
To: Sydney Harris

Copy:

From: Melanie Parsons

Date: 29 September 2026

Job Number: 178_21

SUBJECT: 597 Horahora Road – Pre-hearing Additional Transport Comments



597 HORAHORA ROAD – PRE-HEARING ADDITIONAL TRANSPORT COMMENTS

1. INTRODUCTION

South Waikato District Council (SWDC) engaged Gray Matter to provide a peer review of the transport aspects of the application for a Subdivision Land Use Consent to develop a residential subdivision at 597 Horahora Road, Arapuni.

Following public notification of the resource consent application (13 March 2026), the Applicant made amendments to the application.

The amendments to the application, related to transport, are:

- = Reduction from 81-lots to 73-lots
- = Revised access, road, reserve and land-vesting arrangements.

Submitters have raised matters relating to transport. This memo identifies where matters raised have been addressed in my previous review letters, or provides additional comment in response.

This memo is based on the following information:

- = *Integrated Transportation Assessment Kevin & Lynn Tylee Lot 1 DPS 21946, Horahora Road* (CKL, Rev 2, 9 June 2023)
- = 597 Horahora Road, Arapuni – Residential Subdivision – Transport Review (Gray Matter, 7 March 2025).
- = *Lot 1 DPS 21946, Horahora Road—Section 92 Response* (CKL, 16 May 2025).
- = 597 Horahora Road, Arapuni – Residential Subdivision – Review of Response to Further Information Request (Gray Matter, 1 July 2025).
- = *Lot 1 DPS 21946, Horahora Road—RFI Response* (CKL, 6 August 2025).
- = 597 Horahora Road, Arapuni – Residential Subdivision – Review of Response to Further Information Request (Gray Matter, 14 August 2025).
- = *Addendum to Application for Subdivision and Land Use Consent – K & L Tylee, RM 240115* (Cogswell Surveys, 19 June 2026).

2. TRANSPORT MATTERS RAISED IN SUBMISSIONS

Table 1 provides a summary of transport matters raised in submissions (provided by SWDC). Items struck out are not relevant to transport.

Table 1 - Summary of submitters' key concerns related to transport

Category	Landscape and Natural Character	Traffic and Roading
Key concerns	- Increased traffic volumes - Unsafe road conditions (bends, intersections, bridge) - Construction traffic effects - Speeding and need for restrictions - Outdated or inadequate traffic assessments	- Road capacity and need for upgrades (bridge, SH1 intersection, road widening) ~~Lack of supporting infrastructure (utilities, services)~~ ~~Pressure on social infrastructure (e.g. healthcare)~~ ~~Uncertainty over funding and responsibility~~
Number of submitters	13	9
List of Submitters * = Hearing	Sue Burnett Aaron Gilmore* Unnamed submitter Arapuni Village Community Association Daniela Forsythe Chris & Julia Hogg Rachel O'Reilly Peter Martin* Kristina Belfield Roger Belfield Brendon Cornes Evelyn Winter Janine & Brendon Andrews Bates Family Trust (Joan Forret)*	Sue Burnett Unnamed submitter Arapuni Village Community Association Rachel O'Reilly Peter Martin* Chris & Julia Hogg Roger Fyfe Janine & Brendon Andrews Angela Parlane Bates Family Trust (Joan Forret)*

In summary, I consider that the proposal is unlikely to result in unacceptable safety or efficiency effects that cannot be managed with the mitigation as outlined in my review letters and additional comments below, required in conditions of consent, including:

- = A covenant on the certificate of title for all lots adjoining Horahora Road to prevent additional vehicle crossings onto Horahora Road.
- = A covenant on the certificate of title for lots with vehicle crossings onto Horahora Road that requires fencing and vegetation to be no more than 1.0m in height within the 5m x 2.5m visibility splay. This is to include access lots for the shared right of ways.
- = Signage and markings improvements at the 65km/h reverse curves at RP 5.930 as described in my review (July 2025).
- = SWDC approval of the detailed design of the proposed new intersections on Horahora Road
- = Regrading/reinstatement of the WRT in accordance with the NZ Cycle Trails Design Guide to the satisfaction of the WRT Trail Manager and SWDC.
- = Confirmation of sight distance at the vehicle crossings at detailed design and EPA, or as verified onsite during construction to the satisfaction of SWDC.
- = Detailed Design and Post Construction Safe System Audits of the proposal.

Considering SWDC's speed limit consultation which opened on 28 September, I recommend that Council complete a review of the 100km/h speed limit along the frontage of the proposal if resource consent is granted.

The matters raised are discussed in the sections below.

2.1. Increased Traffic Volumes

The reduction in the number of lots from 81 to 73 is unlikely to materially change the trip generation of the proposal. The estimated trip generation of the amended proposal is around 700 vpd¹. At the time of my initial review (March 2025), the estimated average daily traffic (ADT) volume on Horahora Road was 850-885 vpd². The current estimated ADT is 1165-1350 vpd on the sections of Horahora Road along the development frontage.

The 50-60% increase in ADT is expected to be noticeable, particularly during peak hours. Assuming the morning and evening peak hour traffic volumes are around 10% of ADT, this equates to around 135 vph in a peak hour or approximately one vehicle every 27 seconds (two-way).

The addition of trips from the proposal would increase the peak hour traffic volume by around 70% to around 230 vph or approximately one vehicle every 16 seconds (two-way).

There is expected to be sufficient gaps³ in approaching traffic for drivers to turn out of driveways or side road intersections onto Horahora Road, particularly with platooning (grouping) of vehicles.

An ADT of around 2,100 vpd is within the capacity of a two-lane road⁴ and is not expected to result in unacceptable safety or efficiency effects.

2.2. Unsafe Road Conditions (Bends, Intersections, Bridge)

Horahora Road currently has a Collective risk rating of Medium and a Personal risk rating of High⁵. These risk ratings have progressively increased over the duration of the preparation and lodgement of the consent application. The Application ITA (June 2023) identified “Low” risk ratings, my Transport Review (March 2025) identified the Collective risk as “Low Medium”, and the Personal risk as “Medium High”, and with the latest update in 2026, the ratings are “Medium” and “High”, respectively. The ratings are likely to have increased due to traffic growth, rather than an increase in crashes (refer section 2.1 above).

2.2.1. Crash History

A search of the CAS database for the most recent 5-year period (2021-2026, as at 28 September) shows there have been 25 crashes on Horahora Road between the intersection with SH1 and the southern extent of the proposed development. The crashes are predominantly single vehicle loss of control crashes (17) with only two resulting in serious injury. Three crashes involved head-on collisions due to vehicles tracking wide (over the centreline) on bends.

Four of the crashes were head-on collisions at the one lane bridge. All the crashes were due to the driver failing to give way to oncoming traffic (i.e. already on the bridge, or about to enter the bridge). The most recent of these crashes occurred in 2024. Given the relatively low traffic volumes over the preceding years' there may have been an aspect of driver complacency in not expecting opposing traffic at the bridge. There were no environmental factors identified that contributed to the crashes.

There have been eight crashes in the past 5-years along the frontage of the proposed subdivision. The ITA included a search of crashes for the 5-year period ending in 2023 which returned seven crashes. There has not been a significant change in crashes in the 3 years since the ITA was published.

There have been eight crashes at the intersection of Horahora Road and SH1 in the past 5-years. Only one crash involved two vehicles and resulted in minor injuries to the occupants. The crash was due to the driver of a southbound

¹ 73 lots generating 8.5 to 10.1 trips per day and 1.1 to 1.4 trips per hour (peak) equates to 621-737 vpd and 80-102 vph. Trip generation rates from *RR453 Trips and Parking Related to Land Use* (NZ Transport Agency, 2011).

² Mobileroad.org

³ Based on Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, Section 3.2.3 and a critical acceptance gap of 5 seconds.

⁴ Austroads Guide to Traffic Management Part 3: Transport Study and Analysis Methods Section 5.1 indicates the theoretical capacity of a single lane is around 1,500 to 2,400 passenger cars per hour

⁵ NZ Transport Agency Mega Maps 2024 Edition (as at September 2026)

vehicle turning right, failing to give way to an oncoming northbound vehicle. The other seven crashes were single vehicle loss of control crashes where vehicles turning from SH1 onto Horahora Road were travelling too fast and slid off the road, colliding with the safety barrier (south side) or the drainage ditch (north side). Only one of these crashes resulted in serious injuries, the remainder were non-injury crashes.

Reviewing the most recent 5-year crash history has not identified any additional concerns related to safety.

2.2.2. Bends

My review of the transport aspects of the application (March 2025, section 4.1) identified the 65km/h reverse curves at RP 5.930 as a potential safety risk due to the crash history and the estimated increase in traffic on Horahora Road related to the proposal.

The recommended mitigation at the reverse curves includes:

- = Edge marker posts
- = White RRPMs on centreline
- = Red RRPMs on edgeline
- = Advance curve signs
- = Chevron sight boards
- = Chevron curve indicator signs.

These items are described in more detail in Section 2.1 and Table 2 of my review letter (July 2025).

My review of the crash history and the road corridor alignment has not identified any other curves requiring mitigation.

2.2.3. Intersections

State Highway 1

The intersection of State Highway 1 (SH1) and Horahora Road is formed as a priority-controlled T intersection with a right turn bay on SH1. SH1 carries around 13,114 vpd with 20% heavy vehicles (2023 ADT from a telemetry site 590m north of the intersection). Horahora Road at the intersection with SH1 is estimated to carry around 4,197 vpd with 15% heavy vehicles.

The estimated increase in traffic related to the proposal using Horahora Road and turning at the intersection with SH1 is around a 4% increase in total traffic at the intersection and is not expected to result in any unacceptable safety or efficiency effects.

Proposed New Intersections on Horahora Road

The proposal includes two new intersections on Horahora Road, serving 25 lots (Road 1, northern intersection) and 15 lots (Road 3, southern intersection). My review of the proposed intersection locations and layouts concluded that the 20m road reserve should be sufficient to accommodate the widening, drainage and WRT (refer Item 3, Table 1 of my review August 2025).

The final layout of the proposed intersections can be confirmed in detailed design and Engineering Plan Approval.

Vehicle Crossings

The amended proposal includes a total of 15 new vehicle crossings onto Horahora Road, serving a total of 33 lots. Individual vehicle crossings will serve up to 4 lots, with most vehicle crossings serving 2 lots. Vehicle crossings have been grouped together to minimise the number of conflict points on Horahora Road, minimise the number and frequency of interruptions for people using the WRT, and mimic the arrangement of paired vehicle crossings in the existing rural lifestyle zone to the north.

Achieving sight distance at the vehicle crossings was queried in my reviews with my final recommendations detailed in section 2.1 of my review letter (August 2025).

2.2.4. Bridge

The Pokaiwhenua Stream one lane bridge is located at RP4.254-4.310, approximately 720 north of the northern extent of the Tylee property (RP 5.028). The one lane bridge requires southbound traffic to give way to northbound traffic. The layout of signs and markings complies with the Traffic Control Devices Manual (TCDM) Part 5⁶, including requirements for sight distance and distance in advance (for advance warning signs) for the currently temporary speed limit of 80km/h.



Figure 1 - Pokaiwhenua Stream Bridge, looking south

If the 100km/h speed limit were to be restored, the visibility requirements for the signage would increase from 80m to 120m. Visibility to the advanced warning sign for the northbound approach (priority direction) may be limited by roadside vegetation and need to be relocated to achieve clear visibility over 120m.

Sight distance on both approaches exceeds the 139m Stopping Sight Distance⁷ for an 85th percentile approach speed of 90km/h.

Crashes at the one lane bridge appear to be solely due to driver error, misjudgement and failure to give way, rather than any environmental factors.

The increase in traffic will increase the likelihood of opposing vehicles meeting at the one lane bridge by around 20-30%⁸. The increase in traffic volumes on Horahora Road may reduce drivers' complacency and improve adherence to give way signage, as they are more likely to meeting opposing traffic.

In my opinion, there is no additional mitigation required at the one lane bridge due to the estimated increase in traffic relating to the proposal.

⁶ Traffic Control Devices Manual Part 5 – Traffic control devices for general use – Between intersections, Section 6.3.3. One-lane bridges and other roadways

⁷ Austroads Guide to Road Design Part 3: Geometric Design, Section 5.3 Stopping Sight Distance. SSD = 139m for a vehicle speed of 90km/h and a driver reaction time of 2 seconds.

⁸ Comparison of assumed existing and estimated proposed peak hour traffic volumes using a basic probability assessment with an average vehicle speed of 63km/h and conflict length including the bridge and approaches.

2.2.5. Road Widening

The existing road width is recorded in Mobileroad as being around 7.7m wide, allowing for two 3.5m lanes and nominal shoulders. There is sufficient carriageway width for two-way traffic on Horahora Road and there is no requirement for passing lanes.

The proposed new intersections will be required (by way of conditions of consent) to include the necessary widening in accordance with Austroads Guide to Road Design, RITS and as approved by SWDC.

2.3. Construction Traffic Effects

Standard conditions of consent are expected to include conditions requiring construction traffic to be managed under Temporary Traffic Management (TTM) with a Traffic Management Plan (TMP) and Corridor Access Request (CAR) in accordance with the New Zealand Guide to Temporary Traffic Management and SWDC District Plan.

A condition requiring a Construction Traffic Management Plan (CTMP) is recommended to ensure construction access to and from the transport corridor is managed to minimise disruption to other road users.

2.4. Speeding and Need for Restrictions

The northern section of Horahora Road (approx. RP 1.942 to 4.608) has a temporary speed limit of 80km/h through the existing Rural Lifestyle Zone (RLZ).

SWDC is currently consulting on a speed limit change between RP 0.651 to RP 5.420.⁹ The options for changing speed limits relate primarily to the existing RLZ and section further north to SH1. The section under consultation does not include the full extent of the proposed development, covering only part of the frontage for Stage 1 of the proposal (approx. RP 5.020 to 5.965).

The consultation seeks feedback on two options for speed changes, with reductions in speed to 80km/h or 50km/h based on a peri-urban¹⁰ ONF classification.

Given the current ratings for Collective and Personal risk on Horahora Road, the recent growth in traffic using the corridor, and the increasing likelihood of crashes resulting in serious or fatal injuries for vehicle collisions at speeds above 50km/h, I recommend that Council complete a review of the 100km/h speed limit along the frontage of the proposal if resource consent is granted.

2.5. Outdated or Inadequate Traffic Assessments

I have addressed the changes in traffic volume in section 2.1 and the safety effects in section 2.2, above. I do not consider that further traffic surveys or analysis is required to support the application.

2.6. Road Capacity and Need for Upgrades (Bridge, SH1 Intersection, Road Widening)

I have addressed road capacity in section 2.1 and safety concerns in section 2.2, above. Subject to SWDC's approval of the detailed design of the transport infrastructure, I am satisfied that the proposal will not result in unacceptable safety or efficiency effects.

Subsequent development and the continued growth in traffic on Horahora Road may require upgrades to transport infrastructure at a future date.

⁹ <https://yourvoice.southwaikato.govt.nz/proposed-speed-limit-changes-horahora-rd>

¹⁰ <https://nzta.govt.nz/assets/Roads-and-Rail/onf/docs/category-peri-urban-roads-factsheet.pdf>