

PROPOSED PORIRUA CITY DISTRICT PLAN - HEARING 4 (TRANSPORT ENGINEERING)

SUMMARY OF STATEMENT OF EVIDENCE

- 1.1 My name is Robert Clive Swears. I prepared for this hearing a primary statement of evidence dated 21 January 2022 relating to transport engineering. My qualifications and experience are set out in my primary statement. I reaffirm that I have read and continue to comply with the Code of Conduct for Expert Witnesses (2014).
- 1.2 I attended expert witness conferencing in relation to provisions of the PDP associated with transport and we prepared a Joint Witness Statement ('JWS') dated 3 February 2022. I have read those portions of the supplementary planning evidence provided by Mr Smeaton and Mr Rachlin that are relevant to my primary statement. Set out below is a summary of my primary evidence, updated to reflect my position following the review of those statements and my involvement with the transport engineering expert conferencing.

Summary

- 1.3 In the table below I have listed the key points from my primary statement and documented whether they have been addressed through the JWS.

Matter	Paragraphs in statement	Resolved through JWS?	JWS Ref
Clarification of the definition for annual average daily traffic	3.1	No. However, s42A report recommends accepting Waka Kotahi submission	N/A
Signs visible from a state highway	4.2 - 4.3	Not considered in conferencing	N/A
Separation of advertising signs from safety critical components of the network	4.4 - 4.8 4.26 - 4.31	Not considered in conferencing	N/A
Measuring content of advertising signs	4.9 - 4.17	Not considered in conferencing	N/A
Sign separation distances	4.18 - 4.25	Not considered in conferencing	N/A
Reference sources for designing walking and cycling facilities	5.1 - 5.3	No	b
Parking and cycling widths	5.4 - 5.19	Yes	c and App. A
Sight distance measurements	5.20 - 5.22	Yes	d
Equivalent car movements	6.1 - 6.7	Yes	h
Threshold above which analysis of transport engineering effects is required	6.8 - 6.9	Not considered in conferencing, but resolved through ECM as above	N/A

Signs Visible from Highway (4.2 – 4.3).

- 1.4 Although the Waka Kotahi submission relates to signs being visible from a highway, given the same traffic volumes, alignment, operating conditions, and so on, I consider it unlikely that the effect on road users of signs visible from the road would vary significantly based on the type of road from which the sign is visible.
- 1.5 As noted in my primary statement (4.2), the issue is not whether signs are within a given distance from a highway, but rather whether they can be seen from the highway and have the potential to distract road users. There are various factors to consider in relation to the likely effects of advertising signs on road users, therefore, I consider the simplest way to address the matter is to apply restrictions in relation to advertising signs based on whether they can be seen from the

highway. Provided the size of a sign does not proportionally increase based on distance from the highway, it may be acceptable to have signs visible from the highway, provided the message on those signs is of a size such that it is effectively illegible to road users and the sign is an unobtrusive part of the background. In his supplementary evidence, Mr Rachlin (paragraph 31) states that he continues to have “[...] concerns regarding the introduction of the term “visible from a state highway” [...]”. I do not agree with those concerns.

Separation of Advertising Signs from Safety Critical Components of The Network (4.4 - 4.8, and 4.26 - 4.31)

- 1.6 If signs can be seen from the highway (or any road for that matter) they present the potential to cause distraction. Therefore, if such distractions are to be permissible within the PDP (that is, signs can be visible), I consider they should be positioned away from locations where the demands on road users and the consequences of road user mistakes are highest. Acknowledging there is variety in the level of roadside development around Porirua, signs should be adequately separated from safety critical components of the road network.
- 1.7 I agree with Mr Rachlin (paragraph 23 supplementary statement) that safety critical features of the transport network should not be obscured by signage. However, I consider that the adverse effects of signs are not limited to the potential they will obscure transport infrastructure, but also that they will distract road users.
- 1.8 The separation distances described in the table at paragraph 4.31 of my primary statement are potentially suitable for separation between advertising signs and safety critical locations on the transport network. In my opinion, where demands on road users are greatest, the District Plan should minimise the additional demands that can be placed on road users as a result of signage that could readily be located elsewhere.

Measuring Content of Advertising Signs (4.9 - 4.17)

- 1.9 From a transport engineering perspective, a common issue is that a consent for a sign does not ordinarily relate to the specific content on the sign for the life of the sign. As illustrated in Figure 2 and Figure 3 of my primary statement, there can be significant differences in the content of a sign. Therefore, taking into account the limited ability of road users to comprehend and respond to the various messages presented to them, I have proposed a simple method for defining elements on a sign so that the complexity of the sign is managed in addition to the matters ordinarily addressed through conditions of consent. I note that in his supplementary statement, Mr Rachlin does not appear to have addressed my proposed approach.

Sign Separation Distances (4.18 - 4.25)

- 1.10 As noted in my primary statement, the effect of a sign on a road user's ability to focus on the driving task is not necessarily a function of the supporting structure of the sign, but rather is a function of the content of the sign, its location relative to the road user, and its location relative to other features that have the potential to distract road users.
- 1.11 From a transport design perspective, signs intended to inform road users should be separated from each other to provide road users with sufficient time to comprehend the sign message and react to that message. This applies to all signs, including those “official” signs where road users need to be informed of more than one issue for a given specific location.
- 1.12 Notwithstanding my concerns regarding advertising signs being visible from the highway network, I consider it important that advertising signs (whether freestanding or supported on a structure such as a building) are adequately separated in order to minimise the potential for distraction to drivers and / or information overload at any given location.

Reference Sources for Walking and Cycling (5.1 - 5.3)

- 1.13 The existing provisions reference an incorrectly titled and soon to be replaced Waka Kotahi guide and an Austroads guide that could readily be confused with another Austroads guide. In my primary statement (5.3) I proposed to refer to specific authors (not documents), with priority given to Council. However, in the conferencing I updated my position and now consider that the District Plan should refer to (and give preference to) the Waka Kotahi guidance first, followed by Austroads, and then the Council guidance (JWS b(ii)).
- 1.14 Ms Crafer and Ms Fraser agree (JWS (b)(i)) that Waka Kotahi guidance is useful, however, they raise concerns regarding that guidance where it is a web-based resource. I agree with them that guidance presented in an HTML format can be more difficult to reference than guidance presented in a PDF or physical document form. However, neither expert has disagreed with the prioritisation I applied to guidance for the design and / or development of walking and cycling facilities.
- 1.15 In his 4 February 2022 supplementary statement, Mr Smeaton considers (paragraph 145) my approach “[...] would create a complex and potentially confusing standard within the PDP [...]”. In my opinion, resolvable difficulties in defining guidelines to be used for designing facilities for the most vulnerable road users should be overcome so that the latest applicable guidance is applied for walking and cycling design in Porirua and that the PDP is a document which anticipates and accommodates change in design guidance.

Parking and Cycling Width (5.4 - 5.19)

- 1.16 I agree with the basic approach described in Appendix A of the JWS; namely that where cyclists can travel at a similar speed to motor vehicles, and traffic volumes are relatively low, it is acceptable for cyclists to share traffic lanes. Where motor vehicle volumes and / or operating speeds increase, dedicated facilities should be provided for cyclists. The primary concept in Appendix A of the JWS with which I disagree (refer JWS (c)(ii)) is the “acceptance” of gradients that discourage walking and cycling, and potentially force cyclists to travel at a speed that is significantly different from the motor vehicles with whom they share traffic lanes. However, my primary statement did not consider gradients, therefore, I have not considered the matter in this statement.
- 1.17 In my primary statement I referred (paragraph 5.19) to the table being expanded to include design speeds higher than 50 km/h. However, given that for a target operating speed of 60 km/h a shared path is required, I consider that if there is a need for provision to be made for cyclists adjacent to roads with operating speeds greater than 50 km/h, the table clearly indicates that the facilities for cyclists should not be on the road.
- 1.18 The concerns I raised in my primary statement regarding parking and cycling widths have been largely addressed through the conclusions of the JWS.

Threshold Above Which Analysis of Transport Engineering Effects Is Required (6.8 - 6.9)

- 1.19 I consider that setting a limit of 100 equivalent car movements (as agreed in JWS (h)(i)), rather than “100 vehicle trips”, addresses my key concern that all vehicle movements are not equal. In his supplementary statement Mr Smeaton (paragraphs 183 – 185) agrees with the ECM approach.