turbulence, sustainable flows, safety and operation demonstrates that separation of traffic movements over a reasonable distance is necessary in order to limit the impact of turbulence when demands are at or near capacity.

41. The reference design solution in the EES reflects a solution that addresses a range of factors, including:

(a) ensuring efficient operations;

(b) ensuring an appropriate hierarchy of movements (long, short, local, strategic);

(c) respecting physical and operational constraints;

(d) improving capacity to actively manage operations for safety and efficiency (e.g. integration of coordinated ramp metering); and

(e) ensuring potential operational bottlenecks are not adjacent to high risk / high value assets, such as tunnels, to avoid or limit the potential for congestion in undesirable operational environments.

42. The Department’s work, which has been undertaken across multiple sites within the urban motorway network, establishes that providing efficient lane flows and reducing the likelihood of flow breakdowns requires that serious consideration be given to the use of separated carriageways where design flows are high.
Tram Road to Middleborough Road

43. The Tram Road and Middleborough Road interchanges are spaced at a distance that is considered close in an urban motorway context (approximately 1.3 kilometres between cross roads or about 500m from entry to exit). Currently, auxiliary lanes (an additional lane in both directions) are provided between these interchanges. These auxiliary lanes also extend east through to Surrey Road / Blackburn Road in both directions. The function of the existing auxiliary lanes is to cater for weaving and other lane changing movements associated with entering and exiting traffic at these three closely spaced interchanges.

44. The reference design for the Project proposes termination of the eastbound carriageway separation (i.e. Collector-Distributor arrangement) in this section of the motorway, which coincides with the necessary ramp connections from the arterial roads and results in a number of significant conflicting movements needing to be appropriately designed and managed between Tram and Middleborough Roads.

45. In addition to the separated carriageways ending in this section, it is also observed that the length of the existing entry ramps from Tram Road (eastbound) and Middleborough Road (westbound) are insufficient to cater for necessary ramp metering storage, even for current demand flows. Both require extension to facilitate required ramp metering design storage provisions. Extending the ramps with shortened weave sections in both directions on the mainline would result in arrangements well below standard requirements. It would significantly compromise operations. Because of the close proximity of Tram and Middleborough Roads, the Project proposes the use of braided ramps (see sheets 38 and 39 of the map book) to remove weaving from the main freeway carriageways. The Department supports the proposed use of braided ramps as it will facilitate efficient and safer main line flows. The braided treatments proposed address both the close spacing of the arterial roads and also their coincidence with the end of the separated carriageway in the eastbound direction.

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7 The collector / distributor terminates west of the Middleborough Road intersection (see sheets 38 and 39 of the map book).
Currently, the Eastern Freeway between Tram and Middleborough Roads is used heavily for short local trips. This is a result of the parallel east-west connections in the network (Doncaster Road and Whitehorse Road) being located a significant distance north and south of the freeway.

Precluding or reducing the use of the Eastern Freeway between Tram and Middleborough Roads for short local trips would likely result in more traffic diverting onto local roads. Accordingly, local connections are proposed by the Project adjacent to the Eastern Freeway in both directions. These connections are proposed to be separated from the main freeway movements but integrated with the braided ramp access arrangements (noting that auxiliary lanes on the mainline carriageway are not compatible with braided ramps). These connections are supported by the Department. They are designed to minimise east-west traffic using local roads as connections between Tram/Station Road and Middleborough / Wetherby Road.

**Buses**

The Project would result in the retention of on-road bus services and would enhance public transport services with the addition of the Doncaster Busway. Provision for a new dedicated bus lane in each direction along the Eastern Freeway would result in better travel times and reliability and enable more frequent bus services between Doncaster and the inner city. New “Park and Ride” facilities at Bulleen Road and Doncaster Road will also be provided to integrate transport modes and to cater for patronage along these bus routes.

The Department has undertaken strategic bus network planning to inform the reference design and to understand the nature of the issues and opportunities on the corridor. This planning work has enabled planners to inform the infrastructure necessary and to allow sufficient flexibility for future service improvement plans and broader network integration.
Shared Use and Cycling Paths

50. The Project will also improve the walking and cycling network, improving connectivity and safety for pedestrians and cyclists. Shared use paths\(^8\) will be constructed across the Project, allowing for improved pedestrian and cyclist connectivity to major activity areas and community facilities.

51. The Department has been working to update the network plan for Strategic Cycling Corridors (SCCs). SCCs represent the most important cycling routes for transport, such as commuter trips. They link important destinations including the CBD, National Employment and Innovation Clusters, Metropolitan Activity Centres and other destinations of metropolitan and regional significance. In the North-East, important destinations include the La Trobe NEIC, Heidelberg, Box Hill and Ringwood. SCCs are generally complemented by other bicycle networks, including connecting into the local municipal bicycle networks.

52. The review is close to completion and will result in an updated, publicly available Victorian SCC network map.

53. Infrastructure delivered as part of the Project supports development of the SCC network, including by:

(a) completing a new commuter cycling route along the Eastern Freeway between Chandler Highway and Merri Creek and upgrading crossings under Belford Road and Burke Road;

(b) ensuring new and upgraded paths along Bulleen Road;

(c) improving facilities at various locations along the North East Link corridor, such as at Greensborough Highway; and

(d) implementing various treatments along the SCC from Bulleen along the freeway to Springvale Road.

54. Following the release of the final updated SCC network, the next steps are to “prioritise strategic cycling corridors for investment” in accordance with initiative

\(^8\) A shared use path may be used by walkers and cyclists simultaneously.
1.3 in the Victorian Cycling Strategy and to work with local Councils to address
gaps in the SCC (which reflects initiative 1.6 in the Victorian Cycling Strategy).
This is a discrete exercise which will be undertaken separately from the Project.

IV ISSUES ARISING

Level of service target (LOS D)

55. A key objective in designing and operating a motorway is to minimise flow
breakdowns and congestion. The purpose of this objective is to maximise
productivity, which is achieved when both speed and flow are maintained at near
maximum values. Maximised productivity ensures that people experience good
travel times and good quality journeys. These objectives have informed the level of
functionality that is sought to be achieved in the reference design.

56. Analysis undertaken by the Department indicates that optimised productivity and
minimisation of flow breakdown for the Project aligns with traffic conditions
equivalent to Level of Service D. This target level of service has formed the basis
for the performance assessment of the Project, which is an approach that is
supported by the Department and requires the integration of Managed Motorway
control tools to manage entering demands.

Benefits of separated carriageways

of the Managed Motorway Design Guide) states that, as the number of lanes on a
carriageway increases, the capacity of each individual lane (i.e. the number of
vehicles per lane) reduces and the crash risk increases.9

58. Based on the findings outlined in the Motorway Design Volume Guide, sustainable
flows on a 6-lane single carriageway would be limited to 9,180 vehicles per hour
while providing two 3-lane carriageways would cater for sustainable flows of up to
10,500 vehicles per hour – a difference of 1,320 vehicles per hour. These nominal
figures assume there are no other exacerabating factors that would further reduce
maximum sustainable flows, such as compound weaving impacts.

9 Design Volume Guide at Section 2.3.2.
59. Separated carriageways in the same direction also provide network resilience, particularly for managing traffic during major incidents. Physical separation allows one carriageway to continue operating without physical restrictions to lane availability in the event that the other carriageway experiences an incident causing reduction in physical capacity.

60. As a general principle, all motorway projects should be focused on delivering optimum safety and productivity outcomes, which is also aligned with the Network objectives of the Transport Integration Act.

**Eastern Freeway**

61. The Department supports the functionality of the Eastern Freeway including the proposed separation of carriageways and points of access along the Eastern Freeway as conceptualised by NELP in the reference design for the Project.

**Modelling**

62. The Department is supportive of the transport modelling undertaken for the project. The traffic estimates they generate appear to the Department to be reasonable.

63. The Department prepares a Reference Case that is the starting point for use in all transport modelling. The transport networks examined as part of the Reference Case includes committed projects and assumptions around arterial road upgrades, rail service upgrades, motorway improvements, tram and bus upgrades and service levels in order to ensure sufficient supply to support future demand that might be achieved under an ongoing medium future investment profile.

64. In terms of the specific criticism concerning the sufficiency of the Reference Case with respect to public transport projects, the Department disagrees that the Reference Case is more developed for roads as compared to public transport, as has been suggested by some parties. The Reference Case includes a range of rail, tram and bus improvements.
**Arterial roads**

65. There are number of arterial roads which either directly intersect with the Project or which run parallel to the route of the Project. These roads attract moderate to high volumes of traffic and play an important role in linking to freeways or urban activity centres.

66. The Project will result in a reduction, or in some cases, a slight increase, in the traffic volumes on these arterial roads. It is expected that these general increases in traffic due to the Project will be capable of being managed. The Department will monitor the performance of these roads, and consider improvements to them, as warranted.

67. However, the Department agrees that the Diamond Creek and Civic Drive roundabout needs to be treated, and planning investigations are currently underway to determine the appropriate level of treatment.

**Management of heavy vehicles (including curfews)**

68. The Department is responsible for the application of truck curfews. Signs prohibiting access to a road by class of vehicle are a ‘major traffic control device’ over which the Department has exclusive control under the *Road Safety (Traffic Management) Regulations 2009* (Vic).

69. Truck curfews were introduced along key arterial routes in Melbourne’s North East including Rosanna Road, Lower Plenty Road and Greensborough Highway in August 2015. These curfews restrict access to certain trucks on affected roads in order to attempt to balance the needs of local residents and truck operators. The curfew applies to trucks in excess 16.5 tonnes, restricting access to the listed roads between 10.00 pm to 6.00 am daily. The use of curfews has resulted in a successful reduction of truck volumes at night for these roads.

70. The existing curfew only applies to trucks using the roads as a through movement. Trucks which have a local destination or originate from the area (such as local deliveries) are exempt from the curfews under *Road Rule 104(4)* which states as follows:
“However, a driver may drive a truck on a road past a no trucks sign if the destination of the truck lies beyond that sign for the purpose of loading or unloading goods or equipment and –

(a) there is no other route by which the truck could reach that destination; or

(b) any other route by which the truck could reach that destination would require the truck to pass another no trucks sign.”

71. Truck curfews are proposed to remain unchanged following completion of the Project. Greensborough Highway, Lower Plenty Road and Rosanna Road provide an important travel route for heavy vehicles including Over Dimensional (OD) and placarded vehicles as shown on VicRoads Declared Maps. While these roads will carry significantly less truck traffic, they will continue to have an important function in the overall freight network.

72. The geometry of Greensborough Highway and Rosanna Road is appropriate for OD and placarded trucks that cannot use the NELP tunnels as they provide an unimpeded route for both weight and height restrictions. These routes have grades which provide better efficiency and safety and provide the most direct arterial road connection.

73. The Project does not change the arterial road functionality of Rosanna Road or Greensborough Highway. The Project does not result in, or otherwise contemplate, a change in the existing truck curfews for Rosanna Road or Greensborough Highway. Without this designated route, freight vehicles would be diverted onto roads in other parts of the region, which are unable to cope with OD and placarded vehicle requirements (i.e. turning circles, mass and height restrictions) or potentially result in truck travel over longer distances.

Function of Rosanna Road

74. Rosanna Road functions as a key arterial road movement corridor. It is the continuation of Greensborough Highway, connecting local and Major Business Activity Centres across Nillumbik and Banyule Councils. An arterial road functions as a high-capacity urban road which delivers traffic from feeder roads to
freeways. Based on traffic modelling, while there are significant reductions in heavy vehicles as a result of the North East Link, the function of Rosanna Road as an important arterial road will remain unchanged. It will remain an arterial road to cater for movements locally and across the north east, including to the Austin and Mercy Hospitals, Heidelberg Activity Centre and La Trobe University.

**Function of Bulleen Road**

75. Bulleen Road functions as a key arterial road movement corridor. It facilitates movements across the North-East, including by providing connections to Boroondara. It will support movements to and from the Project from both Boroondara and Manningham through interchanges at Manningham Road and Bulleen Road. Bulleen Road will remain a heavy vehicle route inclusive of OD and placarded trucks.

76. Due to its arterial road function, the status of Bulleen Road as an arterial road will not change as a result of the Project.

**Heritage Values**

77. As part of the EES, the heritage advisor for NELP (Lovell Chen) identified the Eastern Freeway between Hoddle St and Bulleen Road as potentially having State heritage significance.

78. The Department has nominated the relevant section of the Eastern Freeway for heritage recognition, and this nomination has now been lodged.

79. The Department’s nomination relates to the whole of the Eastern Freeway from the Hoddle Street Bridge in Clifton Hill to the Bulleen Road freeway overpass in Balwyn North. In terms of the effect of the nomination on the Project, the Department believes that NELP’s Urban Design Strategy, the EPRs and the performance requirements for the development of the detailed design will ensure that the heritage value of this part of the Freeway will be appropriately respected (should the nomination give rise to registration).
V CONCLUSION

80. The Department will continue to have a presence in this hearing. A project of this scale warrants serious consideration and testing.

Dated: 8 August 2019

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