

**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**

**SUPPLEMENTARY EVIDENCE OF DAVID JOHN ROBERT SMITH
IN RESPONSE TO OFFICER REPORT
ON BEHALF OF MARK AND MELISSA PROSSER
REGARDING HEARING STREAM 12C**

DATED: 8 July 2024

Presented for filing by:
Chris Fowler
Saunders & Co
PO Box 18, Christchurch
T 021 311 784
chris.fowler@saunders.co.nz

INTRODUCTION

- 1 My name is David John Robert Smith.
- 2 I have prepared a statement of evidence regarding Hearing Stream 12C in support of Mark and Melissa Prosser's submission on the Proposed Waimakariri District Plan (**PWDP**) to rezone approximately 73 ha at Mandeville (**Site** or **Prosser Site**) from Rural Lifestyle Zone (**RLZ**) to Large Lot Residential Zone (**LLRZ**).
- 3 My qualifications and experience are set out in that statement. I confirm that this supplementary statement of evidence is also prepared in accordance with the Environment Court's Code of Conduct.
- 4 On 23 May 2024 the Waimakariri District Council (**Council**) released an Officer Report for Hearing Stream 12C prepared under section 42A of the RMA containing an analysis of submissions seeking Large Lot Residential Zone and recommendations in response to those submissions (**Officer Report**).
- 5 On 27 June 2024 the Reporting Officer issued a preliminary response to written questions prepared by the Panel in relation to Hearing Stream 12C (**Response Document**).
- 6 The Officer Report recommends that the Prosser rezoning submission be rejected. My supplementary evidence is filed in response to that Report.

SCOPE OF SUPPLEMENTARY EVIDENCE

- 7 In my supplementary evidence I address the following matters:
 - (a) My supplementary evidence responds to those parts of the Officer Report and S42A Response Document that address matters within scope of my expertise, with particular emphasis on matters where there is a difference of view between myself and the Officer Report.
- 8 In preparing my supplementary evidence I have:
 - (a) Reviewed the Officer Report and Appendix F (Transport) to that Report;
 - (b) Reviewed transport matters raised in the S42A Response Document;

- (c) Reviewed my evidence in chief filed earlier on behalf of the Submitters; and
- (d) Reviewed other materials specifically mentioned in my supplementary evidence discussed below.

CONTEXT AND APPROACH

- 9 As mentioned, the Officer Report recommends decline of the Prosser rezoning submission. A range of reasons are given for this recommendation, some of which relate to my area of expertise.
- 10 Mr Binder from Council prepared a memorandum summarising transportation advice in relation to the Prosser submission. This is included as Appendix F Part 1 to the Officers Report.
- 11 The approach I have adopted in this supplementary statement of evidence is to identify those parts of the Officer Report (and accompanying Appendix F) where I disagree with the Officer Report and to explain my reasons for disagreement.
- 12 The matters I address are as follows:
- (a) Transport accessibility and Green House Gases (GHG);
 - (b) Constraints on transport network (specifically the SH1 / Tram Road interchange);
 - (c) Public transport and active mode provision;
 - (d) Poor outcomes from ROWs;
 - (e) Roding widths; and
 - (f) Local infrastructure improvements.

RESPONSE TO OFFICER REPORT

Transport accessibility and GHG

- 13 **Paragraph 138** of the Officer Report states "*...the rezoning application does not meet Policy 1(c) by having good accessibility to jobs, community services, and public or active transport, as there is very limited community services, and no public and limited active transport options. Development away from existing townships with good community services and public transport does*

not support the reduction in GHG [refer to footnote 60] (Policy 1(e) and Policy 6(c))."

- 14 From a transport perspective, the Site is very similar to other LLRZ candidate locations. There are two schools within 7km of the Site and the Mandeville Village shopping centre in only 2km from the Site including a supermarket, service station, eateries and other retail offerings.
- 15 With respect to access to jobs, Rangiora and Kaiapoi towns provide ample local employment and can be accessed in 15 minutes by vehicle. Christchurch as the main urban centre is situated 26km to the south. I have compared the location of the Site with other candidate LLRZ sites that have capacity in the District. Mr Allan has provided me with a map of the location of these candidate sites which I have included in the figure below. The stars indicate the Prosser site and five other candidate sites where there proposed rezoning to LLRZ either in the PDP or through submissions on the PDP.

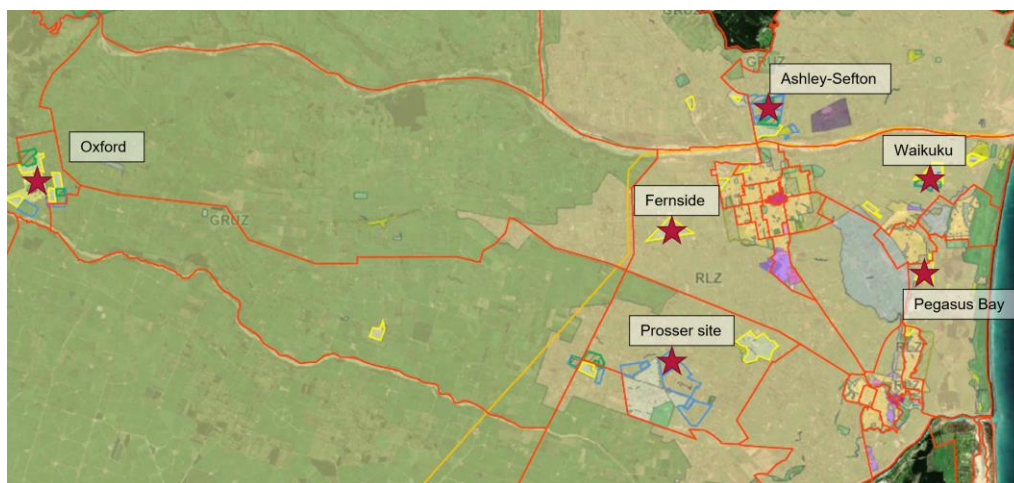


Figure One Locations of proposed LLRZ

- 16 I have calculated the distance¹ from these six locations to urban centres including the Christchurch City Centre with result in the table below.

¹ Using Google Maps based on vehicle travel distance

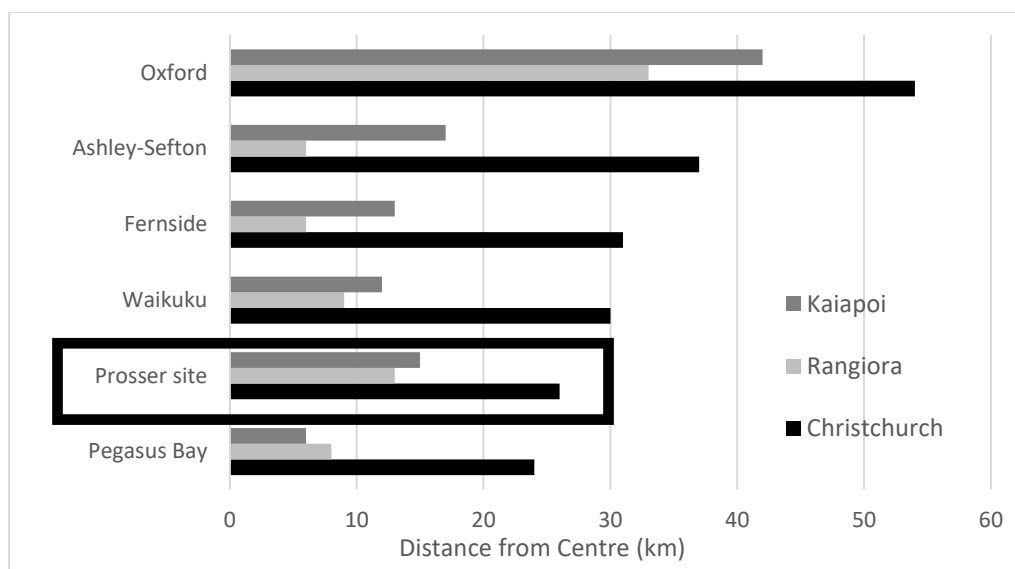


Figure 2 Distance from urban centre by LLRZ area

- 17 This demonstrates that in relative terms, the Prosser site (in the box shown above) is one of the closest candidates to Christchurch and is comparable to others with respect to proximity to the urban centres of Kaiapoi and Rangiora. I consider that in the context of the zoning sought, the site can be supported from a transport accessibility perspective.
- 18 I have also analysed Statistics New Zealand (StatsNZ) 2018 census data to compare the Prosser site to the five candidate locations with respect to the transport modes used to access workplaces and education from each corresponding Statistical Area. This is available online using the StatsNZ Waka Commuter tool². The results are shown in the figure below.

² <https://commuter.waka.app/>

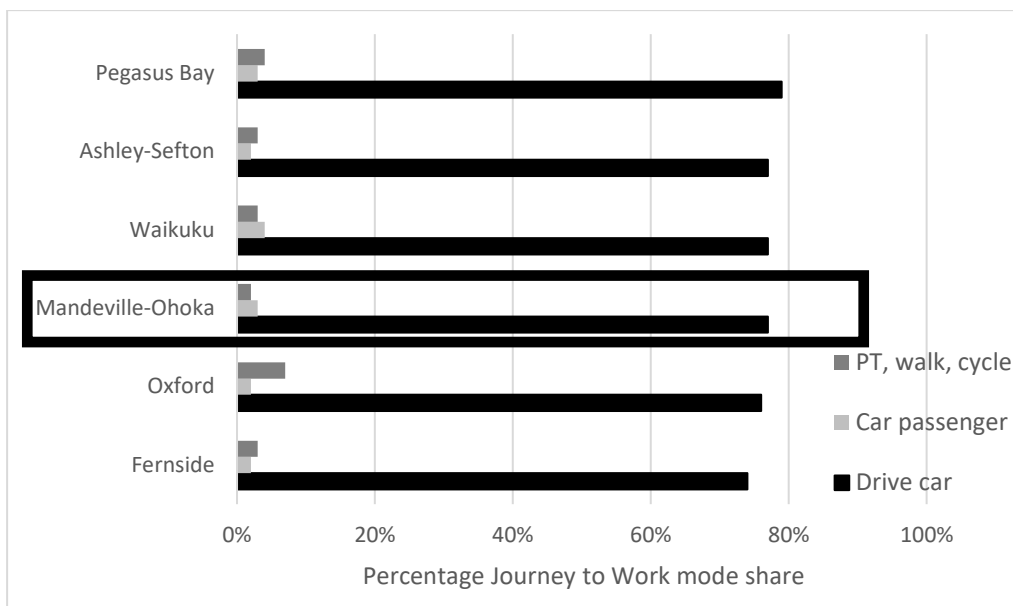


Figure 3 Transport mode choice for journey to work trips by LLRZ area

19 The transport mode data show that the Prosser site (in the box above) is very similar to all other candidate locations with respect to car driver and passenger mode share.

20 I have undertaken a similar assessment based on trips to education from the same data source. This captures trips from each candidate area to primary, secondary and tertiary education providers. The results are presented below.

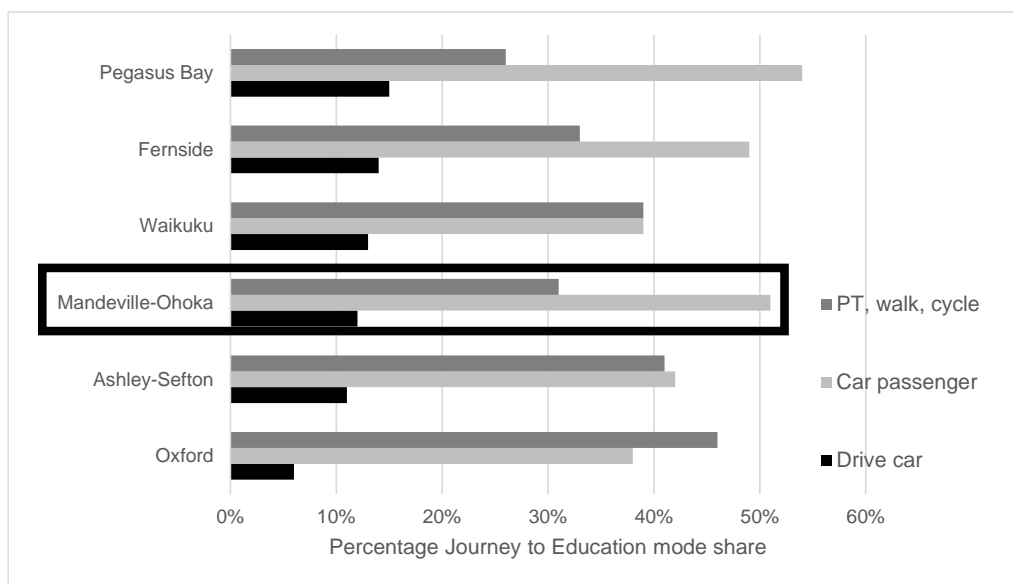


Figure Four Transport mode choice for journey to education trips by LLRZ area

21 The transport mode data shows that the Prosser site (in the box above) is very similar to all other candidate locations with respect to car driver and passenger mode share.

- 22 I do not consider that this site is performing poorly in the context of proposed LLRZ areas, but instead exhibits very similar results to other areas which have similar contexts. Notably as this site is closer to Christchurch than most other sites, the impacts of long-distance commuting to Christchurch as the major metropolitan centre in the Region are less than those of other candidate sites.
- 23 I have provided the trip distance and transport mode data from 2018 census for the six sites to Mr Wilson to inform his Green House Gas (GHG) assessment. The data is included for each site in **Attachment One**.
- 24 There is potential to achieve better outcomes in the future through improved provisions for public transport and active modes. I acknowledge concerns raised with respect to there being no public transport and limited active mode provision in vicinity of the site at present. However, I elaborate on opportunities to improve provision for these modes in Mandeville in paragraphs 39-49.

Constraints on transport network

- 25 **Paragraph 141** of the Officer Report states "*...the proposed rezoning is not consistent with Policy 6.3.2 as it is not integrated with infrastructure in that there is no capacity in the wastewater network and existing constraints within the transport network.*"
- 26 Mr Binder in his memorandum helpfully identifies that the SH1 / Tram Road interchange is the local transport network constraint that has the potential to be impacted by the rezoning. Mr Binder states "*I refer back to the evidence provided in the PC31 plan hearings (and generally accepted by both parties) that suggested there was a threshold of 250 additional households in the Mandeville area before traffic operations begin to fail at the Tram Road / SH1 motorway interchange. This proposal seeks to add 115 households (and I would consider this trip generation to have a distribution similar to that proposed for PC31), which is almost half of the Tram Road threshold by itself. While this may not be sufficient to cause the interchange to fail by itself, the cumulative impacts of this development along with any others in the area could likely lead to this outcome.*"
- 27 I agree that Tram Rd is the most likely transport infrastructure constraint in the vicinity. Notably, the interchange has very recently been upgraded by

NZTA³ to signalise the Tram Road offramp, which improves the safety and operational efficiency of the interchange.

28 To understand the impacts of the rezoning of the Prosser Site a microsimulation model of the recently upgrade interchange has been built by Abley staff under my direction, to demonstrate the incremental impact of the rezoning.

29 This is a more sophisticated approach to that presented in PC31 whereby a linked intersection model was relied upon. I have developed the model using Paramics Discovery which enables the interaction of the adjacent on ramp and offramps signals to be well understood by simulating individual vehicle movements through the interchange. The model study area is shown below:

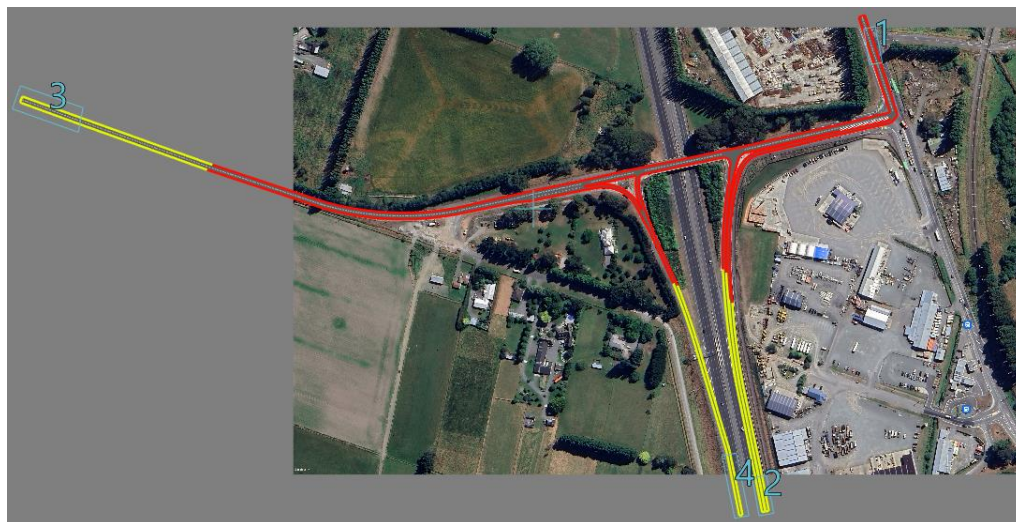


Figure Five Tram Road interchange model study area

30 The model has been developed as follows:

- (a) 2021 peak hour classified turning movement surveys used for base as presented in evidence for PC31 application were sourced (Source Novogroup⁴).
- (b) SCATS⁵ detection data from existing on ramp signals (March 2023 data) were used to factor these 2021 flows up to two-hour 2023 demand profiles retaining the 2021 survey vehicle classification.

³ <https://www.nzta.govt.nz/assets/projects/christchurch-northern-corridor/sh1-tram-road-off-ramp-safety-improvements-infosheet-january-2024.pdf>

⁴ https://www.waimakariri.govt.nz/_data/assets/pdf_file/0026/160694/Evidence-of-Nick-Fuller-Ohoka-rezoning.pdf

⁵ SCATS is the software used by Traffic Operations Centres to control the traffic signal operations including allocating overall signal cycle time, phase (green) time, offset timings between adjacent signals and vehicle detector counts.

- (c) 15 minute SCATS detection data disaggregated to prepare 5 minute loading profiles by lane at on ramp signals.
- (d) Paramics modelling of interchange was carefully calibrated to match signal timings and offsets from 2023 SCATS data.

31 I have assessed that the Prosser rezoning submission will add 376 vehicle movements per day to the Tram Road interchange which equates to an approximate 3-4% increase in traffic flows along Tram Road. In the context of peak commuter hour travel I estimate that 10% of this flow of 38 vehicle movements per hour will be added to the interchange (with the remainder of traffic from the Site remaining within the Waimakariri District).

32 A total of four transport modelling scenarios have been run as follows:

- (a) Scenario 1 - Base year (2023)
- (b) Scenario 2 - Base year (2023) with 115 lots on Prosser land
- (c) Scenario 3 - Future year (increasing all flows by 30% to account for 10+ years growth at 2.5-3% per annum)⁶
- (d) Scenario 4 - Future year (increasing all flows by 20% to account for 10+ years growth at 2.5-3% per annum) with 115 lots on Prosser land

33 The model results shown in Table One and Table Two below show the travel time through the intersection under each scenario for vehicle moving through the interchange as shown in the figure below.

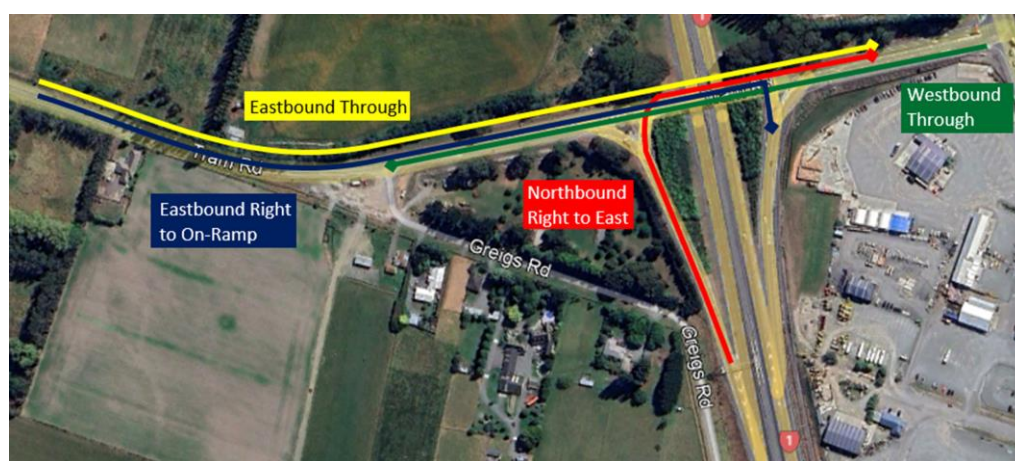


Figure Six Travel movements through the Tram Road interchange

⁶ NZTA Count Station 01S2037 Waimakariri Bridge (immediately south of Tram Rd interchange has experienced 2.7% growth per annum 2018-22

Vehicle path	Sc.1 AM Peak	Sc.2 AM Peak with 115 lots		Sc. 1 PM Peak	Sc.2 PM Peak with 115 lots	
	Time(sec)	Time(sec)	change	Time(sec)	Time(sec)	change
Tram Rd Westbound Through	79	80	0.7	49	48	-0.9
Tram Rd Eastbound Through	51	51	0.2	61	61	0.2
Tram Rd Eastbound Right to On-Ramp	49	49	0.5	58	59	0.8
Northbound Right to East	70	70	-0.6	49	48	-0.2
Weighted Change in travel time			0.4			0.0

Table One Base year modelling results (Scenarios 1 and 2)

Vehicle path	Sc.3 AM Peak	Sc.3 AM Peak with 115 lots		Sc.4 PM Peak	Sc.4 PM Peak with 115 lots	
	Time(sec)	Time(sec)	Change	Time(sec)	Time(sec)	Change
Tram Rd Westbound Through	84	84	0.2	53	53	0.2
Tram Rd Eastbound Through	59	62	2.9	70	72	1.7
Tram Rd Eastbound Right to On-Ramp	57	59	2.7	68	69	1.3
Northbound Right to East	84	86	1.7	50	50	-0.1
Weighted Change in travel time			2.5			0.9

Table Two Future year modelling results (Scenarios 3 and 4)

- 34 The modelling assessment demonstrates that in the base year the addition of 115 lots has minimal impact on travel times with the average increase in travel time through the interchange being less than one second.
- 35 In the future year scenario which allows for 10 years of future background growth, the additional 115 lots increase travel times by on average 2.5 seconds in the morning commuter peak and 0.9 seconds in the evening commuter peak. In the context of commuter trips of 15 minutes or more to access the northern Christchurch suburbs, a 0.9-2.5 second increase in total travel time is in my view inconsequential.
- 36 Additional observations of the model running with the development traffic demonstrate that there are no adverse impacts due to additional queuing or congestion throughout the commuter peak periods. I have concluded that the interchange has ample capacity to accommodate the 115 lots associated with the Prosser submission as well as ten years of continued background growth in traffic.

37 I disagree that the Tram Road interchange is an existing constraint that would be exacerbated by the addition of traffic associated with the Prosser rezoning submission. This is consistent with my site visit observing the operation of the Tram Road interchange subsequent to the recent traffic signals upgrade on 5th July 2024. I observed no notable congestion, minimal delays awaiting green lights and minimal queuing on approaches. I conclude that the recently upgraded interchange is operating safely and efficiently with substantial spare capacity to cater for future traffic growth.

Public transport and active mode provision

38 **Paragraph 142** of the Officer Report refers to Mr Binder's assessment that *"...there was poor active transport options, no provision for public transport and notes that remote LLRZ development does not make best use of existing transport networks."*

39 Mr Binder states *"...with the exception of short paths between roads within and around the Millfield development, most of the "existing network" pictured has no walking or cycling facilities and consists of peri-urban 50-80 km/h roads with minimal shoulders. I would not consider these appropriate all-ages/all-abilities walking or cycling links."*

40 I consider that active mode options will be enhanced by connectivity to the neighbouring Large Lot Residential to the west and south of the site as shown on the Outline Development Plan (ODP). I have also discussed improving provision for pedestrians and cyclists with Mr and Mrs Prosser and they have agreed to establish a footpath to connect the site with the Mandeville commercial centre.

41 This is in my view a substantial investment in, and commitment to, active mode infrastructure that would not only benefit future residents but also neighbours and the wider community. I have recommended that this additional infrastructure be included in the ODP subject to Council approval.

42 I recommend that any such facility should be in keeping with the semi-rural environment and would likely be formed with crushed gravel or other high-quality unsealed surface. This would in appearance and function be similar to the function of the active mode corridor adjacent to Macleans Island Road as pictured below (noting that this example is on reserve land). With a 6-7 metre

wide grass berm, a 1.5m wide facility can be established safely in the berm with separation from traffic.



Figure Seven Example of likely design standard active modes facility⁷

- 43 This addition addresses the concerns about a lack of existing infrastructure raised in the Officers Report.
- 44 Mr Binder's concerns are stated in his memorandum as "*...the existing and proposed housing density across Mandeville is far lower than the residential density in any of the present or recently terminated on-demand PT trials across New Zealand. Further, any such services would have to connect to existing fixed services (as they would unlikely serve any key destinations) and research consistently shows that every added transfer in a PT journey has substantial negative impact to the competitiveness of that mode. As such, I would consider Mandeville not to be a viable area for public transport services.*"
- 45 I have addressed public transport provision in paragraphs 17.4-17.5 of my primary evidence where I acknowledged the role of park-and-ride services to provide for outlying lower density areas as well as the potential for on-demand services. The matter of public transport provision is not unique to the Prosser site but is a challenge for all Large Lot and rural residential sites which typically have a lower density compared to urban centres.
- 46 Options such as park-and-ride and on-demand services are relatively recent innovations to provide more flexibility for public transport to service the

⁷ Source: Google Streetview

diverse travel needs of communities. These in my view provide opportunities to extend the reach of public transport.

47 Communities seeking public transport are also able to lobby to Environment Canterbury to assess the viability of providing public transport. The outcomes of these processes can include introducing a targeted rate enabling the costs of establishing services to outlying areas to be shared by the community. I understand that the current Darfield and West Melton service operates on the basis of a targeted rate for ratepayers that benefit from this service.

48 I conclude that there remains the potential for improved public transport provision in Mandeville in the future, and reiterate that although there are currently no services in Mandeville this is no different to the situation in other low density development areas in the District.

Poor outcomes from ROWs

49 **Paragraph 144** of the Officer Report refers to Mr Binder's statement relating to Right-Of-Ways (ROWs) that "*...in general I have no comment on the ODP, beyond previous comments on poor outcomes from ROWs.*"

50 I can find no clear reference to concerns raised around right of ways in the Officer Report, but have considered the ROWs included in the ODP against the Waimakariri District Plan transport rules and Engineering Code of Practice Part 8: Roading⁸.

51 The Code of Practice stipulates that any private ROW must comply with the District Plan, but also clearly states that engineering drawings must be provided to Council prior to physical works. This means there is a clear process (and a requirement) for Council engineering review and approvals. This enables Council to address any concerns with respect to the design and operation of the ROWs.

52 The Transport chapter (TRAN) of the Proposed District Plan defines the term 'Accessway' - "*includes any rights of way, private way, access lot, access leg or private road*". I have reviewed the rules and associated design standards for the formation of new vehicle accessways (Table TRAN-7). I can see no reason why any future ROWs associated with the Prosser subdivision would not be compliant with the legal requirements of the Proposed District Plan.

⁸ https://www.waimakariri.govt.nz/_data/assets/pdf_file/0025/134296/Part_8_QP-C817-Roading.pdf?v=0.0.0

Roading widths

53 Under the sub-heading Transport, paragraph 156 states "*The roading assessment identified that road reserves would be 20m, but did not detail the actual road widths. The concluding statement of the Services report was that a full road design would be undertaken as part of the resource consent application. There was no separate assessment of the impacts of traffic on the wider network.*"

54 I consider that road widths would be addressed through later design and consenting stages but in my view can be compliant with DP rules and Council's engineering design standards. The assessment of wider impacts is addressed on Attachment One and paragraphs 15.1-15.2 of my primary evidence. In response to concerns raised by Mr Binder I have undertaken a detailed modelling assessment of the impacts of the rezoning on the Tram Rd interchange. This is included in paragraphs 26-38 of this evidence.

Local infrastructure improvements

55 A further matter raised by Mr Binder in his memorandum in relation to the Prosser submission is "*I consider that a development of this scale would likely trigger sealing of Ashworths Road and widening of Dawsons Road (as well as potential to upgrade the classification of Dawsons Road). The approved Walking & Cycling Network Map did not include any facilities on Dawsons Road because this development was not considered in its development. A Grade 2 walking/cycling facility is proposed for Wards Road, however. The scale of this development could potentially result in the need for a connection along Dawsons Road.*"

56 This addition addresses the concerns about a lack of existing infrastructure raised in the Officers Report.

57 Ashworths Road is intended to be sealed at least as far as the access to the Site as stated in paragraphs 16.3-16.5 of my primary evidence. I have recommended that the seal extend to approximately 10m past the access intersection to avoid loose material being dragged into the intersection by vehicles but understand that Mr and Mrs Prosser are happy to seal to the eastern extent of the Site should Council be agreeable. This would helpfully reduce the potential for dust and noise in vicinity of the properties at the eastern end of the Site.

- 58 I do not agree that Dawsons Road requires widening as a result of the proposed rezoning. As noted in Attachment One to my primary evidence I have estimated the daily traffic volume to increase from 241 to 935 vehicles per day should the rezoning be approved. As a local road under the PDP, Dawsons Road meets the required design standards under the Waimakariri District Engineering Code of Practice⁹ with respect to road width (20 metres), lane widths (3 metres), and number of lanes (2).
- 59 I do note there are currently no sealed shoulders on Ashworths Road to provide for pedestrian or cycle movement, but there are generous grass berms of 6-7 metres on both sides of the corridor. As highlighted in paragraphs 41-43, Mr and Mrs Prosser have agreed to establish a footpath to connect the site with the Mandeville Village centre. This is a substantial investment in and commitment to active mode infrastructure that would not only benefit future residents but also neighbours and the wider community. I have recommended that this additional infrastructure be included in the ODP subject to Council approval.
- 60 I understand that the Grade 2 walking/cycling facility proposed for Wards Road does not extend as far north as to connect with the Prosser Site, however the addition of connection along Dawsons Road between the Site and Mandeville Village centre is a more direct connection which would follow the desired line for pedestrians and cyclists.

COMMENT ON S42A RESPONSE DOCUMENT

- 61 I have reviewed transportation matters that relate to the Prosser submission in the S42A response document.
- 62 In addressing an overarching question as to how rezoning requests have been assessed against Objective 1 and Policy 1 of the NPS-US, Mr Buckley states¹⁰:
"The determination of whether a rezoning request contributed towards a well-functioning urban environment with respect to NPS-UD Objective 1 and Policy 1, consideration was given to a range of factors, some are detailed in assessments in the S42A LLRZ Rezoning officer report. In particular these

⁹ https://www.waimakariri.govt.nz/_data/assets/pdf_file/0018/134280/Engineering-Code-of-Practice-Full-Documents-July-2020.PDF

¹⁰ on page 9 of the S42A response document

include those listed in Policy 1(c), and those that meet RPS Policies in Chapter 5 and 6, which include:

- *avoid development which connects directly onto a strategic or arterial road;*
- *have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport¹¹;*

63 From a transport perspective I disagree with the assessment that has been undertaken with respect to these two points. I also note that no rationale has been provided by Mr Buckley in terms of how these two transport-related matters have been assessed for the Prosser submission, and the extent to which these two points have contributed to the overall assessment of the submission.

64 The Prosser site connects directly to Ashworths and Dawsons Roads. As noted in paragraphs 8.4 and 8.5 of my primary evidence, these are both classified as a Local Road in the proposed Waimakariri District Plan (pWDP) and a Rural Road in the One Network Framework (ONF). There is no direct connection to a strategic or arterial road.

65 I have assessed the accessibility of the site with respect to key destinations including Christchurch, Rangiora and Kaiapoi (paragraphs 15-25) and discussed at length the current and potential future access to public transport (paragraphs 46-49) and provision for active modes (paragraphs 41-43). I have concluded that:

- (a) I do not consider that this site is performing poorly (with respect to accessibility) in the context of proposed LLRZ areas, but instead exhibits very similar results to other areas which have similar contexts.
- (b) There is potential to achieve better outcomes in the future through improved provisions for public transport and active modes. This rezoning submission does not preclude better outcomes in that regard to be achieved.
- (c) Mr and Mrs Prosser have agreed to establish a footpath to connect the site with the Mandeville commercial centre which is a substantial

¹¹ Note that I have only included the two bullet points relating to my field of expertise.

investment in and commitment to active mode infrastructure that would not only benefit future residents but also neighbours and the wider community.

CONCLUSION

- 66 I have reviewed the transport related matters raised in respect of the Prosser submission in the Officer Report, Appendix F part 1 transport memorandum prepared by Mr Binder, and the Response Document.
- 67 I have undertaken additional assessment work including:
- (a) comparing the accessibility of the Prosser site with five other proposed LLRZ sites, which demonstrates they all perform very similarly with respect to transport accessibility albeit the Prosser site is notably closer to Christchurch than most others,
 - (b) built a transport model to demonstrate the impacts of the rezoning on the Tram Road interchange, which demonstrates that with the recent upgrade to this interchange there is ample capacity to accommodate traffic from the Prosser site plus extensive additional background growth; and
 - (c) further considered opportunities to improve public transport and active mode provision - notably the Prossers are committed to providing an active mode connection to Mandeville Village centre and I have recommended this be included on the ODP.
- 68 My view is that the matters raised in the Officers Report are satisfactorily addressed through the additional assessment work and the generous addition of an active mode facility which will benefit future occupants of the Prosser site, neighbours and the wider community. I subsequently consider there to be no transport-related reasons to decline the rezoning submission.
- 69 Thank you for the opportunity to present my evidence.

David Smith
8 July 2024

ATTACHMENT ONE ACCESSIBILITY ASSESSMENT

Distribution of trips for all transport modes							Mode Share		
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Mandeville	Local	2	378	159	35%	22%	Public transport	0%	27%
	Rural/other	5	53	30	5%	4%	Walk	1%	2%
	Swannanoa	4	12	177	1%	24%	Cycle	1%	2%
	Rangiora	13	123	102	11%	14%	Car	77%	12%
	Kaiapoi	15	54	48	5%	7%	Car Pass	3%	51%
	Christchurch	26	460	216	43%	30%	Work from home	18%	5%
	Total Trips		1,080	732	100%	100%	Other	0%	1%
			Ave trip distance of all trips in data set		14.3	12.1			
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Oxford	Local	2	363	300	63%	81%	Public transport	0%	11%
	Rural/other	10	75	33	13%	9%	Walk	6%	29%
	Kaiapoi	42	6	-	1%	0%	Cycle	1%	6%
	Christchurch	54	78	24	14%	7%	Car	76%	6%
	Rangiora	33	51	12	9%	3%	Car Pass	2%	38%
	Total Trips		573	369	100%	100%	Work from home	14%	10%
			Ave trip distance of all trips in data set		13.3	7.1	Other	1%	0%

Distribution of trips for all transport modes							Mode Share		
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Pegasus Bay	Local	3	99	45	49%	43%	Public transport	1%	23%
	Other	5	-	6	0%	6%	Walk	2%	0%
	Kaiapoi	6	30	33	15%	31%	Cycle	1%	3%
	Christchurch	24	45	21	22%	20%	Car	79%	15%
	Rangiora	8	27		13%	0%	Car Pass	3%	54%
	Total Trips		201	105	100%	100%	Work from home	13%	5%
			Ave trip distance of all trips in data set		8.8	8.3	Other	1%	0%
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Fernside	Local	3	210	99	48%	42%	Public transport	1%	28%
	Other	10	-	-	0%	0%	Walk	1%	4%
	Rangiora	6	135	93	31%	40%	Cycle	1%	1%
	Kaiapoi	13	-	-	0%	0%	Car	74%	14%
	Christchurch	31	96	42	22%	18%	Car Pass	2%	49%
	Total Trips		441	234	100%	100%	Work from home	21%	4%
			Ave trip distance of all trips in data set		10.0	9.2	Other	0%	0%

Distribution of trips for all transport modes							Mode Share		
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Ashley-Sefton	Local	2	291	168	42%	48%	Public transport	1%	31%
	Other	15	63	9	9%	3%	Walk	1%	6%
	Kaiapoi	17	12		2%	0%	Cycle	1%	4%
	Christchurch	37	174	39	25%	11%	Car	77%	11%
	Rangiora	6	159	132	23%	38%	Car Pass	2%	42%
	Total Trips		699	348	100%	100%	Work from home	17%	5%
		Ave trip distance of all trips in data set			13.1	7.8	Other	1%	1%
Location of residents	Destination	Distance (km)	Trips to workplaces	Trips to education	%age to workplaces	%age to education	Mode	To work by transport mode	To education by transport mode
Waikuku	Local	3	231	138	46%	49%	Public transport	1%	37%
	Other	10	24	15	5%	5%	Walk	1%	2%
	Kaiapoi	12	27	42	5%	15%	Cycle	1%	0%
	Christchurch	30	120	36	24%	13%	Car	77%	13%
	Rangiora	9	96	48	19%	17%	Car Pass	4%	39%
	Total Trips		498	279	100%	100%	Work from home	15%	9%
		Ave trip distance of all trips in data set			11.5	9.2	Other	1%	0%