IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	Notices of requirement for designations under section 168 of the Act, in relation to Te Ahu a Turanga; Manawatū Tararua Highway Project
BY	**NEW ZEALAND TRANSPORT AGENCY** Requiring Authority

STATEMENT OF EVIDENCE OF DAVID JAMES DUNLOP (TRANSPORT) ON BEHALF OF THE NEW ZEALAND TRANSPORT AGENCY

8 March 2019

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INTRODUCTION

1. My name is **David James Dunlop**.

2. I am a Principal Transport Planner and Sector Leader – Transport Infrastructure at WSP Opus in Wellington.

3. I prepared Technical Assessment #1: Transport ("**Technical Assessment 1**") as part of Volume 3 of the Assessment of Environmental Effects ("**AEE**"), which accompanied the Notices of Requirement ("**NoRs**") lodged on 2 November 2018 in respect of Te Ahu a Turanga; Manawatū Tararua Highway Project ("**the Project**").

4. My qualifications and experience are set out in paragraphs 6 to 10 of Technical Assessment 1.

5. In preparing Technical Assessment 1 and my evidence I have:

   (a) Attended workshops and meetings as documented in paragraph 117 of Technical Assessment 1.

   (b) Visited the site on three different occasions, including a full specialist team site visit on 6 July 2018 and more recent visits in September and October 2018 during the preparation of the Transport Assessment.

   (c) Reviewed and responded to the Councils' request for further information under section 92 of the Resource Management Act ("**RMA**") relating to traffic and transport effects ("**Section 92 Request**").

   (d) Reviewed submissions relating to Technical Assessment 1 and associated transport matters.

   (e) Reviewed the questions from the Hearing Panel and the Section 42A materials relevant to my evidence.

   (f) Had ongoing interaction and communication with other specialists, including those involved in Project design, indicative construction methodology, social impact assessment, and noise assessment.

Code of Conduct

6. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. My evidence has been prepared in compliance with that Code, as if it were evidence being given in Environment Court proceedings. In particular, unless I state otherwise, this evidence is within my area of expertise and I have not omitted

to consider material facts known to me that might alter or detract from the opinions I express.

7. The assumptions and exclusions applied in my assessment are set out at paragraphs 13 and 14 of Technical Assessment 1.

Purpose and scope of evidence

8. Technical Assessment 1 assesses the transportation effects of the Project, including both temporary effects during construction of the Project, and permanent effects.

9. My evidence does not repeat the detail set out in that assessment, but rather in this evidence I:

   (a) present the key findings of Technical Assessment 1, updated to take into account information received more recently, in an executive summary;

   (b) comment on submissions received in respect of the NoRs;

   (c) answer questions by the Hearing Panel that are relevant to my evidence; and

   (d) comment on Council section 42A reports.

EXECUTIVE SUMMARY

10. Technical Assessment 1 assesses the transport impacts of the proposed designation corridor alignment for the Project as shown on the Project Drawings included with the NoRs.[1]

Project description and background

11. The Project is described in Part C, Volume 2 'Supporting Material' (included with the NoRs), as the construction of a new road, which will form part of State Highway 3 ("**SH3**"). The Project will run from the SH3 western entry to the closed Manawatū Gorge route, across the Ruahine Ranges ("**the Ranges**") north of the Manawatū Gorge and south of Saddle Road, re-joining SH3 near Woodville – a length of approximately 11.5km.

12. The Project replaces the section of SH3 through the Manawatū Gorge that was closed on 24 April 2017 following a large slip and ongoing stability issues in the Gorge. The Manawatū Gorge route was a critical North Island east / west link and the Project seeks to replace it, to deliver a safe, efficient

[1] See drawings D-00 and D-01 to D-10 in Volume 4.

and resilient transport solution that will enable economic development and regional productivity as underlying outcomes.

13. Technical Assessment 1 considers the existing environment of the two alternative routes running east-west over the Ranges: Saddle Road, and the Pahīatua Track (the "**existing routes**"). The closure of the Gorge has had a significant impact on the safety, efficiency and reliability of the existing routes for all modes of travel, attributed to a major consequential increase in the traffic demand. Without the Project, it is expected that the performance of the existing routes will continue to worsen in future years.

Key transport benefits of the Project

14. The Project will have a significant positive effect on the transport network. The Project will improve resilience, increase capacity within the wider network, and improve safety and efficiency for general traffic and freight, including public transport and emergency services. It will improve route reliability by providing a route built to a higher standard that is more resilient to incidents and events.

15. The Project will significantly reduce travel times between Palmerston North and Woodville, by more than 10 minutes for light vehicles ("**LV**"), emergency services, buses and freight. Travel between Aokautere (SH57 South) to SH2 north of Woodville will see an even larger travel time saving of more than 24 minutes, if compared to the current travel time via Pahīatua Track and Mangahao Road. Both reductions are approximately half the existing travel time and will have significant benefits to all road users and the wider economy.

16. The Project will redistribute traffic demand from the existing routes, which translates to an overall better environment for residents, pedestrians and cyclists on the local road network, particularly in Ashhurst, on Saddle Road and on the Pahīatua Track.

Ashhurst Bridge and the access to and from Ashhurst

17. The Project will result in a significant increase in traffic on the existing SH3 Ashhurst Bridge over the Manawatū River, essentially reverting back to a situation similar to before the closure of the Gorge route.

18. A survey undertaken in September 2018[2] has confirmed that there is currently little use of the SH3 Ashhurst Bridge by cyclists and almost no use

[2] Video survey of pedestrians and cyclists demand at SH3 Ashhurst Bridge undertaken by WSP Opus between 14 September to 20 September 2018, discussed in Walking and Cycling section of this report.

by pedestrians. The Project has the potential to increase adverse safety and amenity effects for any pedestrians or cyclists using this connection.

19. Recently (2018) the Transport Agency installed electronic cycle warning signs near the Ashhurst Bridge, which will help manage the effect for cyclists using this link. In addition, as set out in the evidence of **Sarah Downs** and **Ainsley McLeod**, the Transport Agency is intending to bring forward the already identified improvements to the Ashhurst Bridge to 2020, and has committed through the proposed conditions (proposed condition 26 – Network Integration) to the NoRs to complete those improvements before the Project route is opened (subject to obtaining the necessary resource consents). The current intention is that a new facility on or adjacent to the bridge will be constructed to better provide for walking and cycling.

20. In my view, prioritising improvements to the Ashhurst Bridge is an appropriate response to the potential effects of the Project on safety and accessibility for walkers and cyclists using the bridge to gain access to and from the Manawatū Gorge recreational area.

21. Irrespective of the Project, the predicted traffic growth gives rise to a need to upgrade access to and from Ashhurst, either at Cambridge Avenue and/or York Street, through the implementation of traffic signals or a roundabout. These upgrades will be undertaken as part of the Project.

Woodville

22. Additional assessment of the transport effects of the Project through Woodville (undertaken in response to the Section 92 Request) demonstrates that the transport system in Woodville would not perform particularly well with or without the Project in opening year (2025). This means there is a broader need for the Transport Agency to investigate the future of the State highway network through Woodville. I would expect that this task would consider traffic management, cycle and pedestrian provision, intersection improvement options, and may include road network improvements including bypass options.

23. Such an investigation would need to take into consideration community aspirations and economic conditions, and the ongoing efforts being made to re-divert traffic back into SH3 Woodville in the short term.

24. Social and economic factors are critical considerations in determining the future for transport within Woodville. Before any long-term decision is made

as to future changes, there would need to be careful consideration and engagement with the Woodville community and wider transport users.

Private property access

25. The Project designation bisects a number of private properties, which results in a requirement for several alternative accesses to the existing road network. These properties will see a significant reduction in traffic volumes on Saddle Road, which in turn will significantly improve access. The overall impact to private property is considered neutral, however there is a need for the Transport Agency to work with property owners and constructors to achieve safe access. I understand access agreements will be prepared for each affected property, as discussed in the evidence of **Lonnie Dalzell**.

Requests for a separate walking and cycling path

26. A large number of submitters have raised concerns about the lack of a dedicated pedestrian/cycle path along the proposed route (a number of submissions also indicate a desire for equestrian facilities). This includes the large number of submissions made through 'Build the Path' ("**BTP**").

27. In my view the Project will significantly improve conditions for cyclists / pedestrians and equestrian users by facilitating improved safety conditions on the Pahīatua Track and Saddle Road (in particular) through the reduction in traffic demand.

28. The provision of appropriately wide shoulders along the Project route is in accordance with draft Transport Agency guidance for on-road cycle facilities on rural State highways. These facilities are likely to primarily cater for more experienced and confident cyclists, who are the most likely users given the length and topography of the route.

29. As identified by **Ainsley McLeod**, conditions are proposed which require the provision of safe walking and cycling facilities at either end of the route:

    (a) a new facility across the Ashhurst bridge as discussed above;

    (b) a shared facility from there to the Manawatū Gorge Scenic Reserve carpark; and

    (c) the extension of the existing off-road path adjacent to SH3 on Vogel Street between Hampstead Street and Troup Road. This section could form part of a future "Lindauer Arts Trail".

30. Together, these measures effectively address any potential adverse impacts the Project may have on pedestrians / cyclists, and indeed will result in an improved overall situation for pedestrians / cyclists.

31. I am aware of and have been involved in on-going discussions with relevant parties around the future consideration of a dedicated pedestrian and cycling facility. While I support these discussions occurring about pedestrian / cyclist infrastructure in this general area, in my view those discussions should not result in delay to the delivery of the Project, which is a critical piece of transport infrastructure needed to address a significant ongoing issue with the transport network.

32. It is my view that the Project has good overall alignment with the relevant statutory documents, and if the pedestrian and cycling aspects proposed as part of the Project were assessed in isolation they would also be well aligned.

Construction effects

33. Technical Assessment 1 provides an appraisal of the transport impacts that are anticipated to arise from the construction of the Project. The assessment is largely qualitative and provides an appraisal upon which preliminary mitigation measures have been recommended.

34. Construction activities have the potential to exacerbate, temporarily, negative transport effects that have been experienced on Saddle Road and through Ashhurst and Woodville since the closure of the Gorge route. It is expected that construction traffic will result in an increase in overall volumes and in general (before mitigation) have moderate negative impacts, due to the potential impacts to safety and efficiency. Construction activities are also likely to impact on users of the Manawatū Gorge Scenic Reserve walkway, both in terms of access and parking.

35. In general, it is considered that the construction traffic effects outlined in Technical Assessment 1 can be mitigated by developing a Construction Traffic Management Plan ("**CTMP**") and implementing a Construction Management Plan and design solutions in line with good practice. Overall, following the implementation of the CTMP and working with stakeholders and the local community, construction traffic effects are considered to be a ‘minor negative’.

36. One relevant consideration, to be seen in the context of the critical nature of the Project (in my view), is that the faster the Project can be constructed, the faster the negative impacts of existing and construction traffic in Ashhurst

and on Saddle Road will be eliminated, and the faster the Project's transportation benefits can be realised. Therefore, it will be important for the CTMP and related conditions to provide some flexibility for the Transport Agency and constructors to work with stakeholders and the local community to make these trade-offs once the final design and construction methodology has been determined.

Overall

37. Overall the Project will have a 'significant positive' effect on the transport network and the users of the transport system. In transport terms, I consider the Project should be progressed as a matter of urgency, with appropriate mitigation to manage the effects of construction and operational traffic redistribution.

COMMENTS ON SUBMISSIONS

38. A number of submitters express overall support for the Project, with the transport benefits and accelerated timeframe being (either expressly or implicitly) key to that overall support.

39. In my evidence below, I address submission points relating to what submitters consider to be potential adverse effects of the Project (or more general transport issues).

40. Multiple submissions have been received on the following topics. These key topics have been addressed below:

    (a) Facilities for pedestrian and cyclists on the existing SH3 Ashhurst Bridge;

    (b) Facilities for pedestrians and cyclists along the route;

    (c) Facilities for pedestrians and cyclists from Ferry Reserve to Woodville; and

    (d) Additional traffic through Woodville.

Facilities for pedestrians and cyclists on the Ashhurst Bridge over the Manawatū River

41. A number of submitters have raised concerns about the increased traffic on the Ashhurst Bridge following completion of the Project and the associated impact on pedestrians and cyclists currently using the bridge.[3]

42. As set out in Technical Report 1,[4] the Project will result in a significant increase in traffic on the existing SH3 bridge over the Manawatū River east of Ashhurst.

43. Warning signage has been installed by the NZ Transport Agency (2018) to increase safety for cyclists. However, the increased traffic arising from the Project has the potential to affect the safety of cyclists (and any pedestrians) using the bridge. I note that the current usage of the bridge by cyclists is fairly limited (in part because there is no dedicated facility).

44. **Ms Downs** explains that the Ashhurst Bridge is currently identified in the National Land Transport Programme (NLTP) for improvement in 2021-24, and that improvement will specifically address the safety of pedestrians and cyclists on the Ashhurst Bridge.

45. The current indication is that a pedestrian and cyclist facility can be attached to, or run adjacent to, the side of the Ashhurst Bridge segregated from vehicular traffic, however, the form of this link is still subject to ongoing investigations.

46. **Ms Downs** adds that the NZ Transport Agency intends to bring forward this improvement to 2020. As **Ms McLeod** explains in her evidence, a condition is now being offered that will require the Transport Agency to upgrade the Ashhurst Bridge to provide improved cycling access (subject to obtaining any necessary resource consents) before the Project opens.

47. Improving the provision for cyclists and pedestrians using the Ashhurst Bridge will in my view appropriately address the potential safety effects arising from the Project (as well as addressing a current network issue) and improve access to the existing Manawatū Gorge Scenic Reserve recreation area.

[3] I note that Tararua District Council's submission contends that the Project designation should extend to the western end of the Ashhurst Bridge.
[4] At paragraphs 165 – 166.

Additional facilities for pedestrians, cyclists and horse riders along the route

48. A large number of submitters have raised concerns about the lack of a dedicated pedestrian/cycle path along the proposed route. This includes the large number of submissions made through 'Build the Path' ("**BTP**"). **Manawatū Mountain Biking Club** (submitter 373) seeks a separate recreation path away from the Project.

49. In my view the Project will significantly improve conditions for cyclists, including by facilitating improved safety conditions on the Pahīatua Track and Saddle Road and through the provision of appropriately wide shoulders along the Project route.[5] Any additional improvements for pedestrians, cyclists and equestrian users are not precluded by the Project, as **Ms Downs** explains, but rather are a matter for future consideration. I return to this issue below in my response to the Section 42A report.

Cycling via Pahīatua Track / Saddle Road

50. As noted in Technical Assessment 1, the new road is not intended to be the main cycle route between Palmerston North / Ashhurst and Woodville.[6]

51. The well-established Pahīatua Track is currently expected to fulfil that role, as the completion of the Project would facilitate the re-instatement of the NZ Cycle Trail through the Pahīatua Track by reducing traffic flows (thereby reducing current safety concerns).[7]

52. I am aware that the Transport Agency is also considering whether Saddle Road will be a more appropriate route for the NZ Cycle Trail (following construction of the Project), because:

    (a) Saddle Road has been improved (through widening) since the closure of the Gorge road, and has very low predicted traffic volumes with the Project in place (see below); and

    (b) while traffic volumes on the Pahīatua Track will be significantly reduced with the opening of the Project, those volumes might still (in the medium term) be higher than is ideal for an NZ Cycle Trail route.

53. **Jonathan Kennett** discusses this issue in more detail in his evidence. I understand that decisions on the future NZ Cycle Trail route are yet to be made. The Project does not preclude either route (or indeed the old road

[5] The exception to this is in regards to the Ashhurst Bridge, which I have addressed above.
[6] Technical Assessment 1, para 164.
[7] Technical Assessment 1, para 163.

through the Manawatū Gorge, if available) being used as the NZ Cycle Trail route.

54. The BTP submission states "*Neither the Saddle Road nor the Pahīatua Track are safe for walking and cycling, due to high speed, lots of sharp corners with short site distances, and extremely narrow shoulders*".

55. I agree that some parts of those routes are substandard for all road users, but again note that the traffic volumes on both routes (Saddle Road in particular) will be significantly reduced following the opening of the Project. The daily traffic volume on Saddle Road prior to the Manawatū Gorge closure was around 150 vehicles, while the current traffic volumes on Saddle Road are estimated to be 6,078[8] vehicles per day. Following completion of the Project, traffic volumes on Saddle Road are expected to revert to similar levels to those prior to the Manawatū Gorge closure (262[9] vehicles per day in 2041), this is a reduction of around 5,800 vehicles per day or a 96% reduction of flows in 2041 compared to 2016 flows.

56. In addition, the changes made to Saddle Road by the Transport Agency and partners during the closure of the Manawatū Gorge have provided additional width and improved safety, while posted speeds have also been reduced.

57. The daily traffic volume on Pahīatua Track prior to the Manawatū Gorge closure was around 2,220 vehicles, while the current traffic volumes on Pahīatua Track are estimated to be 3,912[10] vehicles per day. Following completion of the Project, traffic volumes on Pahīatua Track are expected to be similar levels to current levels (3,885[11] vehicles per day in 2041). Without the Project, the traffic volumes on Pahīatua Track would be expected to be significantly higher (6,846[12] vehicles per day in 2041). The reduction of traffic on Pahīatua Track, in 2041, because of the Project is around 3,000 vehicles per day or around a 40% reduction in flow.

Provision of shoulders on the Project route

58. While the NoRs do not provide a separated walking and cycling path, the Project will feature a wide shoulder[13] on the new road which will be able to be used by cyclists.[14] The indicative design provides 2.0-metre wide sealed

[8] Technical Assessment 1, Appendix 1.B (5,403 (Cars)+675 (HCVs) =6,078 vehicles per day in 2016)
[9] Technical Assessment 1, Appendix 1.B (236 (Cars)+26 (HCVs) =262 vehicles per day in 2041 (proposed))
[10] Technical Assessment 1, Appendix 1.B (3,429 (Cars)+483 (HCVs) =3,912 vehicles per day in 2016)
[11] Technical Assessment 1, Appendix 1.B (3,497 (Cars)+389 (HCVs) =3,885 vehicles per day in 2041 (proposed))
[12] Technical Assessment 1, Appendix 1.B (6,001 (Cars)+845 (HCVs) =6,846 vehicles per day in 2041 (proposed))
[13] In response to Ross Castle (submitter 93), I note that the shoulder would also provide for e-bikes and other low powered electric vehicles.
[14] Pedestrians could also walk on the shoulders if they wished to do so, however, this is undesirable from a safety perspective and is not likely to be a desired route.

shoulders in all locations. The shoulders are intended to provide multiple functions (including a pull-over space for breakdowns and providing forward sight visibility) and will be able to be used by cyclists. However, they are not intended to be dedicated cycling facilities.

59. This can be contrasted with the closed Gorge route, which did not include appropriate provision for cyclists and walkers, and the Project is therefore an improvement on the situation prior to closure of the Gorge route, as well as currently.

60. The Transport Agency intends the Project to comply with the minimum road shoulder widths for cyclists (2.0m sealed width) according to the Transport Agency's own specification for Design (refer Appendix 3 of Ms Fraser's evidence). This specification is relevant for projects like this where the shoulders have multiple functions, as opposed to the Austroads guides which identify the requirements for dedicated on-road cycling facilities in the shoulder. The width of the shoulder is discussed further below in my response to the Section 42A reports.

61. The BTP submission makes multiple references to the 110km/h design speed and the issues associated with speed differential relative to active users on the shoulder. As a point of clarification, I note that it is standard practice to design high-speed roads for a speed 10km/h faster than it is intended to be operated (as in, the posted speed limit). This practice ensures users who exceed the speed limit by a small amount do not lose control of their vehicles. This is the case for this Project, where the road will be posted with a 100km/h speed limit.

62. I would add that where there are four lanes being provided, with the left-hand lanes being crawler lanes (which is the majority of the route), the maximum speed in the crawler lanes is expected to be 60km/h. That will further reduce the speed differential between cyclists on the shoulder of the road and adjacent vehicles, adding an additional layer of safety for users of the shoulders.[15] The speed in the crawler lanes is discussed further below in my response to the Section 42A reports.

63. As noted by **Mr Whaley**, there is an intention to provide a separation treatment between the edge line and the shoulder. This will provide a visual and audio (could be tactile) buffer between the traffic and cyclist to reduce the likelihood of vehicles unintentionally crossing into the shoulder.

[15] Refer Technical Assessment 1, para 162.

Connection to the Manawatū Gorge Scenic Reserve

64. The current walking network includes a route between Ashhurst and Woodville, located on the south side of the Manawatū Gorge. As noted above, the Project will facilitate access to this facility by providing walking and cycling connections from the Ashhurst Bridge to the Manawatū Gorge Scenic Reserve car park. This is an additional benefit of the Project in transport terms.

Provision of a separate walking/cycling path

65. As noted above, a large number of submissions seek the provision of a separate walking / cycling path along the Project route.

66. The NoRs do not provide for an off-road walking and cycling facility. I do not consider there are any adverse transport effects arising from the Project that would necessitate the provision of a separate off-road path. In my view, an analysis of potential opportunities to add an east-west walking / cycling (and potentially even horse riding) path, and/or other facilities in the general vicinity, should follow a robust process to ensure cost of any additional infrastructure is warranted and that such a facility would benefit the greatest number of users.

67. I am aware that the Transport Agency is engaging in on-going discussions with PNCC, Tararua District Council ("**TDC**"), Horizons, BTP submitters, Sport Manawatū and the Manawatū Mountain Biking Club to understand aspirations and expectations for future connections between Ashhurst and Woodville, and recreational facilities within and adjacent to the Manawatū Gorge / Te Āpiti areas. I also attended a workshop with these parties on 15 February 2019 to gain a greater understanding of these aspirations and expectations, and to clarify technical points relating to Technical Assessment 1.

68. The BTP submissions, and others, seek an end-to-end route between the centre of Woodville to the centre of Ashhurst. With specific reference to facilities within Ashhurst and Woodville, I note that there are existing facilities within Ashhurst and Woodville: examples include the lime-chip path and footpath adjacent to SH3 through Woodville and tracks through the Ashhurst Domain.

69. Different users appear to have different expectations (surface type, directness, ability to accommodate equestrian users etc). However, it seems

that the submitters seek a separate facility away from the road (either separated by barrier or space).

70. Separately to the Project, I understand there will be discussions around the future of the Saddle Road, the Pahīatua Track and the closed Gorge route. These discussions will consider pedestrian and cycling facilities including how they might be improved once traffic diverts back from the local roads onto the new section of SH3.

71. I am of the view that a facility through the Gorge would be more appropriate and appealing, should it be possible in the future (subject to safe provision through the slip sites), than providing a dedicated path alongside the Project corridor. A facility through the Gorge may even provide something which could be used by commuter cyclists.

72. The BTP submissions cite the off-road routes alongside the Taupō Eastern Arterial and the MacKays to Peka Peka Expressway (in Kāpiti) as successful shared facilities, and compares them to the Project. However, both of those other routes have multiple connections to the adjacent transport network and associated communities and are both in a relatively flat topography. By contrast, the Project has no potential for interim connections (aside from those previously identified for providing access to the recreational areas of the Manawatū Gorge). Furthermore, the likelihood of adverse weather (especially wind), steep grades, and change in elevation along the route are likely to deter many users.

73. I note that, in contrast to the majority of the submissions on this issue, **Steve Wrathall** (submitter 358) contends that a separate facility for pedestrians and cyclists should not be included along the route because of high costs, low desirability of route (steep grade / long distance) and the availability of more desirable alternative routes. Similarly, **Michael Hebbert** (submitter 495) does not support a separate path and considers such a facility would not be used. As noted above, in my view these are valid concerns that should be factored into future decisions on the provision of cycling and walking infrastructure within the Project area.

74. While I support wider discussions about cycling and walking infrastructure in this general area, in my view those discussions should not result in delay to the delivery of the Project, which is a critical piece of transport infrastructure.

Consideration of relevant statutory documents in respect of dedicated walking and cycling facilities

75. TDC and Palmerston North City Council ("**PNCC**") link the provision of dedicated walking and cycling facilities to the alignment of the Project with the Government Policy Statement on Land Transport ("**GPS**"), PNCC's district planning documents, and the outcomes sought by Te Āpiti Governance Group. The submissions made through BTP also seek a dedicated path to align with national, regional and local statutory and policy documents.

76. Technical Assessment 1 includes an assessment of the Project against the GPS, the National Land Transport Programme, the Regional Land Transport Programme, and the relevant District Plan.[16] This assessment is of the Project in its entirety rather than specifically the pedestrian and cycling provision.

77. The Project has good overall alignment with the relevant statutory documents. If the pedestrian and cycling aspects of the Project were assessed in isolation they would in my view, be well aligned with the relevant statutory documents. I consider this is the case for the previously identified reasons summarised:

    (a) The Project will significantly improve conditions for cyclists / pedestrians and equestrian users on the Pahīatua Track and Saddle Road (in particular);

    (b) The Project provides appropriately wide shoulders along the Project route for more experienced and confident cyclists;

    (c) I consider that the NoR has the physical space to provide for separate facilities in some form should this be deemed appropriate, justified and the appropriate funding can be identified; and

    (d) The Project and related components provide enhanced pedestrian and cycling facilities across the existing Ashhurst Bridge, between the Ashhurst Bridge and Scenic Reserve carpark and between Hampson Street and west of the proposed Woodville roundabout.

[16] At paragraphs 219 – 256.

78. Together, these measures effectively address any potential adverse impacts the Project may have on pedestrians / cyclists, and indeed will result in an improved overall situation for pedestrians / cyclists.

79. The statutory documents referred to above do not seek to provide facilities for all modes in all locations, rather they seek to ensure appropriate provision. It is my view that the Project has a significant benefit to pedestrians and cyclists without the provision of an additional facility being provided as part of the Project. The provision of such a facility will do little or nothing to reduce traffic volumes or achieve mode neutrality, which is the main objective of these statutory documents.

Making provision for horse riders as part of a separate path

80. A number of submissions by individuals who have supported the BTP submission (73, at my count, as well as **Arthur Yeo** (submitter 40)) request that the Project include provision for horse riders as part of the requested provision of a separate walking, cycling and bridle path.

81. Again, this is beyond what is proposed as part of the Project. However, as with walking and cycling, I note that the Project will improve conditions for horse riders in comparison with the existing situation, as follows:

    (a) Traffic on Saddle Road will significantly reduce, and the improvements to Saddle Road will result in greater separation from traffic, as noted above. In that respect I note that **Sam McIver** (submitter 635, who has submitted in support of BTP) notes that he used to use Saddle Road as a 'fitness' hill for preparing horses for competition, but that increased traffic on this road, as well as the loss of the verge, has made it too dangerous.

    (b) The reduction in traffic will also improve access to the Pohangina River which is understood to be a key recreational area for riders. Improvements to access tracks may also provide opportunity for future entry to private property (subject to agreement).

    (c) Traffic on Pahīatua Track will also reduce (though as discussed above, not as much as on Saddle Road).

Facilities for pedestrians and cyclists from Ferry Reserve to Woodville

82. A number of submitters have raised concerns about the impact of the Project on the ability to provide a future safe route for pedestrians and cyclists between Ferry Reserve (at the eastern end of the Manawatū Gorge) and

Woodville. The submitters note the intention to provide a facility connecting these two locations known as the Lindauer Arts Trail. As far as I am aware, the Lindauer Arts Trail does not yet exist, and its planning is conceptual rather than detailed.

83. As explained by **Sarah Downs**, the Transport Agency does intend to extend the lime-chip path in Woodville, from Hampson Street to west of the new roundabout proposed at the intersection of Woodland Road and Vogel Street, including safe and appropriate crossing facilities of the Troup Road approach, subject to space being available to construct it. This amounts to an additional approximately 500 metres of dedicated footpath provision in Woodville being provided by the Project. The addition of this section of path results in a minor positive effect for pedestrian safety and amenity for this section of SH3.

84. I understand this path to be part of the proposed Lindauer Arts Trail, meaning that the Project will actively deliver a small part of that proposed trail (including through the intersection).

85. The Project will more broadly provide an improved environment for cyclists and walkers between Ferry Reserve and Woodville. The Project will reduce the amount of traffic on the existing section of SH3 (Napier Road) from Gorge Road to Woodland Road. This section of road has been used by a proportion of vehicles using Pahīatua Track since the closure of the Manawatū Gorge. The removal of this traffic will improve the safety and amenity for vulnerable users along this section of road.

Additional traffic through Woodville

86. A number of submitters have raised concerns about the increased traffic through Woodville following completion of the Project, and the associated impact on amenity. **Janette McHugh** (submitter 238) notes specific concerns about the increase in traffic on Vogel Street (SH3) through Woodville and the need for a ring route to remove traffic from Vogel Street in Woodville.

87. As shown in Figure 1.4 of Technical Assessment 1, SH3 and SH2 through Woodville are classified as National and Regional roads and as such the increased traffic is not inconsistent with the intended function of these roads. The Project also removes traffic volumes from local roads around Woodville which are not designed to accommodate these demands.[17]

[17] Technical Assessment 1 at paragraph 156.

88. It is also worth noting that the traffic volumes passing through Woodville following the completion of the Project are not expected to be any higher than those expected if the Gorge route had not closed.

89. As noted above, additional assessment of the transport effects of the Project through Woodville (undertaken in response to the Section 92 Request) demonstrates that the transport system in Woodville would not perform particularly well with or without the Project in opening year (2025). This means there is a broader need for the Transport Agency to investigate the future of the State highway network through Woodville, and in so doing to consider bypass and upgrade options for the existing alignment.

90. As **Ms Downs** explains, that work is beyond what is proposed as part of the Project. Such an investigation would need to take into consideration community aspirations and economic conditions, and the ongoing efforts being made to re-divert traffic back into SH3 Woodville in the short term.

91. Social and economic factors are critical considerations in determining the future for transport within Woodville. Before any long-term decision is made as to future changes, there would need to be careful consideration and engagement with the Woodville community and wider transport users.

Specific submissions

92. I respond below to additional, individual submission points not specifically addressed in the previous section of my evidence.

93. **Tararua District Road Safety Group** (submitter 376) and **Ross Castle** (submitter 93) express a desire for a wind farm stopping and viewing location. The Project will include rest (or viewing) areas adjacent to both the east and west-bound lanes. The locations will be determined as part of detailed design and will likely be provided in conjunction with maintenance service areas.[18]

94. **Barbara Cooke** and **Nicholas Shoebridge** (submitters 105 & 103) raise concerns about the increased traffic volumes past their property, and the increase in accelerating and braking vehicles including trucks and motorbikes near their property. I understand the submitters' property to be on the south side of SH3 between Franklin Road and Troup Road.

95. The evidence of **Dr Chiles** addresses the potential noise impact of accelerating and braking vehicles on this property. I also note proposed

[18] Technical Assessment 1, para 46.

condition 29A – post construction review, requires noise mitigation to be provided if post-construction noise monitoring identifies noise at the submitters' property exceeds the stated noise criteria.

96. I note that the proposed roundabout should improve the ability for the submitters to access the new SH3 route safely in both directions compared to the current situation. I also note that traffic on the road (current SH3) directly outside the submitters' property is expected to reduce.

97. The **Manawatū Chamber of Commerce** (submitter 375) notes concerns about lack of future proofing and notes a desire for four-laning wherever possible, consideration of increases in tourist growth (particularly campervans), and re-evaluation of transport growth statistics. I respond as follows:

    (a) The Project design currently includes four lanes (two general traffic lanes and two crawler lanes) for the length of the route with the exception of the sections at either end of the route, on approach to the Ashhurst River Bridge (~300m length) and Woodville (~1,000m length) respectively where the road reduces to two lanes to tie into the adjacent network. As set out in Technical Assessment 1,[19] the calculated level of service ("**LOS**") for the four-lane section of the route will be 'A', which is 'very good'. I have subsequently calculated the LOS, using the same methodology, for the two-lane sections of the route and note that the LOS is 'B' which is 'good' and is considered acceptable for the hierarchy of the proposed route.

    (b) The primary reason for the sections of four-laning is safety. The crawler lane on the steeper sections of the route allows for slower vehicles (such as campervans and trucks) to get out of the way of general traffic. As noted above, the LOS along all but the ends of the route is expected to be 'very good'.

    (c) Section 2 of Appendix 1A to the Transport Assessment outlines how the traffic growth rates were determined. I note that the growth rate used is titled the 'medium growth' scenario but has a much higher assumed growth rate than other highways in the region. Based on the assessment undertaken, there is significant additional capacity to accommodate growth above that which has been assumed.

[19] At paragraph 126.

98. **Brent Barrett** (submitter 317) notes that four lanes are not justified, and three lanes would suffice.

99. Again, the primary reason for the four-laning is transport safety. Mr Barrett suggests two uphill and one downhill lane should be provided on steep sections. I refer to section 9.7 of Austroads Guide to Road Design: Part 3: Geometric Design, 2016 which states "*On steep downgrades the speed of trucks will be as slow as that on equivalent upgrades […] with a similar effect on traffic flow if overtaking opportunities are not available*."

100. **William Bly** (submitter 241) raises concerns about the current safety on Saddle Road and the associated connections. As discussed above and in Technical Assessment 1, the Project will divert traffic off Saddle Road, thereby improving the safety of that road.

101. **Ghee Yong Tan and Janice Tan** (submitter 107) raise concerns about additional traffic through the intersection of SH3 and Raukawa Road and the associated safety effects. This intersection is on SH3 between Ashhurst and Palmerston North.

102. I note the increase in traffic on SH3 on this link in 2041 is from ~15,500 to ~16,300 vehicles per day. The existing traffic volumes are already relatively high, and I do not consider that the additional traffic will have a significant impact on safety.

103. **Kelly Connell** (submitter 169) raises concerns about traffic travelling between Bunnythorpe and the Project route and the associated existing safety deficiencies on the likely route. Ms Connell identifies the likely route as Mulgrave Street and Hillary Crescent.

104. I note the increase in traffic on Mulgrave Street in 2041 is from ~4,000 to ~4,500 vehicles per day. There is a reduction in traffic on Cambridge Avenue (south of Mulgrave Street) in 2041 is from ~15,900 to ~14,500 vehicles per day. I do not consider that these changes in traffic will have a significant impact on safety.

RESPONSE TO QUESTIONS OF THE HEARING PANEL

In light of the safety concerns expressed by David Dunlop (his para 166), why is a dedicated path for pedestrians and cyclists over the existing SH3 Ashhurst Bridge not being considered and/or implemented a part of this project?

105. As noted above, a dedicated facility is now proposed to be implemented prior to the construction of the project.

Please outline why the Ashhurst roundabout is required to have two circulating lanes yet the Woodville roundabout only has one.

106. For the Ashhurst roundabout, two circulating lanes are not required from a traffic efficiency perspective. Instead, they are provided to allow for the differential speeds between heavy commercial vehicles ("**HCVs**") and general traffic approaching / departing the incline. Provision of two circulating lanes may be able to be avoided if the safe merging of low speed HCVs and general traffic can be safely managed on the approaches to the roundabout. This will form part of the detailed design and associated safety audit process.

107. At the Woodville end, there is a longer section of flat grade on approach to the roundabout which reduces the speed differential between HCVs and general traffic. That means only one circulating lane is necessary.

What are the implications in terms of travel time and distance for wind turbine access roads only being accessible as left in/left out from the proposed road?

108. I note that the internal Meridian road network will provide the primary access to the turbine sites and farm. The accesses off the Project road will only be used for oversize infrequent loads.

109. There are four potential trips for the infrequent loads:

    (a) The first is a load which has an origin in the east and a destination in the west, for this trip the access form has no impact.

    (b) The second and third types are where a load has an origin and a destination on the same side of the route. For these trips the load must travel the length of the route (between the roundabouts, ~11km) in both directions. Only part of this journey is additional compared to the current route via Saddle Road, and the load is likely to be able to travel faster and with fewer restrictions on the new route.

(c) The fourth type has an origin in the west and a destination in the east. For this trip the load must travel the length of the route (between the roundabouts, ~11km) three times (two eastbound and one westbound). Only part of this journey is additional compared to the current route via Saddle Road. The load is likely to be able to travel faster and with less restrictions on the new route, however the distance will be longer than the current arrangement.

Why does the CTMP not also propose to minimise night time construction traffic through Woodville? Please confirm that the CTMP will specify construction traffic routes which will be enforced.

The CTMP does not include restrictions on traffic in Woodville. Please provide an explanation as to why this is.

110. The intention is that the CTMP will be developed in collaboration with the community to understand the trade-offs required. In particular, consideration will need to be given to the relative importance of limiting night works, and the overall duration of the construction programme.

111. I expect the CTMP to identify the different construction traffic routes for different situations and identify the relevant restrictions on use. The relevant requirements will be developed in consultation with stakeholders.

112. As noted in condition 22 – construction traffic management plan, the CTMP will *"identify site access routes and access points for heavy vehicles"*.

113. The conditions for the proposed CTMP do not currently include night time restrictions through Woodville. This is because the State highway network through Woodville already caters for heavy vehicle trips and the effect of intermittent additional construction trips is expected to be relatively minor. Traffic counts from 2018 on SH2 north and south of Woodville[20] indicate that the average hourly night time (10pm-6am) heavy vehicle counts are 15 and five respectively. However, night time restrictions on construction traffic through Woodville could still be considered through consultation with the community.

[20] NZ Transport Agency count sites 00200789 & 00200808.

How might use of the [Ashhurst] bridge differ during the summer holiday period?

114. Use of the Ashhurst bridge by cyclists may be higher during the summer holiday period. I note that the weather during the survey period was fine, not raining and in spring time when people often take advantage of change in weather.

115. Traffic volume data is not available for the bridge location during the summer holiday period (pre- or post-closure of the Manawatū Gorge). Traffic volume data from within the Manawatū Gorge itself (prior to closure) is available. The average daily traffic volume was ~8,640 for the two-week period from Saturday 24 December 2016 to Sunday 8 January 2017. This is higher than the overall daily average for the 2016 calendar year of 7,620.

Can you please explain what your recommendation (last sentence) means in practice?

116. My recommendation is that the Project provides for safe walking and cycling facilities between the Ashhurst Bridge and the Manawatū Gorge scenic reserve carpark where works are being undertaken. These works are now intended to form part of the Project, as discussed by **Ms Downs** (details of the proposed condition are provided in the evidence of **Ms McLeod**).

117. Facilities across the bridge are also intended to form part of the Project. Again, details of the proposed condition are provided in the evidence of **Ms McLeod**.

118. There are existing facilities through the Ashhurst Domain and alongside the Manawatū River from the western side of the Ashhurst Bridge.

Please clarify why a largely qualitative assessment has been undertaken rather than a quantitative one, and why this was an appropriate basis, in your view, for assessing the traffic effects of the NoRs.

119. The assessment has been largely qualitative because of the lack of detailed information about current travel patterns for all transport modes, and the ongoing changes associated with closure of the Gorge road and associated improvements/maintenance and operational modifications by users (e.g. Fonterra).

120. Given the pre-existing condition of the Manawatū Gorge route is well known, and the proposed Project is expected to result in similar travel patterns I consider the largely qualitative assessment process to be appropriate.

Please explain the effects of limiting right turns in relation to individual access roads affected by this means of operation. Please also provide more information on how frequent the emergency vehicle crossover points will be provided and how they will be managed to avoid use by the general public.

121. The only accesses directly affected by the provision of a median barrier are properties W3 and W4 identified in figure 1.30 in Technical Assessment 1. These properties both have alternative direct access provided from SH57 and the former SH3 / Napier Road (via a new underpass) respectively. The travel time impact of these changes is very small relative to the safety benefit to the wider road user.

122. The location and frequency of emergency vehicle crossover points has yet to be determined, but standard practice would be for the designers to discuss those matters with local emergency services. Typically. emergency services are provided with an ability to activate a control barrier or remove a section of safety barrier that cannot be used by the general public (e.g. dropping the wire rope barrier).

Please add, even if indicatively, the vertical alignment of Pahīatua track to the figure.

123. I have shown the vertical alignment of the Project route, Saddle Road, and Pahīatua Track in Figure 1 below. The indicative profile has been traced from a route elevation produced in Google Earth.

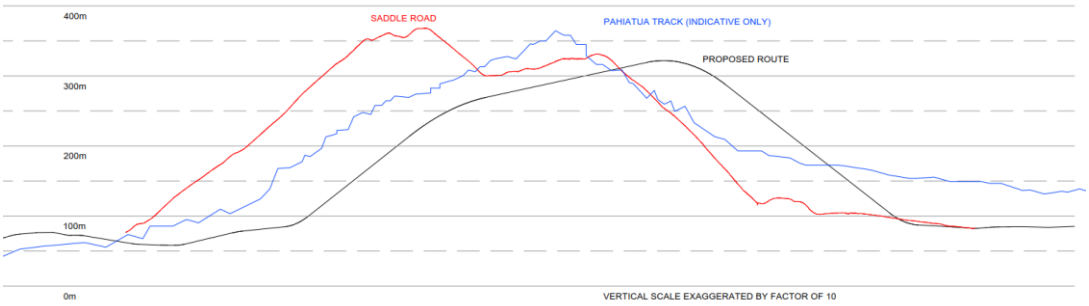

Figure 1: Indicative vertical profile of Pahīatua Track

It is stated that there are fundamental operational issues in relation to terrain for both Saddle Road and Pahīatua Track. Please provide clarification of how, in your view, these routes are suitable for cyclists given those terrain constraints.

124. Saddle Road and Pahīatua Track have fundamental operational issues because both routes have inconsistent speed environments (largely due to the terrain) compared with the function of the road. Vehicles would normally

be able to travel at higher speeds on the Project than can be achieved on these routes.

125. However, cyclists are not able to travel at the same speed as vehicles and the normal travel speeds of cyclists are unlikely to exceed the speed environment on both Saddle Road and Pahīatua Track. Therefore, the terrain constraints are not as relevant for cyclists.

126. In addition, one of the key operational constraints for cyclists are traffic volumes. As noted above the traffic volumes on Saddle Road, in particular, are expected to reduce significantly following construction of the Project. The 262 vehicles per day expected on Saddle Road following construction of the Project equates to approximately one vehicle in either direction every two minutes.

It is stated that the Palmerston North Ring Road Route may lead to changes in active mode travel patterns accessing Manawatū Gorge. If this is expected to increase accessibility, and in general terms increased pedestrian and cyclists demand is anticipated anyway, please explain the rationale behind making no provision within the existing SH3 bridge for these modes. Please also explain how this may change the need for a cycle/walking track, how might a combined cycle, walking and equestrian track be incorporated within the NOR, what would be the cost implications and the design constraints and opportunities and what might a typical cross section look like.

127. As noted above, facilities across the Ashhurst Bridge are intended to form part of the Project (details of the proposed condition are provided in the evidence of **Ms McLeod)**.

128. There is uncertainty surrounding the form / function / location of a future Palmerston North ring road. The location of the ring road will have a significant influence on the most attractive route across the river and ranges for active modes. For example, if another river crossing was constructed between Palmerston North and Ashhurst then the Pahīatua Track is likely to be a more direct route.

129. I also note that the topography and connectivity associated with a ring route around Palmerston North is likely to result in high demands for a shared path associated with the ring route, for the same reasons as why the Taupō Eastern Arterial and MacKays to Peka Peka Expressway shared paths are successful (as discussed above). However, high demands on a future ring route will not necessarily correlate to high demands on a steep route with

limited connections across the ranges (as in, the Project route) for the reasons identified above.

130. As explained above, a separate shared cycle, walking and equestrian path is not proposed as part of the Project. **Andrew Whaley** addresses the last question above as it relates to the hypothetical design of such a path.

Please confirm whether the 2012 and 2017/28 crash records are indeed the same or if this is an error.

131. I can confirm that they are the same and this is not an error.

For 2016 and 2017/18, please provide information on the types of crashes occurring and an assessment of how they may have changed over time as a result the closure of SH3 through Manawatū Gorge.

132. The following tables summarise the crash types on Saddle Road and Pahīatua Track before and after the closure of the Manawatū Gorge. The crash numbers differ slightly from those provided in Technical Report 1 due to a change in the Crash Analysis System.

133. The table below shows that the crash types on Saddle Road have similar proportions both pre- and post-closure of the Manawatū Gorge.

Saddle Road	**Pre-closure of the Manawatū Gorge 01 January 2012 – 24 April 2017 (5.3 years)**		**Post-closure of the Manawatū Gorge 25 April 2017 – 01 March 2019 (1.8 Years)**	
Crash Severity				
Fatal	0	0%	1	2%
Serious	2	5%	3	7%
Minor	14	35%	9	20%
Non-injury	24	60%	32	71%
Crash Type				
Overtaking	2	5%	2	4.5%
Straight road lost control / head-on	2	5%	2	4.5%
Bend lost control / head-on	28	70%	35	78%

Rear-end / obstruction	6	15%	5	11%
Crossing / turning	2	5%	1	2%
Pedestrian	0	0%	0	0%
Miscellaneous	0	0%	0	0%

134. The table below shows that the crash types on Pahīatua Track have similar proportions both pre- and post-closure of the Manawatū Gorge. However there has been a reduction in the proportion of lost control / head-on crashes on bends and a corresponding increase in lost control / head-on crashes on straight roads and crossing / turning crashes. These changes are not surprising given the increased traffic on the route, reducing vehicle speeds on the curvilinear sections of the route and increasing the likelihood of conflicts at intersections / accesses.

Pahīatua Track	**Pre-closure of the Manawatū Gorge 01 January 2012 – 24 April 2017 (5.3 years)**		**Post-closure of the Manawatū Gorge 25 April 2017 – 01 March 2019 (1.8 Years)**	
Crash Severity				
Fatal	0	0%	0	0%
Serious	6	8%	2	5%
Minor	15	19%	9	22%
Non-injury	58	73%	30	73%
Crash Type				
Overtaking	2	2%	2	5%
Straight road lost control / head-on	6	8%	8	19%
Bend lost control / head-on	59	75%	25	61%
Rear-end / obstruction	7	9%	2	5%
Crossing / turning	3	4%	4	10%

Pedestrian	1	1%	0	0%
Miscellaneous	1	1%	0	0%

Please provide a summary of the SIDRA output for all intersections analysed.

135. The following table summarises the performance of the proposed roundabouts at either end of the Project route. All approaches have good or very good performance (LOS B or better). A summary of the SIDRA outputs for the other intersections (in Ashhurst and Woodville) are provided in **Appendix A**.

	SH57 / SH3 intersection		SH3 / Woodland Road intersection	
	Level of service	Average delay (s)	Level of service	Average delay (s)
SH3 east approach	A	4.4	A	4.6
SH3 west approach	A	5.7	A	4.9
Worst side Road approach	B	12.6	B	19.0
Overall	**A**	**6.1**	**A**	**5.2**

Please explain the rationale for excluding the SH2/SH3 intersection from the NOR if capacity issues with and without the project are expected.

136. As noted in Technical Assessment 1 and the response to the Section 92 Request (15/1/19), the issues at the intersection cannot be directly attributed to the Project. They are a result of traffic growth.

137. There are likely to be a number of other similar intersections across the wider region which will have similar issues in the same time period, and the needs of each location needs to be balanced against the needs of the wider region and country. Consistent with the work undertaken for the Section 92 Request, I recommend that the Transport Agency should undertake a review of this intersection, and the Woodville area as part of normal network management due to issues identified with or without the Project.

Please provide information as to the crash rate per million vehicle kilometres travelled rather than just the crash number on Saddle Road and Pahīatua Track pre and post closure of SH3 through Manawatū Gorge.

138. The following table calculates the crash rates on Saddle Road and Pahīatua Track. It should be noted that the traffic demands on Pahīatua Track split at the end of Pahīatua Aokautere Road into three different routes. To allow an accurate comparison, only the Pahīatua Aokautere Road section has been considered for the Pahīatua Track calculations.

139. An indicative rating for the Personal and Collective risk has been identified using figures 4-1 and 4-2 from the Transport Agency's High Risk Rural Roads Guide (2011).

140. The high-severity crash rates and ratings indicate that the personal risk (i.e. the risk of a high-severity crash for an individual travelling at any one point in time) has reduced on both Saddle Road and Pahīatua Track as a result of the closure of the Manawatū Gorge. This is not surprising given the significant increase in the number of vehicles using the two links and the associated reduction in speed.

141. The high-severity crash rates and ratings indicate that the collective risk (i.e. the risk of a high-severity crash occurring) has increased on both Saddle Road and Pahīatua Track as a result of the closure of the Manawatū Gorge. This change is more significant on Saddle Road.

	Saddle Road		**Pahīatua Track**	
	Pre-closure	**Post-closure**	**Pre-closure**	**Post-closure**
Duration of crash period	1940 days	675 days	1940 days	675 days
Length of route	13.5 km		11.3 km	
Average Daily Traffic	150	6078	2220	3912
100 Million kilometres travelled during crash period	0.04	0.55	0.49	0.30
Fatal and serious crash rate per 100 Million vehicle kilometres travelled	50.9	7.2	10.3	6.7

Personal Risk Rating	High	Medium	Medium High	Medium
Injury crash rate per 100 Million vehicle kilometres travelled	407	23.4	30.8	30.1
Crash rate per 100 Million vehicle kilometres travelled (all crashes)	1018	81.2	113	111
Fatal and serious crash rate per kilometre per year	0.03	0.16	0.08	0.10
Collective Risk Rating	Low medium	High	Medium High	Medium-High

Has your opinion on the likely use of the new route by cyclists changed in light of the number of submitters requesting the provision of a shared pathway for cycling and walking along the new route?

142. My opinion has not changed as a result of the submissions received.

143. As I note above, it is evident that different users have different expectations and it is unlikely that an off-road facility (if provided) would cater for all user types. Also, I note that the majority of submitters on this issue desire the facility for recreational use which means that they are unlikely to be as regular or frequent users than if the demand was for daily commuters. The Ministry of Transport household travel survey[21] notes that the average trip leg for cyclists is 4km (2015-2018) which is significantly less than the commuting distance would be between Woodville and Palmerston North using the Project route (~27km).

144. As noted above, the topography and surrounding land-use adjacent to the Project route are significantly different to other successful shared path routes adjacent to major highways. The lack of connectivity and topography is expected to deter regular use or short distance trips.

[21] https://www.transport.govt.nz/mot-resources/household-travel-survey/new-results/the-average-trip/

Please expand on why use of the existing Pahīatua Track or Saddle Road as a cycle connection between east and west sides of the Ruahine Ranges is 'more convenient and parallel to the Project route with similar distance' when one of the justifications for the proposed route is travel time saving for motorised vehicles.

145. The Project provides a centrally located link which is able to be travelled at significantly higher speeds than the parallel routes. That makes the route faster for motorised vehicles despite the fact that some trips will be longer in distance than if they had used one of the parallel routes.

146. Cyclists are not able to travel at the same speed as vehicles, and the travel speeds across the three routes for cyclists are likely to be similar. Therefore, the travel distance has a much greater impact for cyclists. For many journeys, one of the existing parallel routes will be the shortest distance. The parallel routes are also generally more sheltered (specifically from wind), which is an important factor in travel speed for cyclists.

Can you please clarify why you consider the access effects to be neutral given the submissions received from a number of directly affected property owners?

147. I am unaware of any of the directly affected property owners raising specific concerns about access. I consider that most of the property owners will have improved access due to the reduction of traffic outside their properties (where the old SH3 is bypassed) and greater priority to get access onto the new route via the proposed roundabouts. **Mr Dalzell** notes discussions with landowners regarding access taking place in a Public Works Act 1981 context.

How do the estimates of construction traffic demands reflect recommendations in the noise and vibration report (paragraph 32) that construction traffic should primarily access Saddle Road from the east end and traffic through Ashhurst should be kept to a minimum? How practical would such an approach be?

148. The estimates of construction traffic have not taken into consideration the recommendations of the noise and vibration report. The estimates are based on what is expected to be likely / practical. The final distribution will depend on the Contractors' work methodology and will be determined through the CTMP.

149. I agree that reducing traffic through Ashhurst is desirable. However, if plant / materials are travelling between the site and the west then there would be an increased safety risk if all of these trips had to travel via Pahīatua Track to get to the east side of Saddle Road. The additional travel distance would also likely impact on the efficiency of construction and the overall programme. That would increase the duration of the current sub-standard travel routes being in use (and of the construction programme and its associated effects).

Is there sufficient space to address your suggested construction traffic mitigations within the existing road corridor? If not, what are the effects on the extents of the NoRs?

150. Work was undertaken to check that a viable solution (sight lines being the major determinant) could be achieved based on indicative information available. I consider that there will be a workable solution that can be implemented within the existing road corridor, I note that since the time of preparing Technical Report 1 the speed limit on Saddle Road has been reduced to 60km/h, which will make the sight distance and other requirements less onerous than would be required at a higher speed.

151. Other more temporary measures could also be implemented if necessary to ensure there is sufficient space within the existing road corridor, such as Temporary Traffic Management Plans using reduced speeds or even stop / go controls.

Can you please explain what "provisions for safe facilities for vulnerable users at these locations" (last sentence) means in practice?

152. The sentence quoted refers to the effect of construction traffic on the central Woodville area and in particular the school east of the SH2/SH3 intersection.

153. I expect that the CTMP will provide a mechanism for the Contractors to agree what temporary facilities and changes will be required to mitigate the concerns of the community and school. This could include (but would not be limited to) speed reductions, crossing facilities and temporary diversions during school peak periods or other times.

Given the NoRs does not include the Cambridge Road / SH3 intersection, what mechanism do you consider appropriate to ensure that this intersection upgrade is undertaken in sufficient time to address the identified effects of the Project?

154. As a condition. The details of the proposed condition are provided in the evidence of **Ms McLeod** (condition 26 – network integration).

In your opinion, are the proposed shoulders wide enough to ensure the safety of cyclists?

155. There will always be a risk to cyclists of riding adjacent to high-speed traffic. However, the proposed design provides a width which I believe is appropriate to cater for the types of cyclists likely to cycle along the proposed route and will be significantly better than other facilities on the wider network in the area.

Will cyclists and pedestrians be on the traffic side or the non-traffic side of any road side barriers?

156. Cyclists who choose to use the Project route are intended to ride on the shoulder of the highway (the traffic side of the road-side barriers).

157. Pedestrians are not expected to use the route. However, if they did they could choose to walk on the shoulder or behind the barrier along the majority of the route (excluding bridges). I note that the surface behind the barrier may not always be flat and easily traversable.

Please provide information on the limitations of Blip Track as a data course and how much reliance has been placed on it in relation to the development of the directional distribution.

158. Blip Track records the unique signature of devices with Bluetooth (and sometimes Wi-Fi) passing a sensor. It can be used to measure travel times between two sensors or routes where a network of sensors are present. Blip Track only captures the travel patterns of vehicles with the relevant devices on board, so not all vehicles are captured, and some vehicles with multiple devices will be captured multiple times. However, the number of vehicles with relevant devices is unlikely to vary significantly by route so these factors are not expected to skew the data-set.

159. The Blip Track data was collected and combined with other origin and destination data (such as the Palmerston North Cube Model) as part of the DBC assessment. I was not involved in the preparation of the DBC, but I

understand the origin and destination assessment prepared for the DBC relied heavily on the Blip Track data.

160. I have relied on the origin and destination assessment prepared for the DBC. However, it should be noted that I have used recent traffic count data (where available) to calibrate the distribution assumptions.

161. I note that I do not expect the assumed distribution to be a precisely accurate representation of the actual travel patterns. However, I believe that the margin of error between the assumed and actual travel distribution is inconsequential in assessing the relevant effects of the Project. These assumptions have been reviewed and agreed by Craig Nicholson of the Transport Agency, who is a very experienced Transport Engineer.

162. I am confident that the predicted significant increases and reductions in travel demands on the key routes are appropriate, and my overall conclusions would not change if the proportions were slightly higher or lower than currently assumed.

Why, in your view, would people traveling from Palmerston North to SH2 south route via the Project route? What are the comparative travel times of the Project compared to Pahīatua Track for this trip?

163. This information is provided in Appendix 1.C of Technical Report 1. In short, the Project route is expected to be three to four minutes faster for both general traffic and HCVs despite being a longer distance.

The five busiest routes equate to approximately 50% of demand only. How sensitive is the travel distance and time saving analysis to inclusion of additional routes to sample a greater percentage of overall demands?

164. I expect that the majority of the remaining 70 routes which make up ~43% of travel would also have travel time savings. The key assumption to support this belief is that the Project route will be faster than the previous Manawatū Gorge route.

165. All the travel assumed to use the new route previously used the Manawatū Gorge route, and would be expected to use the new route given it is faster than the previous Gorge route. In addition, the Project route has gentler grades than the alternative routes which is more desirable for HCV travel.

In relation to the sub-options A-F for the western end of the NoRs considered in the DBC, please provide an assessment of traffic and engineering design effects of these options.

166. **Scott Wickman** addresses this question in his evidence. I was not involved in the assessment of alternatives during the preparation of the DBC.

167. However, I note that an assessment of transport (including resilience, efficiency and safety) was provided in the Ashhurst sub-options assessment.[22] I have not reviewed this transport assessment in detail but from a high-level review, the proposed solution appears logical given the wider effects associated with the different sub-options.

Are your conclusions/recommendations set out in paragraphs 193, 196, 207, 209, 210, 214, 215, 216, 217 and 218 all addressed in the NOR conditions offered by NZTA?

168. Yes, except for the following.

169. The recommendation in paragraph 193 is not addressed in conditions because the accesses are generally not within the designation. Instead the formation of such accesses will need to comply with the access standards in the relevant District Plan (or be the subject of a future resource consent application).

170. In respect of the recommendation in paragraph 196, improvements to this intersection are part of a separate project being undertaken currently or imminently by the Transport Agency and as such imposing a condition on the designations is not necessary.

COMMENTS ON COUNCIL SECTION 42A REPORTS

171. The following paragraphs provide responses to the Section 42A Technical Evidence: Traffic and Transport prepared by Harriet Fraser and Section 42A Technical Evidence: Planning prepared by Phillip Percy and Anita Copplestone. The responses have been grouped into themes.

172. Where **Mr Percy** and **Ms Copplestone** refer to the same aspects as **Ms Fraser** I have referenced **Ms Fraser** only. Items only referred to by **Mr Percy** and **Ms Copplestone** are identified separately.

[22] Manawatu Gorge Alternatives Detail Business Case: Ashhurst Sub Options Assessment 2018. This is Attachment 1 to the evidence of **Scott Wickman**.

Design Considerations

173. Ms Fraser questions (paragraph 138) whether adequate consideration has been given to the road having a lower design speed and reduced capacity to help mitigate the potential adverse environmental effects and provide better for cyclists.

174. **Mr Whaley** discusses the limitations of the design speed on route choice and alignment. I comment below on the transportation aspects of these alternative design criteria.

175. As noted above, it is standard practice to design high speed roads for a speed 10km/h faster than it is intended to be operated (as in, the posted speed limit). This practice ensures users who exceed the speed limit by a small amount do not lose control of their vehicles.

176. A lower design speed (and fewer passing opportunities) would also increase travel times for vehicles, reducing economic benefits and potentially resulting in less traffic shifting from the adjacent sub-standard routes.

177. A lower design speed would also be inconsistent with the adjacent network which typically has a posted speed limit of 100km/h except for through urban areas. Ms Fraser raises concerns (paragraph 136) about the integration of the Project route into the existing road network. I consider a consistent speed to be a key aspect of ensuring a consistent and integrated network.

178. Also, as noted previously, the primary reason for the sections of four-laning is safety. The crawler lane on the steeper sections of the route allows for slower vehicles (such as campervans and trucks) to get out of the way of general traffic.

179. As noted in Appendix 1A to Technical Report 1, estimated HCV average travel speeds on the proposed Project have been calculated from the longitudinal profile of the proposed route and the speed / grade curves provided in Austroads Guide to Road Design Part 3: Geometric Design (2016), and assume that HCV speeds downhill are the same as the equivalent uphill grade. These calculations showed HCV speeds varied between 90km/h and 33km/h with an average speed of around 60km/h.

180. I consider that failure to provide a crawler lane will create significant safety issues associated with differential speeds between cars and HCVs and further reduce travel times for general traffic as discussed above.

181. I also note that further work will be undertaken in the detailed design phase of the Project and subsequent safety audit processes, to determine the appropriate lane configuration and speeds within the proposed designation.

Ashhurst area

182. Ms Fraser states (paragraph 77) that the geographical extent over which the transportation effects have been assessed has been limited and notes additional areas that she considers should be assessed.

183. All of the links listed by Ms Fraser were included within the spreadsheet model for the Project (with the exception of Hope Road which is a very low-use road). In the Ashhurst area the links listed by Ms Fraser include:

    (a) SH3 Ashhurst from York Street to western extent of the Project designations; and

    (b) York Street, Cambridge Avenue, Mulgrave Street. Salisbury Street and Wyndham Street in Ashhurst.

184. As noted in Appendix 1B to Technical Report 1, the traffic volumes on the majority of these links reduce significantly with the exception of the following links:

    (a) SH3 York Street to SH57, where traffic volumes increase significantly;

    (b) the section of Cambridge Avenue north of Mulgrave Street (not provided in Appendix 1B), where traffic volumes in 2041 increase from ~6,200 to ~8,400; and

    (c) Mulgrave Street (not provided in Appendix 1B), where traffic volumes in 2041 increase from ~4,000 to ~4,500.

185. On York Street (not provided in Appendix 1B) traffic volumes in 2041 reduce from ~10,200 to ~7,800.

186. I do not consider the increase in traffic demands on Cambridge Avenue and Mulgrave Street to have significant effects given the ongoing project to improve safety and amenity through the Ashhurst urban area (as identified in paragraph 85 of Technical Report 1).

187. I address the effects on SH3 between York Street and SH57 in paragraphs 131, 154 and 165-167 of Technical Report 1.

188. Ms Fraser suggests additional mitigation and additional conditions are required (paragraphs 141 and 206) to provide for safe turning to / from

properties and accesses either side of SH3 between Ashhurst and the Ashhurst Bridge.

189. I note that the current layout provides a flush median treatment and wide shoulders adjacent to all accesses for private properties and I consider that no additional mitigation or conditions are required to mitigate the effects on safety and efficiency of access to / from these private properties.

Woodville area

190. Ms Fraser states (paragraph 77) that the geographical extent over which the transportation effects has been assessed has been limited and notes additional areas that she considers should be assessed.

191. Again, all of the links listed by Ms Fraser were included within the spreadsheet model for the Project (with the exception of Hope Road which is a very low-use local access road). In the Woodville area the links listed by Ms Fraser include:

    (a) SH3 from Woodland Road to SH2;

    (b) SH2 from SH3 to Pinfold Street; and

    (c) Hope Road, Oxford Road and Pinfold Road in Woodville.

192. As noted in Appendix 1B to Technical Report 1, the traffic volumes on the State highway links increase and the volumes on the local roads reduce. I do not consider the local roads require further assessment given the Project results in reduction of traffic demands.

193. As noted above, SH3 and SH2 through Woodville are classified as National and Regional roads and as such the increased traffic is not inconsistent with the intended function of these roads. The Project also removes traffic volumes from local roads around Woodville which are not designed to accommodate these demands. [23]

194. It is also worth noting that the traffic volumes passing through Woodville following the completion of the Project are not expected to be any higher than those expected if the Gorge route had not closed and the desired outcome of the changes currently occurring at the intersections of SH3 / Woodlands Rd and Woodlands Rd / Oxford Rd which redirect traffic through Woodville. I

[23] Technical Assessment 1 at paragraph 156.

also refer to **Ms Linzey's** evidence regarding the range of views and aspirations to get traffic back into Woodville following the Gorge closure.

195. As noted above, additional assessment of the transport effects of the Project through Woodville (undertaken in response to the Section 92 Request) demonstrates that the transport system in Woodville would not perform particularly well with or without the Project in opening year (2025). This means there is a broader need for the Transport Agency to investigate the future of the State Highway network through Woodville, and in so doing to consider bypass and upgrade options for the existing alignment.

196. I note that Ms Fraser implies that the assessment, prepared in response to the section 92 request, justifies that the reduction in safety is appropriate. I do not consider the poor performance of the transport network in Woodville prior to the Project justifies the reduction in safety, nor does the assessment imply that. The key point to note is that the poor performance of the transport network prior to the Project is not an adverse environmental effect of the Project, in RMA terms.

197. Ms Fraser suggests additional mitigation and additional conditions are required (paragraphs 141 and 206) to provide for vulnerable road users and intersection upgrades / traffic management in Woodville. As above, the poor performance of the transport network prior to the Project is not an effect of the Project. Therefore, I do not consider any additional mitigation or conditions are required.

Cycling

198. Ms Fraser has raised a number of concerns regarding / related to cycling, which include:

    (a) Safety on SH3 between Ashhurst and SH57 for active modes (paragraph 103);

    (b) Safety on the Project route including:

        (i) An assertion that the Project does not meet best practice guidelines for cycling (paragraph 78);

        (ii) Appropriateness of the Transport Agency's cycle shoulder guidance (paragraphs 111-112);

        (iii) The assumed speed in the crawler lanes (paragraphs 113-114);

(iv) Project not aligned with safe system (various locations including paragraph 127); and

(v) Assessment of low crash risk for cyclists on new route (paragraph 103); and

(c) Safety on Saddle Road and Pahīatua Track (paragraph 103).

199. I have addressed these concerns in the following paragraphs.

200. Regarding the safety of cycling on SH3 between Ashhurst and SH57. I note the following provision for cycling that will be in place when the Project is finished construction:

(a) Pedestrian and cycling facilities between the Manawatū Gorge Scenic Reserve carpark and the Ashhurst Bridge (constructed as part of the project);

(b) A facility for pedestrians and cyclists on or adjacent to the Ashhurst Bridge (to be constructed prior to the Project);

(c) Existing wide shoulders between Ashhurst Bridge and York Street (estimated to be a minimum shoulder width 2.0m but generally wider based on aerial imagery); and

(d) New connections into Ashhurst at either or both York Street and Cambridge Avenue (as noted in paragraph 131 of Technical Report 1) including appropriate crossing facilities for pedestrians and cyclists (constructed in prior to the Project opening).

201. In addition, there are existing pedestrian connections to Ashhurst through the Ashhurst Domain and the partially complete shared path connection to Palmerston North along the river will remain.

202. Based on the above provision I consider that the safety of cyclists will be improved significantly on this section of SH3 following completion of the Project.

203. The following paragraphs address the safety of cycling on the Project route.

204. I note the Project objectives (presented in **Ms Downs'** evidence) are to restore the closed connection of SH3 that was previously through the Manawatū Gorge and in doing so, improve resilience, efficiency and safety. In achieving these objectives, the Project has the added benefit of

addressing safety for cyclists and other users on the existing transport system while also providing improved provision on the Project (shoulders).

205. The shoulders are intended to provide multiple functions (including a pull-over space for breakdowns and providing forward sight visibility) and will be able to be used by cyclists. However, they are not intended to be dedicated cycling facilities.

206. While the new road has not yet been designed, the Transport Agency intends the Project to comply with the minimum road shoulder widths for cyclists (2.0m sealed width) according to the Transport Agency's own specification for Design (refer Appendix 3 of Ms Fraser's evidence). This specification is relevant for projects like this where the shoulders have multiple functions as opposed to the Austroads guides which identify the requirements for dedicated on-road cycling facilities in the shoulder.

207. I note the following extract from Austroads[24] *"Table 4.4 provides guidance as to the appropriate shoulder width to be provided generally for reasons other than cycling. However, where the shoulder is available for use by cyclists, Table 4.18 (for exclusive bicycle lanes in urban areas) should be used as a guide to the appropriate width of sealed shoulders".* Table 4.18 notes that the appropriate width range at 100km/h is 2.0-3.0m.

208. As noted above, calculations of HCV speeds over the Project route varied between 90km/h and 33km/h with an average speed of around 60km/h. I consider this average speed an appropriate basis for interpretation of the Austroads requirements given the intention is not to provide dedicated on road cycling facilities.

209. The Project route, in accordance with the objectives of the Project, has been designed in accordance with a safe system approach for vehicles. As with any Project, consideration needs to be given to the potential users and the alternatives that exist. The primary demand for the Project is for freight and general traffic, with alternative routes available for active modes, in which conditions will be improved as a result of the Project.

210. Further, the Project does not preclude the possibility of off-road pedestrian and cycling facilities being provided in the future (for example the route as proposed in the Draft Te Āpiti Master Plan or similar).

211. I note the significant safety concern in the road safety audit prepared for the DBC, however I also note the following changes to the scope of the Project

[24] Section 4.8.9 Sealed Shoulders of Austroads guide to Road Design Part 3: Geometric Design (2016)

and understanding of cycling demand on the route since that audit was completed which reduce the risk for cyclists along the route. As identified previously, this includes:

(a) A wider shoulder through the four-lane section of the route (2.0m sealed shoulder) with additional delineation between the traffic lane;

(b) Roundabouts to control vehicle speeds at the tie-ins to the existing network with appropriate provision for pedestrian and cycle travel through the roundabout; and

(c) The demand for cycling was completely unknown at the time of the road safety audit, given there is no current facility, the demand remains uncertain and difficult to predict. However, based on **Mr Kennett's** evidence his demand predictions suggest 10 commuters per day with a further 1,400 cycle tourers per year (an average of 4 per day). It should be noted that these demands are for a protected facility (adjacent to the road but behind a barrier) and the demand on the shoulder itself is likely to be even less, and cyclists may still choose to use Saddle Road or Pahīatua Track.

212. I note that there will always be a risk and high-severity outcome for cyclists that are involved in a crash on a highway. However, based on the changes above, I consider the crash risk for cyclists has reduced since the road safety audit. I also note that the crash risks for cyclists on other sections of the wider transport network around the country are significantly higher than on this Project.

213. Regarding the safety of cycling on Saddle Road and Pahīatua Track, I refer to my prior comments on this, summarised below:

(a) The daily traffic volume on Saddle Road will reduce from ~10,600 vehicles per day in 2041 to 262 vehicles per day following completion of the Project. Assuming a peak hour is 10% of the daily traffic flow, the peak vehicle flow is expected to be 26 vehicles per hour (total) this is equivalent to one vehicle passing a cyclist every two minutes.

(b) Changes made to Saddle Road by the Transport Agency and partners during the closure of the Manawatū Gorge have provided additional width and improved safety, while posted speeds have been reduced.

(c) Cyclists are not able to travel at the same speed as vehicles, and the travel speeds across the three routes (Saddle Road, Pahīatua Track

and the Project) for cyclists are likely to be similar. Therefore, the travel distance has a much greater impact for cyclists. For many journeys, one of the existing routes will be the shortest distance. The existing routes are also generally more sheltered (specifically from wind), which is an important factor in travel speed and comfort for cyclists.

(d) The daily traffic volume on Pahīatua Track will reduce from ~6,800 vehicles per day in 2041 to 3,900 vehicles per day following completion of the Project.

214. Based on the above, I note that the Project will improve safety for cyclists on both Saddle Road and Pahīatua Track by removing traffic from the routes. I note that the traffic volumes on Pahīatua Track will remain relatively high which may discourage cycling, however, that it not an effect of the Project.

215. I consider the significant reduction in traffic, the improved road geometry and reduced speed limit on Saddle Road will make cycling it the preferred route for recreational cyclists. The biggest improvement on Saddle Road will be the reduction in traffic on the route which is as an effect of the Project.

216. Ms Fraser suggests additional mitigation and additional conditions are required (paragraphs 141 and 206) to provide for vulnerable road users between Ashhurst and Woodville. Based on my assessment above, I consider the Project provides an overall improvement for cyclists and no additional mitigation of consent conditions are required.

217. Mr Percy and Ms Copplestone (paragraph 161) make reference to the neutral assessment of effects for cycling and walking. I note that this assessment was prior to several improvements and associated conditions being proposed by the Transport Agency. Following the inclusion of enhanced provision at the SH3 Ashhurst Bridge, the linkage from Ashhurst to the Manawatū Gorge Scenic Reserve, the extension of the facility at the Woodville end of the Project, the significant reduction of traffic on the local roads, and the ability for cyclists to use an appropriately designed shoulder on the Project; I now consider this to be a positive to significant positive improvement for pedestrians and cyclists.

Construction effects / CTMP

218. Ms Fraser considers the CTMP should usefully include confirmation of heavy vehicle construction traffic routes, provide for the safety of vulnerable users along the busiest construction traffic routes and provide an indication of the

frequency of closures of the Manawatū Gorge Scenic Reserve carpark (paragraphs 99 and 141).

219. I note the proposed condition surrounding the CTMP notes the CTMP will address the following aspects:

    (a) Traffic control activities;

    (b) Impacts on pedestrians and cyclists;

    (c) Acceptable routes for construction vehicles and the expected frequency of heavy vehicle movements;

    (d) Briefing of truck drivers on appropriate routes, sensitive areas and points of pedestrian and cycle usage; and

    (e) Details on the traffic management measures for site access points.

220. I also note the intention for walking and cycling facilities to be provided on or adjacent to the Ashhurst Bridge and safety improvements through Ashhurst (as identified in paragraph 85 of Technical Report 1) to be provided prior to construction beginning.

221. Based on the above proposed improvements and the current wording of the condition for the CTMP I consider Ms Fraser's concerns have been adequately addressed and any further specification at this time would require more certainty around the construction methodology, sources of key resources, and associated traffic movements.

222. Ms Fraser suggests additional mitigation and additional conditions are required (paragraphs 141 and 206) during the construction phase. I consider that all of the additional mitigation is already covered by the current conditions and related components of the Project as discussed above.

Statutory documents

223. As noted by Ms Fraser (paragraph 128) there is agreement that the Project has good alignment with the GPS's strategic priority of access for economic opportunities and resilience.

224. Ms Fraser notes (paragraph 130) that no explanation is provided as to why the Project is strongly aligned to the RLTP. I note (as stated in Technical Report 1) that an alternative to the Manawatū Gorge is the number one priority in the RLTP and thus as the Project provides that alternative, it is

strongly aligned. I also note that the Project has full or partial alignment with all of the strategic priorities of the RLTP.

225. Ms Fraser notes (paragraph 132) that no explanation is provided as to why the Project is strongly aligned to the Transportation Objectives of the PNCC District Plan. I address how the Project aligns with each of the four objectives below.

    (a) The Project maintains and enhances the safe and efficient functioning of the roading network by removing strategic traffic from local roads (through Ashhurst, on Saddle Road, on Pahīatua Track and around Woodville) to improve overall efficiency and safety.

    (b) The Project protects the roading network, as identified in the roading hierarchy, from the potential adverse effects of all land use activities by restricting access to the new road and by removing traffic from local roads which have an access function.

    (c) The Project avoids, remedies or mitigates the effects of roads and vehicles on the amenity values of the City by removing vehicle traffic from urban streets (e.g. Salisbury Street in Ashhurst).

    (d) The Project maintains and enhances the use of public transport, walking and cycling as alternative modes to the private motor vehicle by providing an improved route for public transport and cycling compared with existing and provides enhanced walking facilities across the Ashhurst Bridge and through to the Manawatū Gorge recreational area. The removal of vehicle traffic on local roads also provides enhanced amenity and safety for active modes (compared with existing).

226. Ms Fraser notes (paragraph 134) that no explanation is provided as to why the Project contributes to the PNCC Active and Public Transport Plan. As discussed above, the Project provides an improved route for public transport and cycling compared with existing and provides enhanced walking facilities across the Ashhurst Bridge and through to the Manawatū Gorge recreational area. The removal of vehicle traffic on local roads also provides enhanced amenity and safety for active modes (compared with existing).

227. Ms Fraser questions (paragraph 135) the alignment of the Project with the MDC and TDC District Plans. Both the MDC and TDC District Plans have similar objectives and policies to the PNCC District Plan and as with the

PNCC District Plan the Project has full or partial alignment with these objectives and policies for the reasons discussed above.

Access

228. Ms Fraser suggests an additional condition is required (paragraph 206) to ensure DOC access is maintained to the northern section of the Manawatū Gorge Scenic Reserve. I consider this already covered by the current conditions, which support the need to maintain access.

229. Ms Fraser suggests an additional condition is required (paragraph 206) to provide a protected access to any viewing platform on the new Manawatū River bridge. It is my understanding that the Transport Agency has not committed to providing a viewing platform on the bridge itself, although this may be an opportunity identified during future design processes, and any viewing areas will have separate access from the Scenic Reserve carpark.

CONCLUSION

230. The closure of the Manawatū Gorge has had a significant impact on the safety, efficiency and reliability of the existing routes for all modes of travel, attributed to a major consequential increase in the traffic demand utilising local roads. Without the Project, it is expected that the performance of the existing routes will continue to worsen in future years.

231. The Project will have a significant positive effect on the transport network. The Project will improve resilience, increase capacity within the wider network, and improve safety and efficiency for general traffic and freight, including public transport and emergency services. It will improve route reliability by providing a route built to a higher standard that is more resilient to incidents and events.

232. The Project will redistribute traffic demand from the existing routes, which translates to an overall better environment for residents, pedestrians and cyclists on the local road network, particularly in Ashhurst, on Saddle Road and on the Pahīatua Track. Cyclists will also have the opportunity to utilise wide shoulders on the Project should they choose to travel over the new route.

233. I have read and responded to the submissions received on the NoRs relating to transportation effects. The key topics in the submissions are listed below:

    (a) Facilities for pedestrian and cyclists on the existing SH3 Ashhurst Bridge;

(b) Facilities for pedestrians and cyclists along the route;

(c) Facilities for pedestrians and cyclists from Ferry Reserve to Woodville; and

(d) Additional traffic through Woodville.

234. I have read and responded to the questions of the Hearing Panel relating to transportation aspects of the NoRs and consider that these points have been addressed or will form part of the detail design or CTMP agreements.

235. I have read and responded to the section 42A reports received on the NoRs relating to transportation effects. The key topics in these reports are listed below:

(a) Design considerations;

(b) Ashhurst area;

(c) Woodville area;

(d) Cycling;

(e) Construction effects / CTMP; and

(f) Statutory documents.

236. Overall the Project will have a significant positive effect on the transport network and the users of the transport system. In transport terms, I consider the Project should be progressed as a matter of urgency, with appropriate mitigation to manage the effects of construction and operational traffic redistribution.

David Dunlop

8 March 2019

APPENDIX A – SIDRA OUTPUTS

The following tables summarises the SIDRA outputs for the intersections assessed in Ashhurst and Woodville in 2041 with and without the project.

York Street

The following results are for the AM peak period (which is the worst period at this location). It should be noted that no right turn into York Street has been assumed in any of the models. The following table shows the performance is unacceptable with or without the project under the existing layout. The performance of a signalised seagull option (with the project demands) is shown for information only.

York Street (2041)	Do Minimum		With Project (existing)		With Project (signals)	
	Level of service	Average delay (s)	Level of service	Average delay (s)	Level of service	Average delay (s)
SH3 east approach	A	0	A	0.1	A	0.1
York Street approach	F	870.4	F	2818.0	B	13.8
SH3 west approach	A	3.9	A	2.2	B	15.4
Overall	**-**	**559.1**	**-**	**1047.4**	**A**	**9.0**

Cambridge Avenue

The following results are for the PM peak period (which is the worst period at this location). The following table shows the performance is acceptable without the project but unacceptable with the project under the existing layout. The performance of a signalised option (with the project demands) is shown for information only.

Options of a single combined access point (at either York Street or Cambridge Avenue) have also been considered and assessed. Both a signals option and a roundabout can provide acceptable performance for all movements (LOS D or better) in both peaks.

Cambridge Avenue (2041)	Do Minimum		With Project (existing)		With Project (signals)	
	Level of service	Average delay (s)	Level of service	Average delay (s)	Level of service	Average delay (s)
SH3 east approach	A	5.7	A	5.5	C	29.6
Cambridge Avenue approach	A	6.9	F	176.6	D	43.1
SH3 west approach	A	3.1	A	0.6	B	18.6
Overall	**-**	**5.3**	**-**	**57.8**	**C**	**29.0**

SH2 / SH3

The following table shows the performance is unacceptable with or without the project under the existing layout. The performance of a single lane roundabout option (with the project demands) is shown for information only.

SH2 / SH3 (2041)	Do Minimum		With Project (existing)		With Project (roundabout)	
	Level of service	Average delay (s)	Level of service	Average delay (s)	Level of service	Average delay (s)
SH2 south approach	F	147.2	F	851.3	C	31.3
SH2 east approach	A	3.4	A	2.1	C	31.2
North approach	C	22.0	F	142.9	B	18.1
SH3 west approach	A	5.2	A	6.4	C	21.1
Overall	**-**	**61.4**	**-**	**268.8**	**C**	**27.2**