

**Before Independent Hearing Commissioners
In Ngāruawāhia**

Under the Resource Management Act 1991

In the matter of of submissions and further submissions by NZ Transport Agency (Waka Kotahi) (submitter 742, further submitter 1202) on the Proposed Waikato District Plan

**Summary Statement of Evidence of Robert Swears for Waka Kotahi -
Transportation**

15 October 2020

1 Qualifications and experience

1.1 My full name is Robert Clive Swears. I confirm I have the qualifications and experience described in my evidence in chief (**EIC**) dated 29 September 2020. I also confirm that in preparing this summary statement I have complied with the Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2014).

2 Summary of evidence

2.1 My evidence focuses on the trip generation¹ rules and the need for Integrated Transportation Assessments (**ITAs**) to support resource consent applications involving traffic generating activities where those activities may result in adverse effects on the transport network.

2.2 The Proposed Waikato District Plan (**PWDP**) should include provision for appropriate levels of transportation assessment for land use activities. These provisions should be based on a weighted traffic volume versus road hierarchy matrix such as the approaches adopted by Hamilton City, Waipa District, and Thames-Coromandel District.

2.3 Mr Wood has prepared an amendment to the trip generation rules, which is attached as Annexure B of his summary statement. I note that:

- a Equivalent car movements (**ECM**) have been used to take into account the relative effect of the heavy vehicles associated with a land-use activity. This approach alleviates the need for percentages of heavy vehicles to be considered separately as a proportion of the total trip generation associated with an activity. Instead, the rule is a simple approach for determining if analysis is required and, if so, the nature of that analysis. While an ECM approach would not be used in traffic modelling (because percentages of heavy vehicles can be incorporated within the modelling) the approach provides a clear and simple mechanism through which the need for analysis can be determined.
- b The permitted activity standards have been set depending on the ECM for the land use activity and the classification of the road from which that land use gains access. As noted in my EIC², while I would prefer the analysis to be based on the roads most affected by an activity, I have not been able to

¹ Trip generation is often referred to as traffic generation. While there are arguable subtle differences between them, for the purposes of the District Plan they essentially mean the same thing.

² Paragraph 5.12.

identify a simple criteria by which this can be achieved, therefore, the proposed rule is based on the access road.

- c Where resource consent is required, the proposed provisions clearly set out the level of information required for ITAs depending on the ECMs generated and the hierarchy of the road from which the activity gains access.

2.4 This approach is to be preferred to the notified version of the PWDP (further explained at paragraphs 3.3 to 3.6 of my summary) because it sets appropriate ECM limits for new land use activities, clearly specifies what level of information would be required for any application for resource consent, and puts in place relevant assessment criteria.

2.5 My EIC also addresses the following issues:

- a The trip generation rates included in the notified version of the PWDP are only partially aligned with the trip generation rates generally accepted by transportation experts. Including a copy of the Waka Kotahi research report 453 trip generation rates table³ in the PWDP would ensure the requirements of the PWDP are aligned with the most frequently used industry source.
- b Tables in the PWDP that have “speed limit” or “design speed” as a column heading should have those headings changed to “85th percentile operating speed (or if not known, posted speed limit +10 km/h)”.

3 Comments on Ports of Auckland rebuttal evidence

3.1 I have read the rebuttal evidence of Mr Arbuthnot for Ports of Auckland Limited dated 6 October 2020. I confirm that my position set out in my primary statement of evidence dated 29 September 2020 remains the same, subject to the additional comments as set out below.

3.2 Mr Arbuthnot considers (paragraph 2.10) that the PWDP already provides the mechanism to enable the traffic effects of a development to be considered.

3.3 While I partly agree with Mr Arbuthnot in that the PWDP provides a mechanism to enable the traffic effects to be considered, the mechanism provided under 14.12.1.4 P4 is based on varying trip generation for different zones and simple thresholds in terms of heavy vehicles. One of my concerns in relation to the varying rates and thresholds is that these do not adequately allow for the effects associated with heavy vehicles. For example, 14.12.1.4 (l)(c) sets thresholds

³ Table 7.4 from Trips and Parking Related to Land Use (2011) (NZ Transport Agency research report 453)

based on “[...] a maximum of 300 vehicle movements per day, and no more than 15% of these vehicle movements are heavy vehicle movements [...]”. From an equivalent car movement perspective, a land-use activity could have 299 vehicle movements all of which involve light vehicles; the resultant total would be 299 equivalent car movements. However, a land-use activity could also have 299 vehicle movements of which 14% involve multiple unit heavy vehicles; the resultant total would be 466⁴ equivalent car movements. Clearly, there could be a significant difference between the effects of the two land use activities, however, they are both permitted activities under the rules currently in the Proposed Plan.

- 3.4 The rule proposed by Mr Wood, as updated in his summary statement dated 15 October 2020, allows for a simply weighted comparison to be applied depending on the magnitude and nature of the trip generation associated with any land-use activity.
- 3.5 With regard to Rule 14.12.2 RD4, the matters of discretion are not clearly defined from a transport engineering perspective. In particular:
- a The term “trip characteristics” is not clearly defined and could be interpreted to relate to the modes of transport, the directional distribution of journeys, vehicle occupancy, single purpose or linked trips, and so on.
 - b It is not clear from a road safety engineering perspective as to what is meant by “(b) Safety for vehicles and pedestrians” and “(c) Road network safety and efficiency, particularly at peak traffic times”.
- 3.6 In my opinion, the amended criteria for matters of discretion proposed by Mr Wood are more appropriate because they are more precise and provide more clarity than those contained in the PWDP.
- 3.7 Mr Arbuthnot refers (paragraph 2.5) to the Horotiu Industrial Park and to the “[...] maximum permitted traffic generation of 15.4 trips/ha gross land area during the peak hour.” The trip generation rate to which Mr Arbuthnot refers is applied through the Waikato Regional Transport Model (WRTM) and is widely accepted. Notwithstanding my concerns in relation to the WRTM, as noted through other statements of evidence in relation to the PWDP, I consider that the WRTM is presently the best available transport model for use in Waikato District.

⁴ $299 \times 0.86 + 299 \times 0.14 \times 5 \text{ ecm} / \text{multi-unit heavy vehicle} = 466.4 \text{ ecm}$

3.8 With regard to the Horotiu Industrial Park, while I was not involved in the Environment Court process, my understanding is that development of the area has already been defined and a transport assessment has been undertaken. On this basis I do not oppose the specific exemption from the rule proposed by Mr Wood provided that development within the Industrial Park is carried out in accordance with the decision of the Environment Court.

Robert Clive Swears

15 October 2020