



IN THE MATTER of the Resource Management Act 1991 (“RMA” or “the Act”)

AND

IN THE MATTER of applications under section 88 of the Act to the **Tasman District Council** by **Tasman Bay Asphalt Limited** for resource consents for an Asphalt Plant (**RM201000, RM201002, RM201018**)

**EVIDENCE OF GARY PAUL CLARK ON BEHALF OF TASMAN BAY ASPHALT LIMITED
(TRAFFIC)**

1. INTRODUCTION

- 1.1 My full name is Gary Paul Clark. I hold the position of Director of Traffic Concepts Limited.
- 1.2 This evidence is given on behalf of Tasman Bay Asphalt Limited (the “Applicant”). The Applicant has applied for (collectively the “Proposal” or “Asphalt Plant”):
- Land Use consent to construct and operate an Asphalt Plant and build an acoustic barrier (RM201000);

- Discharge Permit to discharge contaminants from an Asphalt Plant to air (RM201002); and
- Land Use consent to undertake earthworks within 10 metres of the toe of the Waimea stop bank (RM201018).

1.3 This evidence addresses the effects of the activities for which consent is sought on transportation matters.

1.4 I was engaged to assist the Applicant in understanding the possible traffic effects and advising on mitigation measures of the Proposal.

1.5 I have been involved with the Application since August 2020 and have carried out multiple site visits and road inspections over that time. As part of my assessment, I have driven the roads that the trucks will use on several occasions, and I am familiar with the roads in the area. My assessment of the traffic-related effects of the Proposal was completed in October 2020.

1.6 My assessment of the traffic related effects of the Proposal are included in my Transportation Impact Report (“TIR”) dated 12 October 2020 that was provided to Tasman District Council (“Council”) with the application and accompanying Assessment of Environmental Effects (collectively the “Application”). Further information was provided to Council in my Section 92 Response dated 21 January 2021 (“s 92 Response”).

1.7 The TIR specifically considered the effects of the increased truck movements generated by operation of the Asphalt Plant on public roads leading to and from the site. It recommended routes for the truck movements.

1.8 I note that all the roads that are used by the trucks are public roads with no controls on the number of vehicles or type of vehicles that can use them.

1.9 Overall, it is my view that the potential effects of the Asphalt Plant on traffic safety and efficiency are less than minor.

Qualifications and experience

1.10 I am a Chartered Professional Engineer and hold a New Zealand Certificate in Civil Engineering. I meet the standards to be a Registered Engineers Associate (REA) and I am a Member of the Institution of Professional Engineers NZ (MIPENZ) and its specialist Transportation Group. I am a chartered professional engineer that specialises in traffic engineering and transportation planning.

- 1.11 I have post graduate passes and masters papers for traffic engineering, advanced traffic engineering and accident prevention and reduction. I am also a Certified Road Safety Auditor and assisted in writing the “Road Safety Audit Procedures for Projects” publication released by Waka Kotahi New Zealand Transport Agency (“NZTA”). I also co-published the NZTA document “The Ins and Outs of Roundabouts”. I was a certified Commissioner after completing the Making Good Decisions Commissioners Course. I chose not to be recertified.
- 1.12 I have been working in the road and traffic industry since 1982. The knowledge and experience gained over this time (almost 40 years) includes most road and traffic-related matters, and in particular elements around planning, design and safety. I have prepared transportation assessments for both small and large developments throughout New Zealand, conducted road safety audits and have been engaged in the development of strategies for road and traffic related issues. I have also reviewed and prepared designs for roads, intersections, developments, road safety schemes and town centre redevelopments.
- 1.13 More recent work has involved analysis and assessments of quarries for consent applications as well as specific analysis of the safety of routes used by larger vehicles. This has been on local roads and highways in Nelson, Tasman, Wellington and Marlborough.
- 1.14 I have presented evidence in resource consent hearings and the Environment Court for applications in my specialist area of traffic engineering, road safety, transportation planning and road design.
- 1.15 Over the last 39 years I have worked for the Ministry of Works, Ministry of Transport, Local Authorities and multi-national consultancies. More recently I was Transportation Manager at Tasman District Council and worked for Traffic Design Group (TDG) where I was a Senior Associate and Branch Manager of the Nelson Office. In July 2018 I decided to return to my own consultancy which has been operating since July 2004. I am the Director of that Company.
- 1.16 I have no commercial or other interest in the outcome of this application, nor any conflict of interest of any kind.

Code of Conduct

1.17 Although not required for a consent hearing, I confirm that I have read and agree to be bound by the Environment Court Code of Conduct for Expert Witnesses and confirm that I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express in the following evidence. The evidence I give is within my expertise.

Scope of evidence

1.18 In preparing this evidence I have reviewed the Application, the s 42A Recommendation Report including the report from Council's advisor on traffic matters, and the submissions on the Application. My evidence is informed by and responds to this information as well as to the TIR and s 92 Response.

1.19 After receiving the s 42A Recommendation Report and considering the submissions on the Application, the Applicant has amended the proposed hours for operation of the Asphalt Plant and for truck movements to and from the site. These are detailed in Section 3 below.

1.20 I note at this point that I support these changes and they do not materially impact my assessment of conclusions on effects. They have the positive effect of providing more clarity around hours of operation and particularly truck movements.

1.21 Information about the Proposal and effects are contained in the TIR. I do not intend to repeat this material contained within the TIR or s 92 Response except for the key points or changes since writing my assessment. This evidence should be read alongside those two documents. My evidence covers the following matters:

- Key points from the TIR (Section 2)
- The Proposal (Section 3)
- Section 42A Recommendation Report (Section 4)
- Conditions of consent (Section 5)
- Submitters (Section 6)
- Planning instruments (Section 7)
- Summary (Section 8)

2. KEY POINTS FROM THE TIR

- 2.1 My TIR identified some locations of the adjacent road network that could potentially pose issues for trucks as a result of minor geometric deficiency. I note these minor issues did not stop the intersections being used. They are currently used by trucks and other farm machinery on a daily basis. A plan for the Asphalt Plant identifying appropriate truck routes was provided in the TIR. This plan with key locations identified is reproduced in **Attachment A**.
- 2.2 Most of the traffic movements to and from the Asphalt Plant are towards Nelson and Richmond, as this is where most of this product is used. Some of the product may go to Motueka and south of Richmond but this is expected to be in limited quantities.
- 2.3 The road network has sufficient capacity to accommodate the relatively small flows (a maximum of 80 truck movements per day which will be reached on bigger projects, with a typical day seeing something around 40 truck movements from the Asphalt Plant.
- 2.4 The roads in the area can safely accommodate the truck movements noting the reduced speed zones and excellent forward visibility on the straight roads in this area.
- 2.5 The TIR provided a high-level assessment of the traffic-related issues and developed a plan for the management of truck routes for the Asphalt Plant. The completed TIR provided a summary of the detailed analysis that was completed as part of the assessment for the Application.
- 2.6 This analysis included a search of the crash history, inspection of all the possible truck routes, a safety assessment, consideration of capacity constraints, an analysis of the effects on vulnerable road users, calculations around trip generation, the school and key intersections.
- 2.7 Overall, my analysis and assessment showed that any effects of the Asphalt Plant can be managed through the Truck Route Plan and conditions of consent, and are less than minor.

3. PROPOSAL

- 3.1 The Proposal is well described in the Application, and I do not intend to go into the detail of the Proposal apart from noting the following:
- The access to the Asphalt Plant is from Bartlett Road. There is a possible access point to Blackbyre Road, but this is not proposed to be used as part

of this application. The intersection of Blackbyre Road was recently upgraded by NZTA and could accommodate some of the truck movements particularly for projects toward Motueka. This would reduce truck movements on Bartlett Road.

- Adjustments have been made to the operating hours and truck movements in light of the s 42A Recommendation Report and submitters. The standard hours of operation of the Asphalt Plant are now proposed to be 7am-6.30pm Monday to Friday and 7am-6pm Saturday. Both the Asphalt Plant itself and trucks going to and from the site will be restricted to these hours. The maximum number of truck movements to and from the site in that time period will be 80.
- On a maximum of 30 days a year the Applicant can either:
 - a. If a week day (Monday-Friday) operate the Asphalt Plant between 7am-9pm with truck movements until 10pm; or
 - b. If a Saturday still only operate the Asphalt Plant consistent with standard hours (e.g. 7am-6pm) but can have truck movements continue until 10pm.

Truck movements on these longer days will still be restricted to a maximum of 80.

- c. Although a maximum of 80 truck movements per day is sought, I understand that this is the number of movements needed for large projects and that on a 'typical' day truck movements will be less and in the order of 40.

3.2 The changes to the proposed operating hours do not impact my assessment or the conclusions in the TIR because of the following:

- the maximum number of truck movements has not changed.
- my assessment focused on 'typical' operations which were considered to be up to 6:00pm/6:30pm, with only bigger, less frequent jobs in the evenings.
- the change in proposed consented hours simply aligns with my understanding of those typical operations.

3.3 Recommended truck routes have been identified and excepted by the Applicant. Routes are managed through contract supply agreements with truck operators.

4. SECTION 42A RECOMMENDATION REPORT

4.1 The s 42A Recommendation Report has been prepared by Phil Doole. It includes information provided by Ari Fon (Consultant Engineer – Affirm NZ Ltd) provided in Attachment 5.

4.2 Mr Doole provides his assessment of the traffic matters based on the TIR and s 92 Response, along with Mr Fon’s review of the Application and associated reports. His conclusion at para 9.25 is that the Truck Routes Plan “is accepted as a rational approach to minimise traffic safety risks”.

4.3 Mr Doole has recommended that the Truck Routes Plan be appended to the Traffic Management Plan, and I agree. Regarding amenity Mr Doole concludes that there will be some “noticeable amenity effects” which are considered to be at least minor on some routes for some residents, but that the level of effect depends on the route and location.

4.4 Mr Fon has raised a number of matters/concerns based on his review of the TIR. I will address some of these matters where I believe some clarification is needed. Further information has also been included in my evidence under the “Submissions” heading.

4.5 Mr Fon’s review suggests that authorisation is sought for truck movements to occur over a 10-hour window. This is not strictly correct; it is the overall activity of producing and distributing asphalt that consent is sought for. The use of the road does not require approval as the public road and are able to be used by vehicles. There are no restrictions on the use of the existing roads.

4.6 Mr Fon has suggested that land uses are rural along Ranzau Road. This is not correct for all of Ranzau Road with a school, church and a variety of industrial activities. Most of the land uses along Ranzau Road are not rural.

4.7 Mr Fon has used a ten-year crash analysis period, which is typical of an analysis in a rural area. However due to the proximity of the location to Richmond, the area not being isolated and likely good reporting rates, a five-year time frame is more appropriate. My approach appropriately removes any crashes that may have been mitigated by changes in the network, such as improvements, speed limit changes and other modifications in the road network.

4.8 I have provided a full crash history and analysis later in my evidence.

- 4.9 In general, I agree with the conclusions of Mr Fon with regard to the existing crashes albeit from different data groupings. What the information does show is some consistency with safety levels over time.
- 4.10 Council and NZTA agree that there are no significant areas of concerns which have not been mitigated by the recommendations in the TIR. Mr Fon has come to the same conclusion following his discussions with the same parties.
- 4.11 As noted in the Application the existing crushing plant on the site will be removed. The Asphalt Plant will replace the crushing plant. For the purpose of assessing the effects of the Proposal, the Application will add up to 80 trucks per day (for the limited bigger projects when being undertaken) when operating.
- 4.12 Mr Fon has obtained Road Risk Ratings (Infrastructure Risk Rating – “IRR”) from NZTA which is a computer-based tool to enable assessment of a roads personal and collective risk. These are typically based on deficiencies in the road infrastructure for a single vehicle (personal risk) and multiple users (collective risk).
- 4.13 This tool (IRR) is useful but does have some limitations. It should also be noted that its primary use is for the speed management process and the setting of speed limits. While it can provide an indication of how safe a route might be, it does not replace on-site inspections and analysis. This tool has been used to change the speed limits on the roads in this area and is the primary reason why there is a lower speed limit on Ranzau Road (60km/h) compared to other roads.
- 4.14 I was involved in the early development of the IRR for the NZTA with work on Road Infrastructure Safety Assessment (RISA) with a team of ten experts across the country carrying out surveys of existing roads.
- 4.15 The key features of the assessment of safety risk are eight components being:
- Road stereotype
 - Alignment
 - Carriageway width
 - Roadside hazards
 - Land use
 - Intersection density

- Access density
- Traffic volume

4.16 The components are codified from various datasets which leads to a personal and collective risk rating.

4.17 As noted by Mr Fon, the roads in the area fall at the bottom (or low end) of the safety risk being a “Low Collective Risk” which will be largely due to the low traffic volumes on these roads. This is consistent with my inspections and the increase in truck movements will not change this rating.

4.18 In regard to personal risk this is rated a little higher with all roads being “Low-Medium” except for Ranzau Road which is a “Medium”. The main reason Ranzau Road (Medium) is higher than the other roads (Low-Medium) is the increased number of accesses and land use being more intensive. These features do not necessarily make the road less safe.

4.19 The underlying road environment with straight roads, excellent visibility and relatively low traffic, allows these roads to operate safely and this will not change with the proposed Asphalt Plant. The IRR ratings for the roads in the area will not change as a result of the Asphalt Plant.

4.20 The trucks from the Proposal can be accommodated on the adjacent road network. Mr Fon agrees with this position.

4.21 Mr Fon notes that the additional truck movements will be noticeable against the existing traffic flows. This is generally because the existing roads are carrying relatively low flows and it is suggested that any increase would be noticeable. I do not completely agree with this statement.

4.22 While the increase as a percentage is high, this calculation is based on low numbers and any increase would be high. Care should always be used when using percentages to demonstrate change when assessing traffic effects.

4.23 The hourly flows on roads in this area are around 50 to 60 vehicles per hour. The hourly change resulting from the Asphalt Plant is around one vehicle every 60 seconds to one vehicle every 53 seconds.

4.24 This level of change would be indiscernible to other road users.

4.25 I note this assumes eight truck movements per day which is a worst case and would only occur over a very limit number of days. The change would be from one truck every six

minutes to one truck every four minutes at peak times, with the Asphalt Plant operating at the lower level of production needed for typically-sized projects. 80 truck movement per hour is anticipated for big projects only.

4.26 While this change may be more noticeable due to the type of vehicle, it does not necessarily translate to the creation of an adverse effect on safety or efficiency of the adjacent road network. The adverse effects are created from the inability of the road network to safely and efficiently accommodate the increase in traffic.

4.27 Mr Fon agrees with my analysis and assessment where he states in his review that “The local roads are of a sufficient standard, with appropriate speed limits and adequate capacity to cater for the proposed truck movements”.

4.28 There appears to be some confusion in the s 42A Recommendation Report about whether the 80 truck movements covers all truck movements to and from the site or just those related to collection and taking away of asphalt.

4.29 The 80 truck movements cover all truck movements to and from the site including for deliveries of bitumen, diesel, and special gravel as required. As noted above the expected truck movements on a ‘typical’ day will be to be lower than 80.

5. CONDITIONS OF CONSENT

5.1 The draft conditions of consent provided in Attachment 10 of the Section 42A Report have been reviewed with a new set of conditions proposed by the Applicant. I have reviewed the proposed conditions and agree with them.

6. SUBMITTERS

6.1 A large number of submissions have been received on the Application. There were 23 submissions in support and 47 submissions objecting to the Asphalt Plant.

6.2 The focus of my evidence below is to provide further information to the Commissioners on the concerns raised in those submissions. The main high-level themes from the submissions include the following:

- Increased traffic
- Road design
- Tasman Great Taste Trail
- Safety

- Ranzau School
- Congestion

6.3 I set out information in detail below to address these themes under a number of sub-headings.

Increased Traffic

6.4 A number of submissions raised concerns around the increased traffic on the different roads available for trucks to use. The Asphalt Plant will increase the number of movements on these roads. However, these roads have the capacity to carry much higher flows than currently using these roads.

6.5 The roads are straight and generally well designed to accommodate traffic flows much higher and easily up to 5,000 vehicles per day without any safety or capacity constraints.

6.6 The roads that will be used by the trucks are all carrying less than 1,000 vehicles per day except for parts of Ranzau Road near SH6. Ranzau Road at its eastern end carries around 1,300 vehicles per day. These flows are much lower than the practical operating capacity of the roads in this area.

6.7 While there will be an increase in the use of these roads, there are no constraints from a capacity perspective for the additional truck movements to be accommodated within the adjacent road network.

6.8 It is important to remember that although the number of trucks movements per day for which consent is sought will be a maximum of 80, this will not, I understand, occur every day. This number of maximum movements will only occur when there is a large project that requires a significant amount of asphalt which occur a limited number of times per year.

6.9 For other projects the volume of asphalt required is much less, as will be the number of truck movements per day. On some days there may be no production. This is discussed by Mr du Plessis in his evidence.

6.10 The short point is that in practice some days will be busy, and others won't.

6.11 The other important aspect around the supply of asphalt is that apart from the larger projects, product will be going to different smaller projects across the region. This will result in the possibility that trucks will use different routes on a day-to-day basis depending on the project location. This would spread the trucks movements over

different roads, with most of the asphalt heading towards Nelson and Richmond being the larger urban areas.

Road Design

6.12 Submissions have raised concerns about the road geometry and the roads in the area not being able to accommodate the truck movements.

6.13 As part of preparing the assessment for the Asphalt Plant an extensive review of the roads surrounding the Asphalt Plant was carried out. This review/inspection showed some roads, while currently able to accommodate truck movements, did have some minor issues in terms of safety and ease of use. This led to the development of a series of routes that were more suitable for the expected truck movements which are those proposed in the Truck Routes Plan.

6.14 I note that the roads that were excluded from the preferred truck routes are able and currently do allow trucks to use them. However, the Applicant wanted to take a proactive approach to managing the effects of the Proposal which has led to the preferred truck routes.

6.15 Figure 1 shows the typical road layout on the Waimea Plains.



Figure 1: View along Ranzau Road West looking west

- 6.16 As shown the roads in the area are straight with excellent forward visibility along its length. The roads are typically around 6500mm wide and no kerb and channel. There are no footpaths, pedestrians either walk along the road or on the grass berms, depending on traffic movements. There are wide grass berms on each side of the road.
- 6.17 Most notably is the excellent inter visibility between all road users along these rural roads. Motorists are able to see other vehicles, pedestrians and cyclists and take the necessary precautions when passing road users.
- 6.18 The posted speed on these rural roads is 80 km/h with the estimated operating speed being close to the posted speed limit.
- 6.19 This environment is able to provide safe and convenient access for the expected truck movements from the Asphalt Plant.
- 6.20 Ranzau Road is typically more urban in its design with kerb and channel, off road paths including the Tasman Great Taste Trail. The posted speed is 60 km/h and the operating speeds are slightly above the posted speed limit at 64 km/h. This speed runs from SH6 all the way to Pugh Road and includes the Ranzau School.
- 6.21 Figure 2 shows the typical road layout on Ranzau Road.



Figure 2: Ranzau Road looking west from its intersection with SH6

- 6.22 Ranzau Road is noticeably wider than the more rural roads on the plains. Ranzau Road also provides off road infrastructure to vulnerable road users and the width is sufficient for two-way traffic and cyclists, should they want to ride on the road.
- 6.23 There are no inherent safety or capacity constraints on this section of road.
- 6.24 The road widths of the public roads in the area that trucks can use are as follows:
- Bartlett Road - 6500mm wide to edge of seal
 - Ranzau Road West – 6500mm to edge of seal
 - Pugh Road – 6300mm to edge of seal
 - Ranzau Road – varies in width from around 6500mm to 8500mm as you move from Pugh Road to SH6. The width outside the school is 7200mm.
- 6.25 These road widths are able to accommodate trucks safely. I note that Motueka Bridge is 6m wide with guardrails along both sides. Trucks are able to pass on this confined bridge albeit slowly. The rural roads that trucks will use in this area are wider than this and pose no safety or efficiency issues.
- 6.26 In situations where two trucks need to pass each other (opposing) there is sufficient room for this to be done safely and would be at a lower speed. This can be done with excellent forward sight distances being provided.
- 6.27 Concerns have been raised about the intersection of Ranzau Road and Main Road Hope (SH6). This intersection is well designed with a flush median on the highway provided for right turning traffic. The sight lines are excellent.
- 6.28 At peak times the highway is busy which adds to delays to vehicles trying to enter the road. This is not unusual for an arterial road. I would expect that if trucks are having trouble using this intersection, they will alter their route and use the SH60/SH6 roundabout intersection to head to the south.
- 6.29 I note that in consultation with NZTA no issues were raised about trucks using this intersection. I also consider there are no issues with trucks using this intersection. Furthermore, NZTA was satisfied that the proposed truck routes were able to address any adverse effects and it has not submitted opposition on this application.
- 6.30 The road network on this part of the Waimea Plains provides flexible route choice should any congestion or safety issues be noted after operations begin and this can be

incorporated in traffic management procedures. Any effects are appropriately managed and are less than minor with regard to safety and efficiency.

Tasman Great Taste Trail and Cyclists

- 6.31 Submitters have raised concerns about the safety effects on the Tasman Great Taste Trail.
- 6.32 Along the routes trucks from the Asphalt Plant will use the Tasman Great Taste Trail uses an off-road facility. There is one crossing point which is located on Ranzau Road within the 60 km/h section (east of Pugh Road).
- 6.33 This infrastructure provides an excellent facility for these users to ride along the road corridor off the road carriageway. This provides safe facility.
- 6.34 The crossing point is located in the 60 km/h speed limit area and has excellent sight lines in both directions to cross safely. I also note that approaching motorists also have excellent visibility of the crossing facility.
- 6.35 Figure 3 shows the Tasman Great Taste Trail Route.



Figure 3: Tasman Great Taste Trail. (Source: Top of the South Maps)

- 6.36 The trail is shown by the red dashed line with the crossing point across Ranzau Road shown by the red circle. The trail is separated from the road by either kerb and channel or a grass berm. Importantly it is not hard against the road carriageway which provides excellent separation and improves safety.

6.37 It was noted in some of the submissions that some cyclists chose to ride on the road. This is a choice for that road user, however a safe off-road facility has been provided.

6.38 There are also road cyclists that use this area for recreational riding. They are unlikely to use the off-road facility. These users are familiar with the rural road environment and the vehicles that use it. The excellent sight lines along the roads in this area will allow the different road users to take the necessary action and continue the safe use of the roads. They can of course use the off-road facility as well.

6.39 The increase in trucks on these roads will have a less than minor effect on Tasman Great Taste Trail riders and passing trucks are not unexpected in a rural area.

Safety

6.40 Some concerns have been raised about the safety of the road with more trucks using them.

6.41 A detailed search of the NZTA crash database was carried out for the five complete years 2016 to 2020 along with the part year of 2021. The search area included the intersections of Bartlett Road/SH60, Pugh Road/SH60, Ranzau Road/SH6 and the roads (including intersections) Pugh Road, Bartlett Road, Ranzau Road West and Ranzau Road. The search area is very large and includes SH60 and SH6 which are main arterial highways.

6.42 Between 2016-2020 there has been a total of 24 crashes within the search area.

6.43 Table 1 shows the crash history for the search area

Road	Location	Date	Collision Reference	Accident Description	Severity
Bartlett Road	600 metres south of SH60	24/01/2016 Sunday 11.45am	201631241	Motorist heading south lost control of their vehicle while doing a burn out.	Non-injury
Bartlett Road	250 metres south of SH60	17/07/2016 Sunday 2.00pm	201614479	Motorist heading north misjudged entry into private property and hit concrete post.	Minor
SH60	At Bartlett Road	30/03/2016 Wednesday 4.10pm	201617770	Motorist heading east on the highway collided with car waiting behind another vehicle turning right. Note speed limit was 100km/h.	Minor

SH60	At Bartlett Road	11/12/2017 Monday 5.38pm	201756077	Motorist heading east collided with a car heading west when making right turn. There was a right turning vehicle into Swamp Road obscuring view.	Non-injury
SH60	At Bartlett Road	22/10/2020 Thursday 3.30pm	202016019	Motorist heading north on Bartlett Road failed to give way and collided with car heading west on the highway.	Non-injury
SH60	At Bartlett Road	08/04/2019 Monday 4.05pm	201963917	Motorist turning right into Bartlett Road was hit from behind by a truck travelling straight on the Highway. Vehicle hit power pole.	Non-injury
SH60	At Bartlett Road	29/03/2019 Friday 1.30pm	201953131	Motorist traveling straight across the highway was hit by vehicle travelling on the highway. Inexperienced driver.	Minor
Pugh Road	At Ranzau Road	09/07/2020 Thursday 5.00pm	2020160058	Motorist traveling north on Pugh Road did not stop at intersection and was struck by vehicle heading east on Ranzau Road.	Non-injury
Pugh Road	At Ranzau Road	15/04/2021 Thursday 4.35pm	2021184684	Motorist traveling north on Pugh Road did not stop at intersection and was struck by vehicle heading east on Ranzau Road. Driver who failed to stop was on international license. The other driver on learner's license.	Serious
Pugh Road	At Ranzau Road	18/07/2017 Tuesday 10.37am	201700196	Motorist heading south on Pugh Road drove through stop at controlled intersection. The vehicle was struck by a truck heading east on Ranzau Road. The driver of the car was 81 and had been drinking.	Fatal
Pugh Road	650 metres north of Ranzau Road	14/07/2019 Sunday 12.05am	201958469	Motorist travelling south on Pugh Road collided with a parked car. Driver was highly intoxicated.	Minor

Ranzau Road	500 metres west of SH6	13/12/2017 Wednesday 3.20pm	201720140	Driver of a vehicle heading east on Ranzau Road had a medical event and crossed the centreline and struck on-coming car.	Serious
SH6	At Ranzau Road	08/08/2017 Tuesday 2.47pm	201716245	Motorist heading west on Ranzau Road failed to give way to northbound vehicle on SH6.	Minor
SH6	At Ranzau Road	11/02/2019 Monday 7.05pm	201950972	Tow truck heading north of SH6 failed to give way when turning right into Ranzau Road.	Minor
SH60	At McShane Road	06/07/2020 Monday 3.00pm	2020158118	Motorist turning right out of McShane Road has failed to give way to vehicle heading north from Pugh Road.	Non-injury
SH60	At McShane Road	28/03/2017 Tuesday at 5.00pm	201712514	Motorist turning right onto SH60 has failed to give way and collided with vehicle heading west on SH60.	Minor
SH60	At McShane Road	24/08/2016 Wednesday 8.00pm	201647347	Motorist turning right onto SH60 has failed to give way and collided with vehicle heading west on SH60. Car on highway did not have lights on.	Non-injury
SH60	At McShane Road	07/04/2021 Wednesday 5.00pm	2021183811	Motorist heading east on Sh60 was turning right into Pugh Road and collided with a vehicle heading west on the highway.	Minor
SH60	At McShane Road	11/09/2021 Saturday 12.20pm	2021201394	Motorist heading east on Sh60 was turning right into Pugh Road and collided with a vehicle heading west on the highway.	Serious
SH60	At McShane Road	17/11/2020 Tuesday 3.31pm	2020170995	Motorist turning right into McShane Road has collided with a vehicle heading east on the highway.	Non-injury
SH60	At McShane Road	10/08/2021 Tuesday 3.37pm	2021202304	Motorist travelling north from Pugh Road to McShane has collided with a motorcycle traveling east on the highway.	Minor

SH60	At McShane Road	14/06/2019 Friday 11.50am	201957451	Motorist turning right into McShane Road has collided with a vehicle heading east on the highway. The vehicle came from behind a right turning vehicle into Pugh Road.	Minor
SH60	At McShane Road	09/02/2019 Saturday 10.30pm	201955831	Motorist turning right out of McShane Road has lost control and gone into the guard rail. Excessive speed.	Non-injury
SH60	At McShane Road	07/08/2021 Saturday 9.20am	2021197991	Motorist travelling north from Pugh Road to McShane Road has collided with a vehicle traveling west on the highway.	Minor

Table 1: Crash Data (Source: Waka Kotahi)

- 6.44 As shown, there are a number of crashes within the search area. There were three crashes involving trucks. Only one of the crashes was the fault of the driver of a truck (201963917). Interestingly all of the crashes except five occurred in the afternoon, with over half (16 out 24) occurring between 2.00pm and 8.00pm.
- 6.45 Truck crashes are not overrepresented within the existing road network. Only one of the reported crashes was caused by the truck driver.
- 6.46 The three truck crashes were recorded at intersections in the following locations:
- On SH60 at Bartlett Road
 - On SH6 at Ranzau Road
 - On Ranzau Road at Pugh Road
- 6.47 There were no truck crashes recorded at the SH60/Pugh Road/McShane intersection, even though this intersection is often used by these vehicles.
- 6.48 Bartlett Road, Pugh Road, Ranzau Road and Ranzau Road West had four reported crashes along its length. In reviewing the crash data, the cause factors show that the road layout was not the contributing factor to these crashes. This shows that there are no safety issues created by the road layout or its geometry.
- 6.49 The nearby intersections are where the majority of crashes are occurring (which is typical of a road network with many intersections). In reviewing the crashes at these intersections in more detail, the following was noted.

Pugh Road/Ranzau Road

- 6.50 The intersection of Pugh Road and Ranzau Road is a stop-controlled crossroad intersection. Visibility for vehicles is limited by high vegetation on some of the approaches to the junction. The stop controls on Pugh Road are an appropriate measure to mitigate crashes at this intersection if care is taken. There are excellent sight lines from the position where vehicles would observe and make the decision to move.
- 6.51 All three crashes at this intersection involved a driver failing to stop at the junction. In reviewing the Traffic Crash Reports (TCR) it would appear that the drivers failed to see or understand the stop control and drove past the control.
- 6.52 This would suggest that the signage or other measures to guide motorists is insufficient. The nature of the crashes also suggests the drivers that had gone through the stop sign were unfamiliar with the road, as regular users would be aware of the stop signs.
- 6.53 Two of the crashes were in the northbound direction where there is less guidance provided to approaching motorists. The road markings are also worn out. It was also noted that some road markings put in as part of the original works are no longer painted.
- 6.54 The truck crash at this intersection was for the through priority movement and not the cause of the crash. The motorist on the controlled side road failed to stop.
- 6.55 I do not see any issues for trucks for the Asphalt Plant and the increased use of the intersection, because the motorists associated with the Asphalt Plant will be regular users and therefore, they will be aware of the stop-controlled intersection and obey these controls. Where the sight lines approaching the intersection are obscured by vegetation, the visibility at the stop control lines is excellent in all directions. Motorists are able to stop, observe and use the intersection safely.
- 6.56 Noting the type of crashes and the severity, I would suggest that Council should carry out a crash investigation study to see what further improvements can be made to address the issue of the stop controls being ignored or missed by unfamiliar drivers. Such measures may include better road markings, larger signs, more splitter islands and more advance guidance.
- 6.57 These improvements would address the poor safety record at this intersection.
- 6.58 In my experience, professional truck drivers picking up material from the plant will use the intersection with the appropriate care and obeying the controls provided.

6.59 I note that one of the submitters (Submission 43) has made comments relating to my possible involvement in the new kerbing and to providing an inappropriate response to their questions on that matter. This statement is incorrect as I did not start with Council until mid-2009, well after the kerbing work was completed (before March 2008). In looking at the section of the kerb the submitter is talking about, it would appear to have been installed to address a drainage issue rather than a safety issue.

SH6/Ranzau Road

6.60 There have been two reported crashes at this intersection. Both crashes involved a right turning vehicle from off the highway failing to give way to through traffic on SH6. The truck crash at this intersection was for the through movement and not the cause of the crash.

6.61 SH6 is a busy highway with Ranzau Road also being relatively busy. The flush median on the highway is less than 2500mm and cannot completely provide a waiting area for a turning vehicle. That said this was not the cause of the crashes with right turning drivers failing to see an approaching vehicle.

6.62 While there have been two reported crashes at this intersection, it is not considered to be operating unsafely and its design does not suggest there are any safety issues that need addressing. There are shoulders provided on both sides of the road, a flush median for right turning traffic (albeit a slightly narrow one), excellent sight lines for the side roads and the speed was recently reduced to 60 km/h shortly.

6.63 With regard to truck movements, most of the movements will be left out onto the highway from Ranzau Road. There will be some right turning trucks when there is a project south of Richmond that requires asphalt.

6.64 Due to the layout of the intersection no adverse safety issues arising from asphalt truck movements are expected at this intersection.

SH60/Pugh Road/McShane Road

6.65 This intersection has had the highest number of crashes which is an indication of the busy nature of the intersection and the importance it plays in the adjacent road network.

6.66 All the crashes have involved some crossing or turning movement, being mostly right turns. Notably there have been no truck crashes at this intersection, even though McShane Road is informally known as the truck bypass to SH6 to avoid the congestion on Gladstone Road and to access the industrial area on Lower Queen Street. This may

be due to the truck drivers having a higher seat position, which allows them to better see approaching traffic.

- 6.67 The intersection is well constructed with right turn bays and left slip lanes. The left lanes have been specifically designed to allow motorists exiting the side roads to see past the left turning vehicles.
- 6.68 NZTA and Council are currently undertaking studies and consultation around road improvements for this intersection. This is part of a wider transportation study to solve safety and capacity constraints associated with the growth of the Tasman District. These improvements are sitting in the short-term programme within the Business Case framework of NZTA.
- 6.69 I note these suggested improvements include a wire rope median barrier along SH60 which will remove the ability to turn right at a number of minor intersections including Bartlett Road and Swamp Road.
- 6.70 It is unclear what type of safety improvements will be constructed at the Pugh Road/McShane Road/SH60 intersection. Based on the type of crashes at this intersection being mostly right turns, the increased activity on McShane Road from new industrial and residential developments and the need to slow traffic down as they come to the new urban fringe of Richmond, I would suggest it would be a roundabout with some associated speed reductions. This treatment would address all the safety issues and reduce crash severity. It would provide an appropriate level of efficiency based on the wider land use changes.
- 6.71 While there is no certainty what improvements will be made at this intersection, the use of the intersection by Asphalt Plant trucks can still be accommodated at this intersection safely. This is due to the well-designed intersection, the nature of the vehicle type having a higher driver's eye height (crashes at intersection appear to have involved sight lines between cars) and the professional drivers of the trucks.
- 6.72 I note that consultation with NZTA confirmed that in its view trucks were able to use this intersection with any effects being less than minor. This led to the development of the truck routes provided in the Application.

Pedestrians and School Bus

- 6.73 Submitters have raised concerns about pedestrians and the lack of footpaths on some of the roads. I note that Ranzau Road has a footpath along its length.

- 6.74 The other roads within the area considered are rural roads with wide grass berms and relatively low traffic volumes, even after the activity is operating.
- 6.75 The roads are straight and have excellent visibility along their lengths.
- 6.76 Pedestrians including children waiting and walking to the bus are able to be seen and they are able to see vehicles approaching and take the necessary action to be safe. The increase in the traffic movements will not change the need for this to occur.
- 6.77 As noted above the number of truck movements each day is relatively small and during the times school children may be waiting or walking along the rural roads and/or waiting at the bus pick up areas. The number of movements at those times is likely to be less than two trucks at each end of the day.
- 6.78 No change on the current level of safety is expected on the road users.

Summary

- 6.79 A number of submissions made mention of the safety of the adjacent road network and the Asphalt Plant with increased truck movements making the roads unsafe.
- 6.80 The further information provided above shows that this is not the case. The current network does have some safety issues, but these are not related to trucks and the truck movements associated with the Proposal can be accommodated safely within the network not withstanding its imperfections.
- 6.81 The adjacent road network is well designed with trucks being able to move along the roads safely. The adjacent intersections are well designed and there are no impediments for drivers of trucks to use the intersections safely.
- 6.82 Improvements are planned at the Pugh Road/McShane Road/SH60 intersection which will consider the needs of users and make this intersection safer and more efficient, although it can accommodate the proposed truck movements as it is safely and efficiently.
- 6.83 The safety issue identified at the Pugh Road/Ranzau Road is related to drivers being unfamiliar with the intersection and the stop controls. This will not be the case with the truck drivers picking up material from the Asphalt Plant.

Ranzau School

- 6.84 Submitters have also raised concerns relating to the school and the increased truck movements.

- 6.85 Ranzau School is located approximately midway between Pugh Road and SH6 on Ranzau Road. There is a footpath along the front of the school which links back to the residential land uses to the east of the school.
- 6.86 Due to the semi-rural nature of the school, there are a high number of parents who pick up and drop off children with vehicles. The parking area for the church across the road is used for this purpose. Very few vehicles are parked on the street outside the school and there are long sections of no stopping restrictions on both sides of the road. It has been observed that there are around three cars parked on Ranzau Road to the west of these broken yellow lines at school drop off and pick up times.
- 6.87 The speed limit outside the school is a permanent 60 km/h which at 2.55 pm to 3.15 pm is reduced to 40 km/h through the use of a school speed zone sign.
- 6.88 The school operates a Kea crossing which operates before and after school. The Kea crossing has excellent sight lines in both directions and no vehicles parking close to the crossing point.
- 6.89 Figure 4 shows the school patrol in operation.



Figure 4: Kea Crossing Ranzau School

6.90 The level of control/management and infrastructure this school has in regard to the road interface is excellent and one of the best in the Nelson Tasman region. This is for the following reasons:

- All parents are able to park off the road and ferry children from parking to school safely.
- The one crossing point from parking to school is controlled with a patrolled crossing (Kea).
- The crossing is controlled by a 40km/h speed limit at peak times and 60km/h off peak.
- There is a shared footpath providing pedestrian/cycle access to the school.
- Approaching motorists have excellent visibility of the school patrol.
- These features allow the school to operate safely in this environment.
- The traffic flows along Ranzau Road are low at less than 1,300 per day.
- There are trucks already using this road to access the wider road network with no incidents recorded.

6.91 Observations of the school patrol showed that at times when the traffic was low the stop signs remained out into the road even when there were no children crossing. Children were able to easily operate the school patrol.

6.92 The increase in truck movements in front of the school does not pose any safety issues. This is due to the very good sight lines, excellent controls and infrastructure provided at the school during the peak times as well as outside these times. The nature of traffic control with the Kea crossing provides a very safe environment at peak times that stops traffic including trucks when children are crossing.

6.93 Concerns were also raised for children crossing the road outside the school patrol hours. I would expect as part of the school policy that children are not allowed to cross Ranzau Road without a parent or teacher being present. If this is not the case, then the school may want to consider how to better manage this risk, regardless of this application.

6.94 I note that again there are excellent sight distances along the roads in the area, vehicle speeds are travelling slightly above the posted speed limit and the school is well sign posted with warning signs and the variable speed limit. These measures provide excellent guidance to all motorists including truck drivers that care is needed in this area.

6.95 There is no evidence to suggest truck drivers will take less care when travelling on roads in this area.

6.96 In response to submissions, it is now proposed to restrict truck movements past the school in the morning and afternoon peak times.

7. PLANNING INSTRUMENTS

7.1 I have reviewed provisions relating to transport as set out in Chapter 11 of Tasman Resource Management Plan.

7.2 The underlying aim of those provisions is set out in Objective 11.1.2 which seeks to provide *“A safe and efficient transport system, where any adverse effects of the subdivision, use or development of land on the transport system are avoided, remedied or mitigated.”*

7.3 As noted above in my evidence and in the TIR the transport effects of the Asphalt Plant meet this objective.

8. SUMMARY

8.1 My evidence has considered the Application, the s 42A Recommendation Report, Mr Fon’s review and submissions. It is to be read in conjunction with the TIR and s 92 Response.

8.2 The Asphalt Plant can be accommodated with any effects on the surrounding road network being less than minor. Both Council’s advisor and NZTA agree with my assessments in this matter and my conclusions.

8.3 The maximum number of truck movements will be 80 per day. However, this maximum is only expected to be needed some of the time, with the typical daily traffic being less.

8.4 I am happy to answer any questions the Commissioners have.

Gary Clark

10 December 2021

Attachment A Traffic Route Plan

