

**BEFORE INDEPENDENT HEARING COMMISSIONERS APPOINTED BY THE
WAIMAKARIRI DISTRICT COUNCIL**

IN THE MATTER OF

The Resource Management Act 1991 (**RMA** or
the Act)

AND

IN THE MATTER OF

Hearing of Submissions and Further
Submissions on the Proposed Waimakariri
District Plan (**PWDP** or **the Proposed Plan**)

AND

IN THE MATTER OF

Hearing of Submissions and Further
Submissions on Variations 1 and 2 to the
Proposed Waimakariri District Plan

AND

IN THE MATTER OF

Submissions and Further Submissions on the
Proposed Waimakariri District Plan by **Mark
and Melissa Prosser**

**EVIDENCE OF DAVID JOHN ROBERT SMITH
ON BEHALF OF MARK AND MELISSA PROSSER**

DATED: 5 March 2024

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INTRODUCTION

- 1 My name is David John Robert Smith.
- 2 I hold a Bachelor of Technology (with Honours) in Industrial Operations Research and Master of Philosophy in Operations Research from Massey University. I am a Chartered Member of the Institute of Logistics and Transport (CMILT), a member of Engineering New Zealand (MEngNZ) and a member of the NZ Modelling User Group sub-group of ENZ. I have been appointed to the NZ Transport Agency Independent Professional Advisors panel for Transportation Modelling. I am also certified as a Hearings Commissioner having complete the Making Good Decisions course in 2019.
- 3 I hold the position of Technical Director of Transportation Planning at Abley. I have been in this position since 2018 and have been at Abley for over 12 years. I lead a range of development planning and transportation planning projects for both public and private sector clients.
- 4 My previous work experience includes 23 years of transportation planning and engineering experience. I have managed and led numerous projects related to transportation business cases, transportation research and Resource Management Act (RMA) related matters for public and private sector clients. As an expert witness I have represented the Environmental Protection Authority, Foodstuffs South Island Limited, Auckland Council, Selwyn District Council, Queenstown-Lakes District Council (QLDC), Taupō District Council, Ports of Auckland and Fonterra.
- 5 My role in relation to the Proposed Plan is as an independent expert witness to Mark and Melissa Prosser on traffic and transportation matters.
- 6 I have read the Environment Court's Code of Conduct and agree to comply with it. My qualifications as an expert are set out above. The matters addressed in my evidence are within my area of expertise, however where I make statements on issues that are not in my area of expertise, I will state whose evidence I have relied upon. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in my evidence.

SCOPE OF EVIDENCE

- 7 In my evidence I address the following issues:

- (a) Present my assessment of the traffic and transportation effects of Mark and Melissa Prosser's rezoning submission under the Proposed Plan. Specifically, this is an overview of the Transportation Assessment (TA) that was prepared by Abley staff under my direction to assess the potential transportation related effects of the proposed rezoning on the future transportation network.
- (b) In preparing my evidence, I have reviewed the following documents and evidence:
 - (i) Mandeville North-East Development Area Outline Development Plan - 524072-W00001-DRG-US-0002, dated 28 November 2023;
 - (ii) Concept Layout Plan Proposed Subdivision of Lot 6 DP 2038 & Lot 8 DP 314202- 524072-W00001-DRG-US-0001, dated 28 November 2023; and
 - (iii) Proposed Waimakariri District Plan (pWDP).

SUMMARY OF MY EVIDENCE

- 8 Given this is a rezoning request, my evidence has been focused on whether there are any insurmountable transport or traffic problems that might arise from the increased demand on the road network created by development of the site. In summary, I conclude that:
- (a) The level of traffic likely to be generated by the development is low, and subject to the upgrade of Ashworths Road (discussed in my evidence), that the traffic generated by the development can be accommodated by the existing roading network.
 - (b) The site is accessible by public transport (by park and ride facilities in Rangiora and Kaiapoi), although I note that on demand public transport may become more prominent in the future, which will improve accessibility to the proposed development.
 - (c) School bus services are accessible to the site, with stops at the Tram Road / Bradleys Road / McHughs Road intersection.
 - (d) The new internal road network will be designed in general accordance with the proposed Waimakariri District Plan requirements, except that footpaths will only be provided on one side of the internal roads. In

my view, this level of footpath provision is commensurate with the surrounding road network and appropriate for the type and density of development proposed.

- (e) The requested rezoning is consistent with, or not contrary to, relevant transport policy documents at the local, regional and national levels.

9 Overall, I consider the requested rezoning is appropriate from a traffic and transport perspective and my view is that there are no transport related reasons why the rezoning should not be adopted as proposed.

THE RECEIVING ENVIRONMENT

Existing Land Use and Transport Environment

- 10 The site is shown in Figure One below. It is located immediately north of Mandeville with the southwestern end of the site being located 1km from the Mandeville Village Town Centre. The Mandeville Village contains a supermarket, restaurants, a petrol station, and a hire service. Further south is the Mandeville Dog Park and sports grounds.
- 11 The site has frontage to both Ashworths Road and Dawsons Road. The land holding of 2 Ashworths Road is 115ha in area, although only part of the site (Lot 6 DP 2038 (approx. 70ha)) is the subject of this transport assessment and proposed rezoning in Mark and Melissa Proser's submission. Figure One below shows the 70ha portion "the site" being considered for rezoning.
- 12 The site is currently undeveloped farmland, as is the land to the north and east of the site. Low density (large lot) residential housing is located to the south and west of the site.

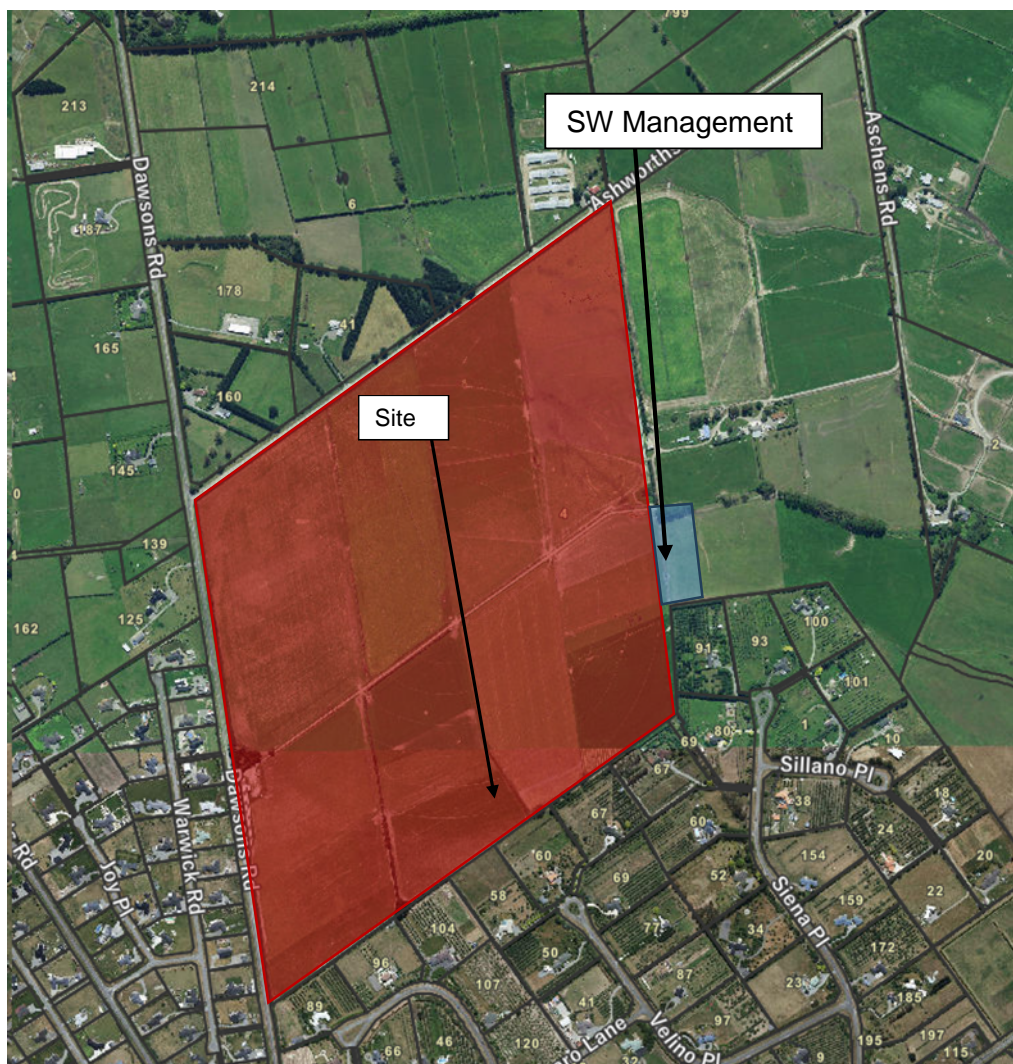


Figure 1. Site location

- 13 The site has frontage to Ashworths Road along its northern boundary. Ashworths Road is classified as a Local Road in the proposed Waimakariri District Plan (pWDP) and a Rural Road in the One Network Framework (ONF). It has a legal width of 20m with a 5.5m wide unsealed carriageway which enables two-way movement. There are utility poles along the southern side of the road. There are currently no footpaths or cycling facilities. The speed limit is 100 km/h. Ashworths Road has an estimated average annual daily traffic volume (AADT) of 201 vehicles, with 13.5% of vehicles classified as heavy vehicles¹. There are three existing accessways from the site with frontage to Ashworths Road. Figure Two shows the typical cross section of Ashworths Road with the site located on the left-hand side.

¹ Source: Mobile Roads



Figure 2. Ashworths Road looking west

- 14 The site also has frontage to Dawsons Road along its western boundary. Dawsons Road is classified in the pWDP as a Local Road, and in the ONF as a Rural Road. Dawsons Road has a legal width of 20m, with a chip-sealed two-lane / two-way carriageway in the order of 6.0m wide. There are wide grassed berms either side of the carriageway. There is a line of utility poles on the southern side of the road. There are no footpaths or cycling facilities. The speed limit on Dawsons Road changes from 100km/h to 80km/h as you travel south towards the intersection with Wards Road (approx. 600m south of Ashworths Road). Dawsons Road has an estimated AADT of 241 vehicles, with 7.2% of vehicles classified as heavy vehicles². There is an existing unsealed vehicle access to the site from Dawsons Road, currently used for farm access purposes. Figure Three shows the typical cross section of Dawsons Road. The site is located on the right-hand side of the photograph.



Figure Three Dawsons Road looking north

² Source: Mobile Roads

Road Safety

- 15 I have reviewed the reported crash history in the vicinity of the site using the NZTA Crash Analysis System to evaluate the existing road safety record on the surrounding road network. My analysis shows there were no crashes on the frontage roads between 2018 and 2023, or at the intersection of Dawsons and Ashworths Roads.

Walking and Cycling

- 16 In terms of walking and cycling, I note that there are currently no dedicated facilities on Dawsons or Ashworths Road. Given the rural nature of the roads, relatively low-density residential land use and distance from Mandeville Village Town and Ohoka, I consider the demand for walking and cycling as a means of daily transport is low, although there may be some use of these modes for recreation.
- 17 I note that there are two existing pedestrian / cycle paths in the vicinity of the site that connect Warwick Road with Dawsons Road, but there are currently no crossing facilities on Dawsons Road.

Public Transport

- 18 At present, there are no Metro routes that service the Mandeville area. There is however the option of multi-modal transport, involving 'Park and Ride' and public transport, through Rangiora and Kaiapoi. There are a total of five Park and Ride facilities across Rangiora and Kaiapoi. The location of these facilities is shown in Figure Four and are an approximate 10–15 minute drive from the site.



Figure 4. Park and Ride facilities

- 19 Metro provides three services through the area, two of which connect to the Christchurch Central City Bus Interchange, as follows:
- (a) 1 Rangiora & Belfast to Cashmere - services both Rangiora and Kaiapoi. The frequency of this service varies depending on the time of day with the most frequent occurring every half hour. The journey time by private vehicle from the site is 12 minutes to Rangiora and 15 minutes to Kaiapoi.
 - (b) 95 Pegasus & Waikuku - services the Waimakariri District from the Christchurch Central City Bus Interchange. During peak times, this service operates every half hour.
 - (c) 97 Rangiora to Pegasus – local service which does not connect to Christchurch. Residents of the site could use the Park and Ride facilities in Rangiora to access Pegasus.
- 20 Metro also provides four local school buses. These routes begin in Rangiora, and service Christchurch Boys' High School, Marian College, St Margaret's College, Avonside Girls' High School and Shirley Boys' High School.
- 21 Metro Buses provide bike racks to allow for further multi-modal transport.

- 22 In addition, I understand from my client team that there are school buses that service Mandeville (Oxford-Christchurch) and the surrounding areas. For completeness, the timetable is shown below:

Pick up Time	Stop Name	Location	Drop Off Time
6.50	Oxford	Outside service centre, Main Street	4.35
7.00	Bennetts	Bennetts, Layby Oxford Road	4.30
7.05	Cust / Poyntzs Road	Cnr Oxford Road and Poyntzs Road	4.25
7.10	Cust Hall	Opposite Cust Service Centre, CUST	4.2
7.13	Browns Road	Cnr Browns Road, Tram Roads	4.17
7.19	Swannanoa	Swannanoa Hall (AM) School (PM)	4.11
7.22	Mandeville	Cnr Bradleys & Tram (AM) Cnr McHughes Tram (PM)	4.08
7.25	Ohoka Downs	Tram Road	4.05
7.26	Whites Road Pond	Whites Road, Ohoka	4.04
7.29	Old Ohoka Hall	Mill Road, Ohoka	4.01
7.31	Ohoka School	Jacksons Road, Ohoka	3.59
7.36	Jeffs Drain Road	Cnr Jeffs Drain Rd, Tram Road	3.56
7.36	Clarkeville (AM)	Cnr Jeffs Drain Rd, Tram Road	3.56
	Clarkeville (2) PM	Corner Heywards & Tram Roads	3.53
	Clarkeville (1) PM	Corner Greigs & Tram Rd (carpark by Motorway Tram rd off-)	3.51
<i>*Stops are current at this time and can be subject to change</i>			

Figure 5. Oxford-Christchurch School Bus Timetable

- 23 I note that this confirms that the Oxford-Christchurch School Bus stops on the corner of Bradleys Road / Tram Road / McHughes Road for pick up and drop off. This is approximately 1.8km from the site, and provides a feasible transport to school option such that parents would not be required to drive into Rangiora, Kaiapoi or Christchurch for school pickup and drop off.

THE PROPOSAL

Proposed Rezoning

- 24 Ohoka Farm Holdings Limited is seeking to rezone 2 Ashworths Road to Large Lot Residential in the pWDP, with an outline development plan (ODP) applied to the site. The rezoning would enable development of the land down to a minimum allotment area of 2,500m², with an average allotment area of 5,000m². Accounting for the space required for civil infrastructure including roading, stormwater facilities and greenspace, an approximate yield of 115 households is anticipated.
- 25 The site will gain access via a new public roading network connecting Dawsons Road with Ashworths Road as shown on the ODP in Figure Six. I have reviewed and provided feedback on the ODP to ensure that the internal layout site is intuitive and well connected for all modes of transport, and that access points to the wider network provide safe and legible connections to the wider transport network.

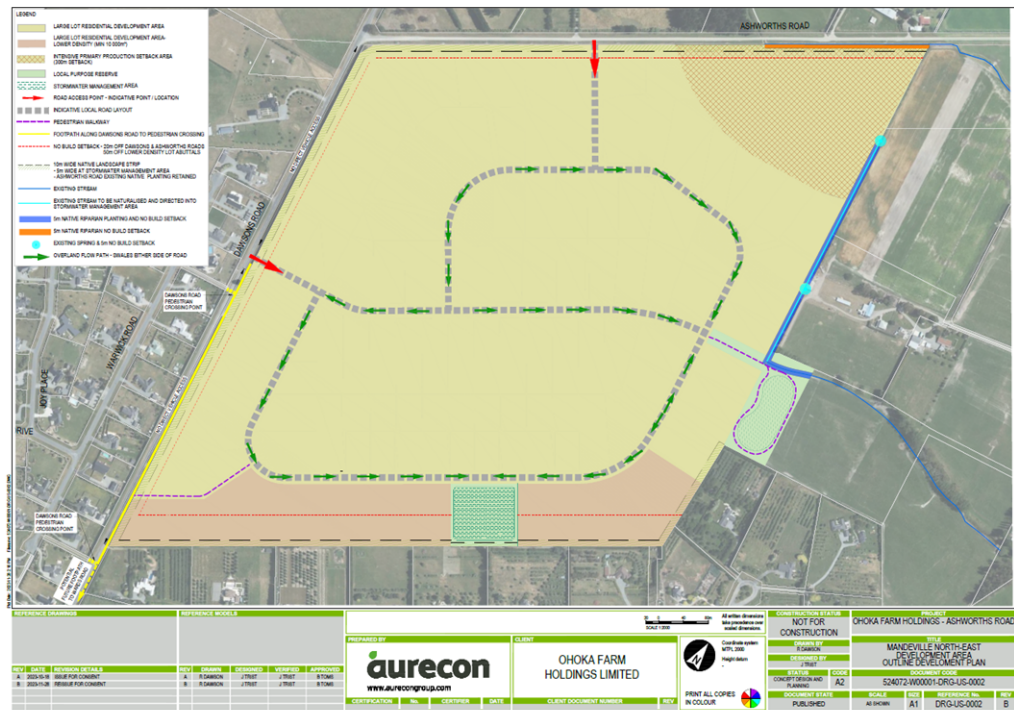


Figure 6. Outline Development Plan

TRANSPORTATION ASSESSMENT

Road Design

26 I have reviewed the intersection locations and undertaken a sight distance assessment in accordance with the standards set out in Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections. Based on a design speed of 100km/h on Ashworths Road and Dawsons Road and a reaction time of two seconds, a Safe Intersection Sight Distance of 248m is required in each direction at each new intersection. I can confirm that this distance is available at both new intersections.

27 I do note, however, that on Ashworths Road the sight distance may be partially obstructed by existing utility poles on the southern side of the road. In my view, given these are only partial obstructions and noting a driver will have good visibility before turning onto the road, I consider that this does to present a fundamental flaw to the design of the intersection and that a safe intersection can be established in this location.

28 Direct property access to Dawsons Road is not provided for (except for the proposed intersection), whereas direct access to Ashworths Road will be allowed. I consider this to be an appropriate design philosophy given the speed environment on Dawsons Road is higher and an increased number of

driveways will therefore increase the road safety risk on that road. Conversely, Ashworths Road is a lower speed road and has lower traffic flows, and so I consider direct property access to that road is appropriate and will not create any significant road safety problems.

- 29 The vehicle accesses are appropriately set back from adjacent intersections and driveways. Visibility on both Dawsons and Ashworths Roads is excellent due to the straight alignment of the roads and flat topography.
- 30 I confirm that the internal roading network will be designed and constructed in general accordance with the proposed Waimakariri District Plan (expect that only one footpath will be provided whereas two are required as per TRAN-3).
- 31 The proposed roading cross sections generally align with the Waimakariri District Council Engineering Code of Practice (other than as noted above in 12.7), and the proposed internal roads demonstrate a high level of connectivity to the existing transport network.
- 32 In this case, I consider that a single footpath can be supported on the basis of the NZTA pedestrian planning and design guide, which sets out that where a density of fewer than three dwellings per hectare is proposed, the 'preferred' provision is for footpaths to be on one side of the road. Refer to Figure Seven.

14.1 Where footpaths should be provided

Table 14.1 is a guide to providing footpaths in urban and rural environments ^[66].

Table 14.1 – When to provide footpaths				
Land use	Footpath provision			
	New roads		Existing roads	
	Preferred	Minimum	Preferred	Minimum
Commercial and industrial	Both sides		Both sides	
Residential (on arterials)				
Residential (on collector roads)				
Residential (on local streets)			Both sides	One side
Three to 10 dwellings per hectare	Both sides	One side	One side	Shoulders on both sides
Fewer than three dwellings per hectare (rural)	One side	Shoulders on both sides		

Figure 7. Footpath provision guidance. (Source: NZTA Pedestrian Planning and Design Guide)³.

- 33 The site has an area of 70ha and 115 households are likely to be yielded, so this equates to 1.64 dwellings per ha on average.

³ <https://www.nzta.govt.nz/assets/resources/pedestrian-planning-guide/docs/pedestrian-planning-guide.pdf>

- 34 Although provision of one footpath does not comply with Table TRAN-3 of the Proposed WDP, I note that those standards do not appear to account for development density. Based on my review, I consider that a footpath on one side is commensurate with the surrounding transport environment and appropriate for the scale of development proposed.
- 35 On this basis, I consider the internal layout and road cross sections will be appropriate to service the type of development proposed on the site.

Traffic Generation

- 36 I have calculated the trip generation rates using rates provided in the Waimakariri District Council Engineering Code of Practice (WDCECoP). That document sets out that a trip generation rate of eight trips per day for a rural dwelling should be used. Peak hour trip rates are not provided in the (WDCECoP). However, I note that the daily trip rates in the WDCECoP are similar to those of an outer suburban dwelling as cited in Table C.1 of Waka Kotahi Research Report 453 (RR453). RR453 lists a peak hour trip generation rate of 0.9 trips per dwelling per hour for outer suburban dwellings. I consider this to be an appropriate peak hour trip rate to apply for this site.
- 37 I have calculated that a yield of 115 dwellings would generate 104 vehicle peak hour vehicle trips and 920 vehicle trips per day. In the peak hour, this equates to less than one vehicle every 30 seconds (two-way) which is a very low trip rate in the context of peak hour travel.

Traffic Distribution

- 38 In the morning peak hour, I expect that 70-80% of traffic will leave the development and 20-30% will arrive at the development, and that this trend will approximately reverse in the evening peak. It is likely that most traffic leaving the development during the peak hour will be travelling to one of four locations – Christchurch Central City, Rangiora, Kaiapoi or to daily amenities nearby in Mandeville.
- 39 Statistics New Zealand's Waka Commuter⁴ service presents travel to work and education data from the 2018 census. I have accessed this data to understand where residents in the Mandeville-Ohoka area travel on a daily basis and

⁴ <https://commuter.waka.app/>

anticipate that trips from the rezoning site would follow a similar pattern. The results demonstrate that:

- (a) 29.4% of people living in the vicinity travel locally within the Mandeville-Ohoka area.
- (b) 14.1% travel to Rangiora and the surrounding areas such as Fernside and Lilybrook.
- (c) 10.4% travel to Swannanoa-Eyreton located directly south of the Mandeville-Ohoka area.
- (d) 5.3% travel to Kaiapoi.
- (e) 30.9% travel to Christchurch.
- (f) 9.9% travel to other outlying areas in the Waimakariri District.

40 I consider that future occupants travelling to Christchurch would exit the development via Dawsons Road, through the Wards Road and Dawsons Road intersection, to the Tram Road intersection. It is likely that motorists would continue along Tram Road through to the State Highway, turning right into Christchurch. I have shown the shortest route between the site and Christchurch City boundary in Figure Eight.



Figure 8 Ashworts Road to Christchurch Central City.

41 Occupants travelling to Kaiapoi in my view would likely also travel down Tram Road, however motorists are expected to turn left onto Giles Road, then right onto Ohoka Road, and through to Kaiapoi. I have shown the shortest route from the site to Kaiapoi in Figure Nine.



Figure 9. Ashworths Road to Kaiapoi.

- 42 Figure Ten shows what I consider to be the likely route between the site and Rangiora. Rather than turning right onto Ashworths Road from the development, drivers can turn left and drive towards Dawsons Road, then turn right and drive towards Pattersons Road. After driving straight on Pattersons Road, they can turn onto Two Chain Road, which eventually changes to Swannanoa Road. At this point, they can turn onto Johns Road. Johns Road will take drivers into the centre of Rangiora. According to Google Maps, this route requires a driving distance of 14.1km and requires a travel time of 15 minutes.
- 43 I note that a more 'direct' route would be for drivers to turn right onto Ashworths Road, up Plaskett Road and right onto either Johns Road or Oxford Road, however this would require travelling down the unsealed section of Ashworths Road, which in my view decreases the attractiveness of this route. According to Google Maps, this route requires driving a distance of 11.1km, and is estimated to require a travel time of 13 minutes (and so is 3km and two minutes shorter than the sealed route in Figure Ten).



Figure 10 Ashworths Road to Rangiora journey

- 44 Although the sealed route shown in Figure Ten is slightly longer, I consider that most drivers would prefer to use this route instead of having to drive down the unsealed section of Ashworths Road as there will be less wear and tear on vehicles.
- 45 I note that if travelling down the unsealed section of Ashworths Road toward Rangiora, drivers would be required to 'cross over' Mill Road, which is a crossroad rural intersection. Generally speaking, these types of intersections can attract a high level of road safety risk primarily due the potential for drivers to fail to give way. This typically occurs when drivers are not aware of the presence of the intersection when approaching from the minor (side roads), and the safety risk is often elevated due to high operating speeds.
- 46 In this instance, I consider the likelihood of drivers failing to give way to be relatively low. This is because the road surface on Ashworths Road changes from unsealed to sealed, which indicates to drivers (particularly on the western approach) that they are approaching an intersection. On the eastern approach, the road curves around to the south slightly (with a centre line) which constrains a driver's ability to travel straight through the intersection without first slowing down and giving way to traffic on Mill Road. There is also advanced warning signage on the eastern approach to the intersection. I do note, however, that there is no advanced warning signage on the western (unsealed) approach.

- 47 Given this, but also noting the safety record is good at the intersection (only one minor crash has been reported in the past five-years where a driver turning right into Ashworths Road failed to give way to a motorcyclist travelling south along Mill Road), I consider that a small increase in traffic through this intersection is unlikely to create a road safety problem. However, I consider it would be appropriate to install improved intersection advanced warning signage at the Ashworths Road / Mill Road intersection on the western approach.

Transport Network Effects

- 48 I have estimated the potential increase in daily flow of traffic on key roads based on the above trip generation and distribution assumptions. This has extended to the wider network including Tram Road which is the main connection to Christchurch from the site. The results are shown in the table in **Attachment 1**.

- 49 My view is that the increment in traffic due to the rezoning and potential subsequent development of the site is generally small. The Highway Capacity Manual⁵ indicates the capacity of a two-lane two-way road is 1700 vehicles per hour in each direction of travel which corresponds to a capacity of up to 17,000 vehicles per day based on typical traffic profiles. I have concluded that there is sufficient capacity for the network to operate safely and efficiently, with no wider impacts on the network anticipated as a result of the future development following rezoning of the site.

Proposed External Transport Infrastructural Improvements

- 50 The ODP shows a new footpath on the eastern side of Dawsons Road from the new intersection location to just slightly south of the south-western corner of the site (to align with the southern pathway connecting Dawsons Road with Warwick Road). Although this will not connect into any existing dedicated pedestrian infrastructure, I consider that should Council seek to extend the pedestrian network to connect to Mandeville Village Town at some stage in the future, that the proposed footpath would be able to 'tie in' with any future footpath. Moreover, I highlight that the proposed footpath will provide positive benefits to existing road users, primarily those residents on Warwick

⁵ US Transportation Research Board Highway Capacity Manual 2000.

Road and others fronting Dawsons Road further south of the site (particularly if the footpath is extended further in the future).

- 51 Two pedestrian crossing points will be provided to align with the two pathways connecting Dawsons Road with Warwick Road (which are recreation reserve lots, with property addresses of 52 Warwick Road (northern pathway) and 16 Warwick Road (southern pathway)). I consider that this will provide excellent connectivity to neighbouring developments for existing and future pedestrians in the vicinity.
- 52 It is also proposed to upgrade Ashworths Road from its intersection with Dawsons Road up to the location of the proposed intersection serving the site. Ashworths Road is currently unsealed and is in poor condition with potholing observed. As per the Waimakariri District Council Engineering Code of Practice, Table 8.3, I have recommended that the upgrade should incorporate a minimum 6.0m sealed carriageway with 2.0m wide shoulders on each side (0.5m of which should be sealed), with adequate side drainage. I note that the design would need to be accepted by Waimakariri District Council. The sealing need not extend to the eastern boundary of the site but should extend far enough past the access (at least five metres) to ensure that loose material such as gravel is not dragged into the intersection.
- 53 The sealing of Ashworths Road will have positive benefits to the roading network. These benefits relate primarily to reduced maintenance requirements but also road safety benefits. Generally, sealed road networks require less maintenance when compared with unsealed road networks, and so I consider that sealing the road will appropriately off-set any potential road degradation effects that might arise from development of the site, and is therefore likely to reduce maintenance costs to ratepayers. Additionally, unsealed roads are generally more likely to have increased incidence of 'loss of control' type crashes compared with sealed roads. This is primarily due to the surface being 'loose' which increases the likelihood of drivers losing control.
- 54 Accordingly, I recommend the Ashworths Road sealing be undertaken prior to establishing the access onto Ashworths Road. The detail as to how this can be achieved and staged with future development can be resolved at latter design stages.

RELEVANT PLANNING PROVISIONS

Strategic Planning Framework

- 55 I have assessed the proposed rezoning against the transport related policies of the following relevant national, regional and district planning instruments:
- (a) National Policy Statement on Urban Development (NPS-UD)
 - (b) Canterbury Regional Policy Statement
 - (c) Canterbury Regional Land Transport Plan
 - (d) Canterbury Regional Public Transport Plan
 - (e) Proposed Waimakariri District Plan
- 56 I have concluded that the proposed rezoning of the site is not anticipated to give rise to adverse effects on the strategic transport network. I consider that the rezoning is consistent with and/or not contrary to the transportation-related provisions of the NPS-UD Canterbury Regional Policy Statement, Canterbury Regional Land Transport Plan 2021-31, Canterbury Regional Public Transport Plan 2018-28, and the objectives and policies of the pWDP.
- 57 Objective 3 of the NPS-UD requires regional policy statements and district plans to enable more people to live in, and more businesses and community services to be located in, areas of urban environment in which one or more of the following apply:
- (a) the area is in or near a centre zone or other area with many employment opportunities
 - (b) the area is well-serviced by existing or planned public transport
 - (c) there is high demand for housing or for business land in the area, relative to other areas within the urban environment.
- 58 Although there is currently no public transport service in the vicinity of the site, I highlight that the wider Mandeville and Ohoka area is well connected to the public transport network via existing park and ride facilities in Rangiora and Kaiapoi. Given the existing density of Mandeville and the proposed future large lot, I consider that park and ride is the appropriate type of public transport facility for this development typology. Furthermore, I note that the site is accessible to the local school bus service as discussed in Paragraphs 20-23 of my evidence.

- 59 However, I also highlight that on-demand public transport services are being used in other parts of New Zealand. I consider that such types of services are likely to be appropriate for development areas such as this where housing density is relatively low. I consider that provision of more housing in the vicinity of existing housing would make such services more viable, which would provide better transport choice for existing and new residents.
- 60 Policy 1(c) of the NPS-UD requires planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum, have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport (among other things). As above, I consider that the site is accessible by public transport via park and ride facilities in Kaiapoi and Rangiora in a manner that is appropriate for large lot residential development. Furthermore, the layout of the site demonstrates an excellent level of connectivity to the existing transport network and wider residential area for all modes of transport. This is demonstrated by a new footpath on Dawsons Road that is accompanied by road crossing points to connect with the western housing area at Warwick Road.
- 61 Policy 5.3.7 of the Canterbury Regional Policy Statement relates to the "strategic land transport network and arterial roads (entire region). It seeks to avoid development that:
- (a) adversely effects the safe, efficient, and effective functioning of the strategic land transport network and arterial roads, including the ability of infrastructure to support freight and passenger transport services, and
 - (b) forecloses the opportunity for the development of the network to meet future strategic transport requirements
- 62 My analysis of traffic generation shows that the proposed rezoning would result in small increments in local traffic volumes, and not have any significant adverse effects relating to safety or efficiency of the local and strategic transport network. I also highlight that the site does not seek direct access to the arterial road network.

- 63 The Canterbury Regional Land Transport Plan 2021-2031 is periodically reviewed and updated to reflect the current state of the region's transport network, and the focus for future investment. The objectives of the plan are:
- (a) Shared prosperity shared prosperity (environmental, social, economic and cultural);
 - (b) better freight options;
 - (c) reduced harm;
 - (d) improved advocacy;
 - (e) reliable and consistent journeys;
 - (f) mode shift; and
 - (g) resilience
- 64 I do not anticipate that the proposed rezoning will give rise to adverse effects on the strategic transport network and does not require any new external roading links. The site is directly north-east of existing development and there are opportunities to connect to existing adjacent developments. Provision for walking and cycling within the site and adjacent to the site on Dawsons Road is included in the proposed ODP and will provide the opportunity to connect to future infrastructure on the wider network.
- 65 Environment Canterbury regularly evaluates the public transport requirements of the wider network. Therefore, I consider bus services to Rangiora and Kaiapoi may increase to provide further public transport accessibility, as the district population continues to grow.
- 66 The Canterbury Regional Public Transport Plan 2018-28 has four key policies. These are as follows:
- (a) The network: service, infrastructure, and supporting measures.
 - (b) Customers.
 - (c) Funding and fares.
 - (d) Standards, procurement, monitoring and review."
- 67 One of the key objectives of the 2018 plan is to achieve "a network of public transport services in the Greater Christchurch and Timaru urban areas that provides people with access to key destinations". This includes services to and

from satellite centres, such as Rangiora and Kaiapoi. The current public transport routes connect Rangiora and Kaiapoi to each other, and to central Christchurch (including local school bus services).

68 I consider that the existing park and ride facilities at Rangiora and Kaiapoi are easily accessible from the site, and will be attractive for residents to connect to the wider network using public transport. On demand public transport services are also becoming more popular and may be appropriate for residential areas such as Mandeville. An example of this being successfully implemented is the MyWay Service in Timaru. In my view, there is nothing to preclude this type of service from being established in the wider Mandeville area, and public transport becomes more viable as the catchment area grows.

69 My review of the relevant objectives and policies contained within the proposed Waimakariri District Plan (TRAN-01-TRAN-05, TRAN-P1-P16) concludes that the proposed rezoning is either consistent with or can be consistent with those policies. I consider that the resource consent process will provide the appropriate platform for assessment of the internal road design and site layout.

MATTERS RAISED BY SUBMITTERS

70 There are no matters raised by submitters that are relevant to my evidence.

CONCLUSION

71 In my view the proposed rezoning in the submission made by Mark and Melissa Prosser can be supported from a traffic and transportation perspective. I consider that there are no traffic and transportation reasons why the proposed rezoning could not be approved.

72 Thank you for the opportunity to present my evidence.

David John Robert Smith
5 March 2024

ATTACHMENT 1

TABLE OF TWO-WAY DAILY TRAFFIC VOLUMES ON KEY ROADS

Road (from / to)	Daily Flow	% of traffic using this road	Daily Flow with development
Tram Road (Whites Road to Bradleys Road)	6757	76	7452
Tram Road (Jacksons Road to Whites Road)	7872	46	8296
Tram Road (Burgesses Road / Gardiners Road to Jacksons Road)	7605	46	8029
Tram Road (South Eyre Road / Giles Road to Burgesses Road / Gardiners Road)	8627	46	9051
Tram Road (Island Road to South Eyre Road / Giles Road)	10285	41	10661
Tram Road (Main North Road to Island Road)	11888	41	12264
Dawsons Road (Wards Road to Ashworths Road)	241	76	935
Dawsons Road (Ashworths Road to McRoberts End)	221	24	442
Ashworths Road (Dawsons Road to 126 Ashworths Road)	201	90	1026
Ashworths Road (126 Ashworths Road to Main Drain Road)	453	15	593
Pattersons Road (Dawsons Road / McRoberts Road to Mandalea Road)	287	24	508
Pattersons Road (Mandalea Road to Wards Road)	244	24	465
Pattersons Road (Wards Road to Two Chain Road)	1074	24	1295
Two Chain Road (Tram Road to Main Drain Road)	2382	24	2603
Swannanoa Road (Two Chain Road to Start of Bridge)	2463	14	2593