

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of proposed Plan Change G: Aokautere Urban
Growth to the Palmerston North City Council
District Plan

JOINT WITNESS STATEMENT OF TRANSPORTATION EXPERTS

14 November 2023

INTRODUCTION

1. This joint witness statement relates to proposed Plan Change G: Aokautere Urban Growth (**PCG**) of the Palmerston North City Council District Plan. It addresses transportation, in particular those matters relating to safety.
2. This expert witness conferencing was held on 14 November 2023 at Palmerston North City Council. It was facilitated by Mark St. Clair. The scribe was Olivia Sinnema.
3. The traffic experts attending the conference were:
 - (a) Ms Harriet Fraser (**HF**) for Palmerston North City Council; and
 - (b) Mr Glenn Connelly (**GC**) for Waka Kotahi – New Zealand Transport Agency (**WK**).

CODE OF CONDUCT

4. This joint witness statement is prepared in accordance with section 9.5 of the Environment Court Practice Note 2023.
5. We confirm that we have read the Code of Conduct for Expert Witnesses contained within the Environment Court Practice Note 2023 and agree to abide by it.

PURPOSE AND SCOPE OF CONFERENCING

6. The purpose of this expert conferencing was to identify, discuss, and highlight points of agreement and disagreement on traffic (safety) issues arising from the s 42A reports and submitter evidence filed with the Hearing Panel.
7. The scope of issues covered at the expert conference included:

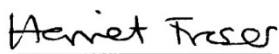
- (a) The existing environment;
- (b) The Palmerston North Integrated Transport Initiative (PNITI);
- (c) The effect of PCG residential development on State Highway 57;
- (d) What mitigation measures are required and when they are required;
- (e) The key matters that need to be taken through into the PCG provisions of the District Plan.

AGREED MATTERS

- 8. Refer to Annexure A.

DISAGREEMENT AND REASONS

- 9. Refer to Annexure A.



Harriet Fraser



Glenn Connelly

Dated: 14 November 2023

ANNEXURE A

In the matter of PCG– Traffic (Safety)

Issue		Statements	Agreed position, with reasons	Disagreements, with reasons
Topic 1: Existing environment				
1.1	Flows/volumes	The traffic flow data in HF's transportation assessment, and GC's evidence are factually recorded data.	Reference to Figure 3 in GC evidence for State Highway flows. HF and GC agree that in the SH57 Aokautere count, there is an increase of approximately 1600 vpd between 2016-2017, which is coincident with the Manawatu Gorge closure.	
1.2	Physical environment	Factual information is contained in the evidence of HF and GC.	HF and GC agree that this information is an appropriate basis for assessment.	
1.3	Safety – crash history and the Safe System Audit	Factual information is contained in HF and GC evidence. The Safe System Audit (SSA) was commissioned by PNCC and undertaken by WSP, with recommendations provided.	HF and GC agree that the existing and historic recorded crash data shows no fatal or serious crashes over latest 10 years, with a low-medium collective risk and low personal risk.	
1.4	Capacity – observations and SIDRA modelling	Observations and analysis show the existing SH57 intersections between Old West Rd and Johnstone Drive performing well overall. For right turns out from side roads at busy times, there are some existing queueing and delays.	The agreement between HF and GC on this statement are based on observations by HF and GC, and SIDRA software modelling.	

Issue		Statements	Agreed position, with reasons	Disagreements, with reasons
Topic 2: Palmerston North Integrated Transport Initiative (PNITI)				
2.1	Growth included for Aokautere	<p>Aokautere is marked as an area for residential growth in the short, medium, and long term programmes in the PNITI Network Options Report January 2021 (Figures 01-03).</p> <p>In developing the programmes, traffic modelling was undertaken to test future scenarios.</p> <p>The only projects identified in PNITI for SH57 Aokautere Drive, is a sub option in the longer-term programme for a route upgrade (Figure 0-3).</p>	<p>HF and GC agree that it is not stated how the Aokautere residential growth was represented in terms of dwellings or additional traffic flows.</p> <p>PNITI is a strategic city-wide study. The analysis undertaken as part of PCG has a greater consideration of the local traffic characteristics.</p>	
2.2	Reported traffic modelling for SH57	<p>HF s 42A report at [25] – Figure 13.4 in PNITI Report shows forecast base year flows for 2031 of 7,400 vpd on SH57 to the east of Pacific Drive compared with December 2022 counts of 12,345 vpd to the west of Ruapehu Drive in front of the Summerhill shopping centre.</p>		<p>HF considers that the modelled flows for this section of SH57 appear to be low.</p> <p>GC considers that it is unclear as it is largely diagrammatic, lacking numeric values.</p>
Topic 3: Effect of residential development on SH57				
3.1	The contribution of trip generation	<p>The use of surveyed trip generation is good practice and the observed rate falls within the standard range.</p>	<p>HF and GC agree that this is a useful tool and basis for assessment.</p>	

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3.2	The contribution of trip distribution	The trip distribution is based on observed intersection turning patterns which demonstrates the majority of vehicle movements are to and/or from the city direction.	HF and GC agree that this is a useful tool and sound basis for forecasting vehicle movement and direction.	
3.3	The contribution of active modes and buses	Additional pedestrian activity as a result of the PCG development is limited due to the distance from SH57. There is expected to be additional cycling and bus use.	HF and GC agree.	
3.4	The effects on SH57	<p>The effects on SH57 are primarily associated with the additional vehicle movements from the development of PCG area on the intersection capacity (delays and queuing), and safety for all road users along the SH57 corridor.</p> <p><u>Intersections</u></p> <p>Each of the intersections of Summerhill Drive, Pacific Drive, and Johnstone Drive with SH57 Aokautere Drive have been modelled with the full development traffic from the PCG area. The modelling results show all three intersections performing with an overall level of service A (which is the best of 6 levels of operating characteristics). Within the detail of the modelling, the right turns out from the side roads are shown as having a level of service C and being reliant on the use of the median to make the turn in two parts.</p>	<p>HF and GC agree.</p> <p>HF and GC agree that observations of existing driver behaviour show many drivers giving way to both streams of traffic rather than using the median. If this continues, the levels of service of the right turns out will deteriorate to a lower level of service than shown in the forecast modelling. If the level of service for an individual turn is forecast to deteriorate to level of service F, then HF and GC agree that mitigation should be considered.</p>	

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	<p><u>Safety</u></p> <p>The current 70km/h speed limit on SH57 between Old West Road and Johnstone Drive presents a risk of death or serious injury for all road users.</p> <p>Waka Kotahi has current plans to improve safety for all road users which include:</p> <ul style="list-style-type: none"> • Lowering the speed limit which will be assessed in the 2024-2027 Speed Management Plan with a likelihood of 50km/h or 60km/h; • Improvement to cycle facilities from Summerhill Drive through to Pacific Drive with detailed design near completion; • Resealing planned in February 2024 allows for reallocation of carriageway space, which could include a wider shoulder on the southern side between Johnstone Drive and Pacific Drive; • Facilities to assist pedestrians and cyclists crossing SH57, including upgrading the existing pedestrian refuge in front of New World and potentially an additional crossing east of Pacific Drive. 	<p>HF and GC agree.</p> <p>HF and GC agree that there are safety benefits associated with the planned Waka Kotahi works, noting that the speed limit reduction is subject to consultation, and funding subject to confirmation. HF and GC agree that these would address the short-term safety concerns.</p>	

Issue		Statements	Agreed position, with reasons	Disagreements, with reasons
		As development of the PCG area progresses, this will exacerbate existing and introduce additional safety effects, it will add to the need for upgrading of the intersections.	HF and GC agree.	
Topic 4: Mitigation – what is required to address any adverse and/or capacity effects				
4.1	<p>Mitigation with full development of PCG area</p> <ol style="list-style-type: none"> 1. SH57 Old West Road Aokautere Drive intersection 2. SH57 Aokautere Drive Pacific Drive intersection 3. SH57 Aokautere Drive between Johnstone Drive and Pacific Drive 	The long-term mitigation builds on the WK short-term works, noting there is a particular reliance on the speed reduction.	<p>HF considers that either a roundabout or signals will be needed to mitigate adverse safety and capacity effects. From a capacity perspective, will be needed for efficient right turn out from Old West Road and Pacific Drive. From a safety perspective, HF relies on the SSA.</p> <p>HF considers that with full development, improved facilities along and across SH57 Aokautere Drive between Johnstone Drive and Pacific Drive will be needed. In the short-term, this will be addressed by the WK currently planned corridor improvements (as listed at topic 3.4). In the longer term, the intersection upgrades can assist with delivering safe crossing for cyclists and pedestrians and a minimum of a shared active mode facility is needed along the southern edge of that section of SH57. Any upgrade of the Johnstone Drive SH57 intersection is likely to be led by safety rather than capacity.</p> <p>GC considers for both SH57/Old West Road intersection, and SH57/Pacific Drive intersection that the traffic volume is likely to necessitate a</p>	

Issue		Statements	Agreed position, with reasons	Disagreements, with reasons
			<p>fundamental change in intersection control (such as signals or roundabout) to appropriately safely and efficiently cater for future traffic.</p> <p>GC considers it would be desirable to have footpaths on both sides of SH57 between Johnstone Drive and Pacific Drive, noting however a shared facility may be more economic and practical to construct. Particularly, as this limits the need for pedestrians to cross SH57 unnecessarily.</p>	
Topic 5: Mitigation – when its required				
5.1	Short, medium, or long-term	<p>It is anticipated that the speed limit will be reviewed in the short-term and lowered via the 2024-2027 Speed Management Plan along with additional corridor upgrades.</p> <p>On the assumption that the short-term works have been undertaken, at some time in the medium to long term, the level of development in the PCG area will result in adverse effects on capacity and safety, triggering the need for additional mitigation (as stated at Topic 4.1).</p>	<p>HF and GC agree.</p> <p>HF and GC agree.</p>	
5.2	Triggers/thresholds for each of safety and capacity	The threshold for safety in terms of the speed environment has already been reached based on the assessed Safe and Appropriate Speed being lower than the existing speed limit.	HF and GC agree.	

Issue		Statements	Agreed position, with reasons	Disagreements, with reasons
		<p>The threshold for intersection upgrades in terms of capacity is whichever is first of:</p> <p>(a) a forecast level of service D or worse for the overall intersection; <u>or</u></p> <p>(b) a forecast level of service F for an individual movement.</p> <p>There is a pedestrian crossing assessment tool that may be applicable to determining whether further upgraded crossing facilities are needed ahead of the intersection upgrades, both in terms of convenience/delay, and safety.</p>	<p>HF and GC agree.</p> <p>HF and GC need to undertake further analysis to determine the appropriate threshold/s for pedestrian crossing assessment. HF and GC agree to undertake and provide this prior to the hearing.</p>	
Topic 6: Key matters to be taken through into the District Plan provisions				
6.1	Matters discussed in topics 4 and 5	The topics discussed in topics 4 and 5 of this joint witness statement will need to be addressed in the PCG provisions of the District Plan.	HF and GC agree.	