

Before an Independent Hearings Panel at Waimakariri District Council

under: the Resource Management Act 1991
in the matter the Proposed Waimakariri District Plan
of:

Right of Reply – Shane Isaac Binder

On behalf of Waimakariri District Council

Hearing Stream 12D – Ōhoka RIDL

Dated: 3 December 2024

File Note: DDS-14-08

INTRODUCTION

1. My full name is Shane Isaac Binder, and I am the Senior Transportation Engineer for the Waimakariri District Council. My qualifications and experience are set out in full in my evidence-in-chief.
2. I have read the evidence provided by submitters for the initial and reconvened Hearing Stream 12D – Ōhoka RIDL.
3. I have prepared this Council reply on behalf of the Waimakariri District Council (Council) in respect of matters raised through Hearing Stream 12D.
4. I am authorised to provide this evidence on behalf of the Waimakariri District Council.

CODE OF CONDUCT

5. Although this not an Environment Court hearing, I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note dated 1 December 2022. I have complied with the Code of Conduct in preparing my evidence. Except where I state I rely on the evidence of another party, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

PROVISION OF TRANSPORT NETWORK IMPROVEMENTS

6. As noted in the Stream 12C/D Joint Witness Statement (Cumulative Transport Effects) I agree with the other experts that the Tram Road corridor will likely be able to accommodate additional traffic and maintain satisfactory operational levels of service.
7. There is general agreement in the JWS that the SH1 motorway Tram Road interchange will operate with a failing level of service with full development as proposed along the corridor. In response to Mr Fuller's comments on this failure¹, I note that Michael Blyleven, NZTA Principal Transport Planner, reiterated by email to me that "*NZTA have no plans to improve [the] Tram interchange, nor is it likely to receive priority funding in the near future.*" I also note that options to upgrade the interchange are constrained by its current design and that NZTA have confirmed that the changes proposed as part of the development rules will require significant and costly works to widen or replace the existing overbridge. Finally, I note that any changes to the interchange ultimately will be approved, funded, and implemented by NZTA, and Council does not control this process. In my opinion, this introduces significant uncertainty in relation to funding, timing, and feasibility of critical upgrades at this location.
8. Mr Fuller further made reference to "transport upgrades that are required to mitigate the effects of the proposed Ōhoka rezoning."² I want to reiterate that the Stream 12D Joint Witness Statement (Transport) considered the applicant's proposed development rules, including intersection upgrade requirements, as a baseline for our conferencing. However, at no time did we evaluate the adequacy (e.g., how much does it address safety deficiencies or risks) or realistic feasibility (e.g., timing, cost) of those requirements. I address the continued high traffic safety risks and unmitigated deficiencies in more detail in the next section.

¹ Reconvened hearing evidence of Mr Fuller, para 11

² Reconvened hearing evidence of Mr Fuller, para 6

9. I note that since the JWS was signed, construction of the Bradleys / Mchughs Roads roundabout has been delayed a further three years due to a lack of any identified Government funding. I also note that none of the improvements listed in the applicant's planning rules have identified any funding or responsible party. I consider these as examples of the uncertainty in implementing necessary improvements not already identified in Council's long-term planning and budgeting.
10. As the applicant's proposed planning rules do not identify funding or implementation details for the intersection upgrades, they lack a well-defined process to implement mitigation of deleterious traffic safety effects. It appears rather that they rely on an unpredictable Council Long-Term Plan process which would require deferring previously-prioritised District-wide infrastructure projects in order to address the existing (and potentially newly created) safety deficiencies in the Mandeville/Ōhoka area, or raising rates across the district.
11. I have sourced high-level cost estimates for four of the six identified intersection upgrades proposed by the applicant from NZTA planning tools (chiefly the Standard Safety Intervention Toolkit) and cost estimates for similar project in existing Regional Land Transport Programmes. I note that no design or alternatives evaluation has been carried out on these projects, so any site-specific improvement is subject to change. I did not include the Bradleys / Mchughs Road roundabout and Tram Road widening (Bradley to Jacksons Road) as these two projects are already included in Council's Long Term Plan, even if Government co-funding has not been secured at this point.
12. Based on these high-level costs, I estimate that the applicant's proposed intersection upgrades could cost between \$15 and \$34 million (not including the Bradleys / Mchughs Road roundabout and Tram Road widening (Bradleys to Jacksons Road)). For comparison, Council has set out \$9.7 million in total spending on this section of Tram Road over the 30-year Infrastructure Strategy while Council's total growth-driven roading spend for the entire district over the same 30-year period is approximately \$140 million³. I also note that recent uncertainty over Government funding suggests an increasing possibility that this roading budget may actually require additional ratepayer funding.
13. In this budgetary context, the unfunded intersection upgrades proposed by the applicant likely have a significant additional cost to complete, equal to a 11-24% increase on top of the total projected roading spend over the next three decades. I do not consider it appropriate for the applicant to rely on ratepayers to fund the majority or all of this cost through the Long Term Plan process. If this submission were to be approved, I consider that this funding should be expressly identified and agreed with the applicant prior to any rezoning.
14. I do not support this application in its entirety due to insurmountable transport effects. However, as noted in the Stream 12D Joint Witness Statement (Transport), should it be approved, I consider a Discretionary activity status to be appropriate for the development due to the lack of certainty around improvement implementation and a lack of clear triggers for traffic safety impacts. I would further consider Non Complying activity status around SH1 motorway / Tram Road interchange upgrades due to the potential operational and safety effects to a State Highway. I note other rezoning requests considered in the Stream 12C/D Joint Witness Statement (Cumulative Transport Effects) are likely to exacerbate the traffic effects these rules are attempting to mitigate.

³ Waimakariri District Council Infrastructure Strategy (Long Term Plan 2024-2034), Figure 4.13

TRAFFIC SAFETY EFFECTS

15. The Stream 12C/D Joint Witness Statement (Cumulative Transport Effects) also evaluated the Tram Road corridor for expected safety performance in road sections between intersections and found it to be similar to that found on comparable rural roads nationwide. I note the JWS did not evaluate intersection crashes, which I consider would be of a similar magnitude (i.e., approximately doubling the crash rates discussed in the JWS) and follow similar comparable performance.
16. I note, however, that the proposed development at Ōhoka is being evaluated relative to development sites elsewhere within the eastern portion of Waimakariri District, not across the nation. As such, I consider a comparison to other roads within the district to be far more appropriate than a comparison to the roads of the Waikato or Northland, with overall higher crash rates. And as noted previously⁴, the portion of the Tram Road corridor connecting to the site has the highest crash rate along the corridor and for any other comparable rural Arterial or Strategic Road in the District. Further, the NZ Transport Agency and Abley transport consultancy have both identified the roads and intersections on this portion as having particularly high crash risks relative to the national roading network.
17. Council proposed a series of improvements along the Tram Road corridor in the 2020 Tram Road Safety Improvements report based on known traffic patterns at that time. The applicant has further proposed several discrete improvements to intersection and road links connecting to the site.
18. In regard to the applicant's proposed safety improvements, Mr Fuller notes⁵ that "[the] effects of the Ōhoka rezoning (beyond those effects already accounted for in Council's Tram Road Safety Study) were identified as being offset by the required road widening of Tram Road between Bradleys Road and Jacksons Road."
19. To be clear, the JWS concluded⁶ that the Ōhoka rezoning would increase crashes on road sections between intersections by 29% and the "offset" from the applicant's proposed safety improvements still resulted in a crash increase of 16%. I note again that these figures are for injuries/fatalities only and further, do not include intersection crashes, so the actual quantity of increased crashes would likely be substantially higher (although the percent increase could likely remain at a similar level⁷).
20. I consider it important to note that even with the tens of millions of dollars proposed to be invested in these improvements, the site will remain connected to Greater Christchurch by a predominantly high-speed rural road network, as opposed to a lower-speed urban road network. Environmental Health Intelligence NZ at Massey University estimates that the mortality rate for people living in rural areas is three times higher than for those who live in main urban areas like Christchurch⁸.
21. I consider that the amount of investment required to bring Tram Road (and Mill Road, Threlkelds Road, Ohoka Road) up to a comparable level of safety service to an urban road far exceeds any improvements discussed thus far. Without this investment, I consider future residents of the development and existing residents of surrounding areas who use Tram Road (and parallel routes) are likely to be exposed to a far higher crash risk resulting in death or serious injury. I also consider this to be a result of locating urban development in rural areas without well-connected transport.

⁴ Evidence in chief of Mr Binder, para 34

⁵ Reconvened hearing evidence of Mr Fuller, para 13

⁶ Stream 12C/D Joint Witness Statement (Cumulative Transport Effects), para 46

⁷ Stream 12C/D Joint Witness Statement (Cumulative Transport Effects), para 36

⁸ Environmental Health Intelligence New Zealand, Massey University, *Road traffic injury mortality*, June 2024

“WELL-CONNECTED” DEVELOPMENT WITH “GOOD ACCESSIBILITY”

22. The National Policy Statement on Urban Development (NPS-UD) notes in Policy 1 that urban environments should have “good accessibility for all people...including by way of public or active transport” and in Part 3 that unanticipated development should be “well-connected along transport corridors.”⁹ I understand the applicant is requiring construction of new walking / cycling connections and proposing to provide new public transport connections to help mitigate the existing isolated nature of the site (note I define “isolated nature” in this instance as being reliant on private motor vehicles for almost all travel).
23. I note that for comparison, there are connections enabling travel between Christchurch and Queenstown other than by private motor vehicle, provided by InterCity bus, Air New Zealand flights, and the Te Araroa hiking trail. I do not consider these cities to be “well-connected,” and bring up this comparison to illustrate that simply providing a connection has far less influence on a “well-connected” development than distance travelled for day-to-day activities.
24. As noted in my evidence¹⁰, regardless of whether Ōhoka is considered to be within an “urban environment” in Greater Christchurch, I consider the considerable distance between the site and most common day-to-day activities results in it failing to be “well-connected.” This distance to the site is far in excess of the average trip lengths that Kiwis take for walking, cycling, or public transport trips, as shown in the table below, based on the latest NZTA Household Travel Survey data¹¹:

	Distance	Walking	Cycling	Public Transport
		0.6 km	2.5 km	7.6 km
Distance to Kaiapoi town centre	9 km	1500%	360%	118%
Distance to Rangiora town centre	10 km	1667%	400%	132%
Distance to Christchurch CBD	27 km	4500%	1080%	355%

25. I continue to have serious concerns about viable public transport service to the Ōhoka area maintaining any substantive usage, as noted previously¹²:

I consider it unlikely that this [public transport] service will be financially viable based on existing demand coupled with this proposed development. But I also consider this viability is further at risk as I understand the proposed development is unlikely to be fully populated within [the proposed] ten-year period.

There is ample research both in New Zealand and abroad that adding transfers [such as the proposed connection to existing Metro services in Kaiapoi] to a public transport journey decreases rider satisfaction and the overall attractiveness of the public transport mode, in particular on low-frequency routes such as the Waimakariri Metro services. I consider that this perceived disbenefit, coupled with the actual disbenefit of an additional 15 minutes each way, are likely to make any new public transport service to or from the Ōhoka area unattractive when compared with driving a private vehicle. I also note that the [Stream 12D Transport JWS] joint experts agreed that new fixed service would be “very unlikely to lead to any notable change in private vehicle travel from the site across the whole day.”

26. To be clear, I consider a development fails to be “well-connected” or have “good accessibility” if the only realistically viable way its residents connect to, and access Greater Christchurch is via private motor vehicle.

⁹ Part 2 Subpart 2.2 and Part 3 Subpart 2 Section 3.8(2)(b)

¹⁰ PC31 Summary Statement of Mr Binder, para 14-17

¹¹ Ministry of Transport (2024) *New Zealand Household Travel Survey 2021-2023*

¹² Memo from Mr Binder to Mr Willis, 27 May 2024 “PDP Stream 12D – Ōhoka transport feedback, para 6-7

SUPPORTING REDUCTIONS IN GREENHOUSE GAS EMISSIONS

27. Part 3 of the NPS-UD limits consideration of new development to those that contribute "at a minimum" to supporting reductions in greenhouse gas (GHG) emissions. I acknowledge that the proposed internal site design is set up to encourage non-motorised travel for the limited number of trips generated within the site. This could be further leveraged if a new school is located on site (which I understand is reliant on a decision by the Ministry of Education, not an element of the submitter's design).
28. Mr Farrelly considers that "Policy 1(e) does not require a comparison of GHG emissions between Ōhoka and alternative locations to be made, or the existing land use"¹³ and "the direction in the NPS-UD does not require a particular proposal to show reductions in GHGs per se, but to contribute to supporting reductions within the wider urban environment by enabling and encouraging people to take positive action in reducing their own GHG emissions."¹⁴
29. I understand that any new development is likely to result in an increase in GHG emissions (disregarding removal or displacement of a prior activity at the development site). However, if the NPS-UD requirement to "at a minimum" support reductions in GHG emissions is to be given effect, then I fundamentally disagree with Mr Farrelly and consider that development needs to be compared across different locations to understand the relative GHG emissions.
30. Mr Farrelly posits¹⁵ that buyers unable to purchase at Ohoka will instead choose similar lifestyle blocks instead of urban locations. I cannot comment on the veracity of this data but understand it suggests the demand for housing is relatively inflexible and needs to be addressed somewhere (if not Ōhoka, it will go somewhere else).
31. At the same time, Mr Farrelly also considers that if the proposed site is converted from dairying activities to residential development, the existing dairying activities will be reduced or removed¹⁶, and thus eligible to claim as a reduction in GHG. I am not an expert in either housing or farming but do not share Mr Farrelly's confidence in unchanging housing demand and variable dairy demand, noting that dairying activities could re-establish elsewhere (with potentially higher GHG emissions).
32. In considering relative GHG emissions, my understanding is that there is nothing particular about the Ōhoka site that is better suited for an overall reduction in GHG emissions than elsewhere within Greater Christchurch. The *Beca Ōhoka Greenhouse Gas Emission Review*¹⁷ further suggests that estimated enabled GHG emissions from the site are in fact higher than comparable sites across Greater Christchurch.
33. Further, the applicant's support for GHG emissions reduction appears to rely almost exclusively on downstream decisions by future residents (and as noted above, perhaps the Ministry of Education) – e.g., installing solar panels, purchasing electric vehicles and charging stations, choosing to walk or cycle to destinations.
34. The distance to travel to day-to-day activities is such that new residents would have to take more substantial actions in order to match the emissions profile of existing urban residents or new

¹³ Supplementary evidence of Mr Farrelly, para 13

¹⁴ Supplementary evidence of Mr Farrelly, para 19

¹⁵ Supplementary evidence of Mr Farrelly, para 14-15

¹⁶ Supplementary evidence of Mr Farrelly, para 22, 25

¹⁷ *Beca Ōhoka Greenhouse Gas Emission Review*, Section 42A report, Appendix G

residents in previously identified urban development areas (who have shorter distances to travel and more viable access to active and public transport).

35. I have reviewed Mr Farrelly's revised assessment of GHG emissions generated by the site¹⁸ and still disagree with his fundamental assumptions. As discussed in my evidence¹⁹, I consider it likely that the travel behaviour of future residents and customers of the development will generate GHG far in excess of the existing dairying activities regardless of the underlying assumptions. I consider the proposal contains only minor GHG reduction support, and instead, relies on future residents to make their own decisions to reduce GHG emissions from resulting longer trips.

36. In summary, I note Mr Farrelly makes the following comment²⁰:

I do believe that declining this rezoning request could potentially result in a worse outcome from a GHG perspective as buyers may choose to purchase in locations further from activity centres.

I consider that approving this rezoning request is likely to result in a worse outcome from a GHG perspective as future residents are likely to generate higher GHG emissions due to their location further from activity centres.

EFFECTS FROM VEHICLE-KILOMETRES TRAVELLED (VKT)

37. As noted in my evidence²¹, vehicle-kilometres travelled (VKT) have the following negative effects:

- i. GHG emissions (as discussed above)
- ii. Other tailpipe emissions (e.g., smog-forming, particulate, and other auto-related pollutants)
- iii. Safety (as discussed above)
- iv. Congestion (as discussed in the "traffic operations" portion of the Stream 12C/D JWS)
- v. Accessibility and economic efficiency (e.g., high cost to own/operate a private motor vehicle, inefficient use of time)

These effects apply to most vehicles, but the per-capita quantity obviously increases with private motor vehicles, in particular when driven by one occupant (as is the case with 86% of the peak period traffic in Council's vehicle occupancy counts). I note Mr Walsh considers VKT predictions to be "speculative,"²² and note in response that my VKT estimates generated by the proposed site are based almost exclusively on the applicant's integrated transport assessment, which, unlike Mr Walsh, I consider to be suitably robust.

38. In his reconvened hearing evidence, Mr Fuller²³ considers VKT more fully and notes that:

Concerns regarding travel on the rural network (and to a degree Vehicle Kilometres Travelled) are primarily safety related as previously addressed. Concerns regarding Vehicle Kilometres Travelled are a result of the site location. I consider that if there is a need to accommodate housing growth in this part of the District, it is best provided for in a consolidated form that can support local services and provide a node for passenger transport as proposed with the Ōhoka rezoning. This will minimise (to the extent practicable) the Vehicle Kilometres Travelled of development in this area.

¹⁸ Supplementary evidence of Mr Farrelly, para 29-33

¹⁹ Summary Statement of Mr Binder, para 22-34

²⁰ Supplementary evidence of Mr Farrelly, para 16

²¹ Evidence in chief of Mr Binder, para 20

²² Evidence in chief of Mr Walsh, para 251

²³ Reconvened hearing evidence of Mr Fuller, para 16-17

39. I completely agree with Mr Fuller's comments above. I consider that the VKT related effects are directly related to the site location relative to both day-to-day activities and the rural road network connecting the proposed site to these activities. I am not a planning or housing expert so cannot comment on whether housing growth is "needed" to be accommodated in this part of the District in this urban-development manner, but consider that if so, it will likely result in these VKT-related effects. I consider that providing for housing growth in the established urban areas of Kaiapoi, Rangiora, or Woodend would be much more consolidated, adjacent to existing services and public transport, and likely to result in lower VKT-related effects than locating the same number of new households at Ōhoka.

SUMMARY

40. The NPS-UD and the recently adopted Greater Christchurch Spatial Plan provide requirements and guidance on how urban development is intended to provide for a well-functioning urban environment for Greater Christchurch. After reviewing the evidence supplied in the initial and reconvened hearings, my deep concern over the transport-related effects of the proposed development remains unchanged.
41. Given the fifty-plus year design life of houses in the proposed development, I consider that locating a development of this scale and this distance from established urban areas with their established transport infrastructure is likely to result in substantial environmental, economic, and traffic safety effects. Further, if from what I understand of the history of development at West Melton is any guide, this proposal could be the "toe in the door" that leads to further urban development around Ōhoka and I consider that these would also likely result in the same safety, economic, and environmental effects on the transport system, due to the location.
42. Regardless of any short-term benefits to the housing market, I consider that the proposal will result in long-term safety and transport-related financial impacts on both existing and future residents, should it be approved.
43. I note as an aside that the substantial negative transport effects I note above resulting from the proposed development would likely arise due to any level of development in this area, from large-lot residential to the "urban" medium density residential proposed in this application. Further, I consider it inappropriate to use "urban development" as a justification for intense housing when the magnitude of transport effects is likely exacerbated by the scale of urban development.