

Memorandum

To: Megan Hankey, Mitchell Daysh
Cc: Kevin Kearney, Southern Link Property Limited
From: Natalie Hampson, Savvy Consulting Limited
Date: 31 July 2026
**Subject: Response to Minute 4 – Economics – Transport
Amendments**

Introduction

1. This memorandum has been prepared in response to Minute 4 from the Southern Link Inland Port expert panel dated 17 July 2026. The following request has been made by the panel for further information from Savvy Consulting:

[1b] ‘In relation to the Economic Assessment, the author is requested to revisit the conclusions regarding costs and disbenefits in section 9.2.2 in light of that information and advise if there is any change to the conclusions reached’.

2. “That information” refers to the request (at [1a] of Minute 4) for further information from Stantec on forecasts of heavy vehicle movement generation arising from operations at the Inland Port, assessment relative to the future receiving environment, an assessment on the efficiency and safety of selected intersections in Mosgiel and anywhere else in the transport network where the increase in vehicle movement is expected to be material, as well as information on any mitigation measures proposed.
3. In preparing this memorandum, I have adhered to the Code of Practice for Expert Witnesses.

Traffic Impacts, Including on Intersection Performance and Safety

4. For completeness, I understand Minute 4 to be referring primarily to the following statement contained in my Economic Report.

[Section 9.2.2] The Inland Port will cause increased heavy (and some light) vehicle movements through the main street (SH87) of Mosgiel township (including increased congestion and road degradation, and reduced road safety and air quality). These localised changes (which initially reflect a transfer of truck movements from elsewhere in the Dunedin road network – and a net overall reduction at the total network level) are discussed in more detail in the Integrated Transport Assessment.

Savvy acknowledges, but has not quantified (or monetised), the localised transport effects for the Mosgiel community (and associated road owners) but considers, based on conclusions in the Integrated Transport Assessment, that such economic costs would have only a minor offsetting effect on the transport related economic benefits for the total Dunedin urban area.

5. I have read the Integrated Transport Assessment (ITA) Addendum prepared by Stantec in response to Minute 4. Key findings that I draw from that Addendum are:
 - a. The Addendum further confirms the transfer of heavy vehicle movements associated with the consolidation of Icon, Port Otago and Fonterra container activity from one part of the road network (including but not limited to SH88) to the road network in and around Mosgiel (including Dukes Road North and SH87 (Gordon Road)). It also assumes that in the counterfactual, that growth in demand for warehousing activity (third party logistics) would have had the same/similar travel patterns as current container logistics activity and so the Inland Port also transfers those future heavy vehicle movements off central Dunedin roads and SH88 to the Inland Port (and local road network). While noting the challenges of increasing warehousing activity in the main Dunedin urban area in the counterfactual scenario (where modest but not significant growth was more likely *if* industrial zoning remained the same), I support that assumption.
 - b. The Addendum now calculates (Table 2.7) gross heavy vehicle movements on the local road network near the Inland Port of around 32,000 per annum on completion of Stage 3. In net terms across the whole Dunedin road network, this is stated as zero additional vehicle movements relative to the counterfactual, as a 100% transfer of these truck movements is assumed.¹ *This is not to say that there are no heavy vehicle movements on SH88 in the future with the Inland Port as some status quo container movements will be*

¹ The Economic Report estimated a minimum reduction of heavy vehicle movements of 30,000 per annum based on 2024 container trade within the main Dunedin urban area. This was an initial mode shift estimate, expected to increase as stages 2 and 3 were completed. This is in the same order of magnitude as the reduction in heavy vehicle movements Stantec has modelled on SH88 for Stage 3 (32,000).

retained where more efficient to do so. This is consistent with the assessment in the Economic Report.

- c. At the completion of Stage 3 of the Inland Port, heavy traffic movements generated by the Inland Port on the local Mosgiel road network equates to an indicative average of 125 movements per day, peaking at 150 movements per day during the busiest weeks of the year (primarily related to dairy and meat exports).
- d. There will be a net increase in heavy vehicle movements on SH87 north of SH1 (based on 2025 traffic data) from 540 on a weekday increasing to nearly 670 (growth of 24%). Relative to total traffic however, the additional heavy vehicle movements represent just under a 1% increase. Net increases may in fact be lower for reasons explained in the Stantec ITA Addendum.
- e. As underlying traffic volumes on SH87 north of SH1 are only expected to grow by a minor amount (5%) by the time Stage 3 is fully operational, the contribution of the additional heavy vehicle movements associated with the Inland Port would still not exceed 1% of the expected future average weekday total traffic movements.
- f. The addition of 130 to 150 heavy vehicles movements spread throughout each weekday is expected to have only a minor cumulative effect on peak hour congestion at the SH1 and SH87 intersection.
- g. The proposed (and conditioned) widening of Dukes Road North to enable the creation of a right turn bay into the Inland Port is expected to mitigate any congestion and safety effects associated with vehicle access into the Inland Port attributable to Inland Port traffic generation.
- h. There is ample capacity on Dukes Road North to accommodate the additional vehicle movements.
- i. NZTA has indicated that they did not consider any improvements were necessary to accommodate the additional movements associated with the Inland Port on the Dukes Road North/SH87 Gordon Road intersection, or the wider transport network (including along SH87 Gordon Road). Further intersection modelling of peak hour performance confirms no noticeable change in delays or queue length attributable to the Inland Port at the Dukes Road North/SH87 intersection.
- j. Although the Inland Port will add to heavy vehicle movements on SH87 Gordon Road through central Mosgiel, it is considered that the route of those vehicles (straight

through) would not contribute to a noticeable change in the risk of a crash involving a heavy vehicle and the crash rate is only expected to increase marginally.

6. In light of Stantec's further assessment, localised traffic impacts in and around Mosgiel not otherwise mitigated by the Applicant, appear to be only marginal/minor, and not to the extent that NZTA consider that further upgrades to the State Highway network are necessary. While peak hour travel delays and increases in crash rates (including property damage and/or injuries) can be monetised using NZTA guidelines for cost benefit analysis,² I do not consider that such quantification is warranted in this case.
7. By way of example, for another Fast-track application (Pound Road), the panel sought more information about the effects of the proposed industrial development on nearby intersections at different stages of the site's development.³ In that example, when the development had completed stage 2 of 4 stages, estimated to be in 2033, the development was expected to increase the number of vehicles using a State Highway/Arterial Road intersection in the AM peak by 235, and increase the number of vehicles in the PM peak by 250 vehicles. This increased the total projected number of vehicles using the intersection in each peak hour to 2,647 and 2,892 vehicles respectively. The additional vehicles attributable to the development increased the AM peak delay at the intersection by a net 5.4 seconds and the PM peak by a net 17.9 seconds (with total delays being 23.2 seconds and 39.5 seconds per vehicle respectively). Conservatively for that assessment, the traffic modeller and I assumed that the development contributed to delays outside of just the peak hours and so delays were scaled upwards. We also applied the congestion effect over 365 days. When I applied the NZTA composite 'value of time' \$/hr/vehicle for urban arterial roads, the total increase in congestion at the intersection attributable to completion of stages 1 and 2 of that development had a total cost per annum of \$1.29 million (in 2021 dollars).
8. By comparison, the ITA Addendum tested the impact of the fully developed Inland Port on the Dukes Road North/SH 87 intersection. This intersection is operating at Service Level B compared to Service Levels D-E in the example above and with a much smaller number of total vehicles using the intersection at peak times. Using a worst-case scenario, Stantec

²NZ Transport Agency Waka Kotahi 'Monetised Benefits and Cost Manual 2025'. This manual is "the industry standard for the economic evaluation of land transport activities." For completeness, I have included the two relevant tables for measuring the value of travel time and weighted average cost per crash from the Manual in Appendix A of this memorandum.

³ The following describes the congestion impact, but that same assessment also quantified (monetised) the marginal increase in crash rate attributable to the proposed development. A marginal increase of 0.11 equated to an estimated \$50,177 increase in crash related injury costs per year at the end of stage 2 of that development.

increased the peak hour traffic volume at the intersection by 30 heavy vehicles, which is a fraction of the additional load caused by the development in the example above. The increase in delays or queue lengths “are all forecast to be less than 2 seconds” per vehicle in both the morning and evening– which is also only a fraction of the delays caused by the development referred to above. Furthermore, there is no reason to scale up the congestion effect to other hours of the day for the Inland Port, nor would peak hour congestion impacts apply 365 days of the year (with the ITA Addendum applying weekday only operation for the Port). When taking into account all of these substantial differences, it follows that any impact of the Inland Port on peak hour Dukes Road North/SH87 intersection congestion will be only a fraction of the \$1.28 million of socio-economic cost modelled in the Pound Road example.

9. Further, the point remains that economic costs to road users in and around Mosgiel are still expected to be offset (to an even greater extent) by economic benefits to road users elsewhere in the Dunedin road network.
10. While the Economic Report in Section 9.2.2 accounted for potential transport impacts assessed in the ITA only briefly (and at a high level), taking into account the ITA Addendum prepared by Stantec, I remain of the opinion that such economic costs (even if quantified) would have only a minor offsetting effect on the widespread and significant transport related economic benefits of the Project for the total Dunedin urban area. That is, the ITA Addendum does not lead me to change the conclusions on other Project costs and disbenefits in the Economic Report.

Appendix A – NZTA Monetised Benefits and Costs Manual (v2)

Table 16: composite values of travel time (\$/h/vehicle July 2021)

Road category and time period	Composite value of time (\$/h/vehicle)	Maximum increments for congestion (CRV \$/h/vehicle)
Urban arterial		
Morning commuter peak	33.37	24.79
Daytime inter-peak	35.75	25.12
Afternoon commuter peak	33.57	24.43
Evening/night-time	33.56	23.79
Weekday all periods	35.52	25.48

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3. Benefits > 3.6 Impact on network productivity and utilisation

Road category and time period	Composite value of time (\$/h/vehicle)	Maximum increments for congestion (CRV \$/h/vehicle)
Weekend/holiday	36.05	27.00
All periods	36.01	26.17
Urban other		
Weekday	35.66	25.76
Weekend/holiday	36.36	27.33
All periods	36.14	26.38
Rural strategic		
Weekday	48.52	32.33
Weekend/holiday	48.53	34.99
All periods	47.04	32.24
Rural other		
Weekday	48.17	32.24
Weekend/holiday	47.34	34.81
All periods	46.55	32.13

Table A36: cost per crash for different site/type

Crash site/type	Cost per crash by speed limit area (\$000 July 2021)		
	30–50km/h	60–70km/h	80–110km/h
Mid-block	554	1,036	1,437
Intersection crashes:			
Uncontrolled T	520	676	1,252
Roundabout	420	445	667
Priority T & Y	514	689	1,373
Priority X	469	623	1,532
Signalised T, Y	518	759	1,659
Signalised X	451	662	977
All other sites	503	745	1,181