

BEFORE THE INDEPENDENT HEARINGS PANEL

UNDER

the Resource Management Act 1991

AND

IN THE MATTER OF

the submissions of B & A Stokes on
the Waimakariri Proposed District
Plan (#214) and Variation 1 (#29)

**SUPPLEMENTARY EVIDENCE OF
CHRIS ROSSITER
ON BEHALF OF B AND A STOKES**

(Traffic)

2 August 2024

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1 EXECUTIVE SUMMARY

- 1.1 My evidence responds to the transport matters raised in the report prepared for Hearing Stream 12E of the Proposed Waimakariri District Plan (**PDP**) under section 42A of the Resource Management Act 1991 (**RMA**) (**Section 42A Report**). In particular, it addresses the feedback received by Waimakariri District Council's (**WDC** or **Council**) expert transport engineer, Mr Binder, to the proposed rezoning of 81 Gressons Road and 1375 Main North Road (the **Site**) to Medium Density Residential, subject to an Outline Development Plan (**ODP**) (the **Proposal**).
- 1.2 Mr Binder expressed concern with the location of the proposed crossroad intersection on Gressons Road, opposite Macdonalds Lane. In response, the proposed internal road has been relocated in the updated ODP to create a staggered T-intersection.
- 1.3 Mr Binder also recommended the inclusion of cycleway connections along the SH1 and Gressons Road frontages.
- 1.4 The ODP already includes a north-south offroad cycle facility that connects Waikuku to Ravenswood via the stormwater open space areas to the west of SH1. I do not consider that it is therefore necessary for a further, separate facility to be provided on SH1. In my opinion, the residential activity enabled by the Proposal will not generate any demand for a separate SH1 facility given the proposed internal cycleway is both more convenient and has a higher level of amenity / rider experience due to the much larger separation between cyclists and SH1 traffic.
- 1.5 The Council's current cycle network plans do not include a route along Gressons Road. While I acknowledge that this represents a potential gap in the network and a new path would provide a safe facility for travel between Waikuku and Rangiora, I consider that a new cycle path along the Gressons Road Site frontage will not attract any usage unless there is also a commitment by Council to extend the facility through to Rangiora Woodend Road. I therefore do not support inclusion of that cycle path in the updated ODP at this stage.
- 1.6 I have used the Christchurch Transport Model (**CTM**) to investigate the effects of increasing the residential yield of the Proposal from 1,500

households to 1,900 households (by lifting the minimum density from 12 HH/Ha to 15 HH/Ha). The primary effect is an increase in travel demands during the peak periods which will contribute to higher delays at the roundabouts on Bob Robertson Drive. The forecast average delays in 2048 represent 'Level of Service (**LOS**) D' conditions at the SH1 roundabout, which represent an environment where vehicle movements are constrained by other traffic.

- 1.7 In my opinion, this is typical of peak period conditions at major intersections. The long term plans to improve public transport services in the area before 2048 will contribute to reducing the private vehicle mode share and will mitigate some of the forecast delays.
- 1.8 I am therefore satisfied that the additional yield from the Proposal can be appropriately accommodated within the existing road network without the requirement for major upgrades or changes to the ODP. I remain of the opinion that there are no transport reasons to reject the Proposal.

2 QUALIFICATIONS AND EXPERTISE

- 2.1 My full name is Michael Christopher Rossiter. I hold the position of Principal Transportation Engineer at Stantec New Zealand Limited (**Stantec**).
- 2.2 I have the qualifications and experience set out in my primary evidence of 4 March 2024.

3 CODE OF CONDUCT

- 3.1 While this is not an Environment Court proceeding, I confirm that I have read the Code of Conduct for Expert Witnesses set out in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and will continue to comply with it while giving oral evidence. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

4 SCOPE OF SUPPLEMENTARY EVIDENCE

4.1 My evidence responds to the transport matters raised in the Section 42A Report, specifically;

- (a) the intersection locations on Gressons Road;
- (b) cycle paths; and
- (c) the traffic related effects of higher development yield enabled by the Proposal.

4.2 In preparing this evidence, I have reviewed the Section 42A Report, and the supporting advice from Mr Binder.

5 SECTION 42A REPORT – RESPONSE

Gressons Road Intersections

5.1 Macdonalds Lane, located across Gressons Road to the north of the Site, provides a legal road link between Gressons Road and SH1, illustrated on **Figure 1**.

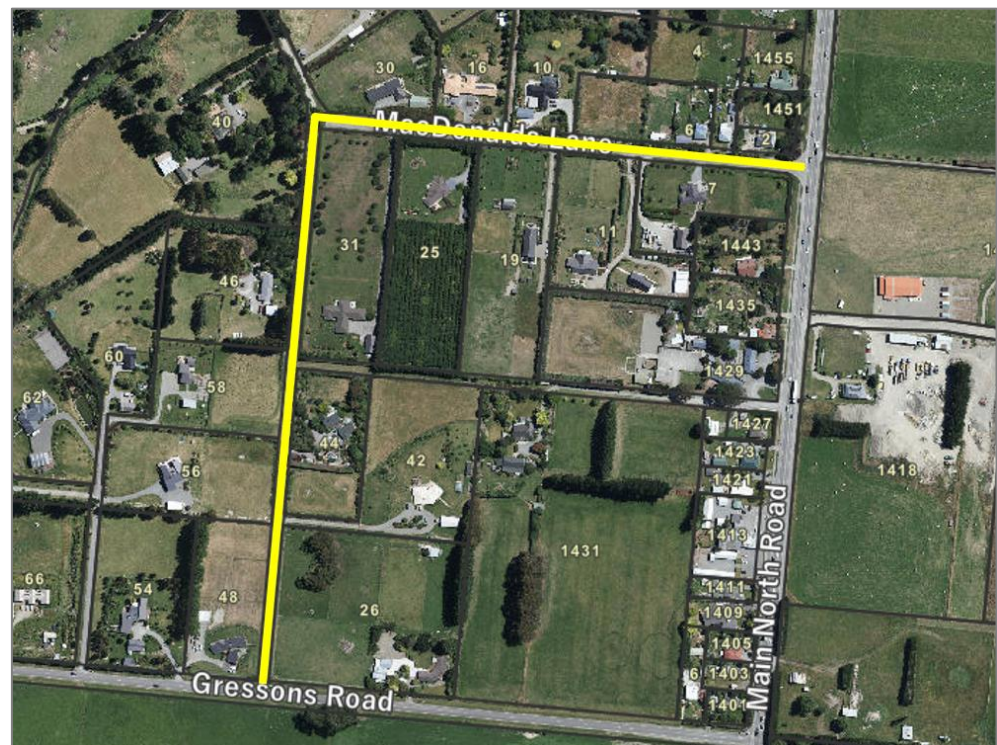


Figure 1: Macdonalds Lane

- 5.2 There are three properties with direct access to the north-south section of the lane that meets Gressons Road and twelve properties with direct access to the east-west section that connects to SH1. I understand that a gate prevents general access between the two sections of the Lane.
- 5.3 Based on a daily household traffic generation rate of 10 vehicle movements per day (**vpd**), the north-south section of the Lane connecting to Gressons Road could carry an average daily traffic volume of about 30 vpd.
- 5.4 Macdonalds Lane meets Gressons Road at an uncontrolled intersection that has been formed to a basic standard. It does not include any provision for seal widening to allow a westbound vehicle to pass a vehicle that stops in the carriageway before turning into Macdonalds Lane.
- 5.5 I agree with Mr Binder that crossroad intersections in general will have a poorer safety record than T-intersections because of the greater number of conflict points that exist. In this instance, since the daily volume of movements on Macdonalds Lane is so low, I do not consider that it is necessary to alter the internal road alignment to create a staggered T-intersection configuration. With the currently proposed configuration, Macdonalds Lane effectively operates as a private lane opposite a T-intersection.
- 5.6 Notwithstanding that I do not consider the change to be necessary, the updated ODP has nevertheless adopted a staggered T-intersection configuration as proposed by Mr Binder. The revised road alignment creates a right-left stagger with a minimum separation of 15 metres between the two roads so that right turn movements do not overlap. This is consistent with the guidance in the Austroads Guide to Road Design (Part 4A). Ultimately, the detailed design of the intersection is a matter that can be refined through the normal subdivision consent processes.

Cycle Network Infrastructure

- 5.7 The ODP includes provision for a pedestrian / cycle path that links with Gressons Road at its northern limit and Wards Road at its southern limit. This provides a north-south link between Waikuku and Ravenswood. This cycle route is shown on the ODP and runs along the western internal edge of the large stormwater basins / eastern open space. Two additional

north-south cycle routes are shown on the ODP adjacent to the collector roads. It is anticipated that all collector roads in the Site will include appropriately designed pedestrian and cycle facilities. East-west paths through the Site will intersect and link to these paths. Since these paths provide a safe route for active travel between Waikuku and Ravenswood, I do not consider that there is a need for an additional path to be constructed alongside SH1, as suggested at paragraphs 860 and 870 of the Section 42A Report. In my opinion, the provision of any cycle facility alongside SH1 should be the responsibility of NZTA given that the Proposal will not generate a cycle demand on this section of SH1, as the proposed internal paths will be both more convenient and have a higher level of user amenity given their separation from SH1 traffic.

- 5.8 The Council's current cycle network plans do not include a route along Gressons Road. As mentioned, this represents a potential gap in the network and a new path would provide a safe facility for cycle travel for that extent of the journey between Waikuku and Rangiora. On that basis, I agree in principle with the concept of creating a cycle path beside Gressons Road as part of an expanded cycle network (my emphasis added). I do not otherwise consider that a cycle path along the Gressons Road frontage of the Site would be appropriate or necessary as it is unlikely to attract cycle demand (unless it was part of an extended facility through to Rangiora Woodend Road).
- 5.9 In any event, since Gressons Road has a 20 metre road reserve and the formed carriageway is about 7 metres wide, there is ample space in the southern berm to form an offroad cycle path without the need to encroach onto the Site, should Council wish to extend the network in the future. The ability to install a cycle facility in the future is shown in 'Section E' of the ODP.

Development Yield

- 5.10 In my primary evidence, I described the effects of a development yield of 1,500 households using the CTM. In response to the Section 42A Report, I have given consideration to increasing the anticipated yield of the Site to 15 households per hectare, which, for the purposes of my assessment, has been modelled to an upper limit of 1,900 households in total.

5.11 As part of that consideration, I have used the CTM to investigate the effects on the transport network of that increased yield. I have used the same methodology as set out in my primary evidence.

5.12 **Table 5-1** shows the area wide travel demands in 2048 with 1,500 households provided on the Site. **Table 5-2** shows the travel demands in 2048 with 1,900 households. As in my primary evidence, I have grouped all trips either starting or ending in Woodend, Pegasus and Ravenswood as a single combined zone labelled 'Woodend' within the tables.

5.13 The proportion of trips that remain within the Woodend area is forecast to be about 12% in 2048 evening peak periods with 1,900 households. This is higher than the forecast of 11.4% with 1,500 households.

Table 5-1: 2048 Forecast Peak Period Travel Demands - with and without the Proposal (1,500 households)

| | | 7:00-9:00am | | 4:00-6:00pm | |
|------------|---------|-------------|-------|-------------|-------|
| | | Woodend | Other | Woodend | Other |
| KAC | Woodend | 309 | 2,748 | 491 | 1,956 |
| | Other | 1,020 | | 3,389 | |
| Stokes | Woodend | 497 | 3,677 | 877 | 2,360 |
| | Other | 1,189 | | 4,440 | |
| Difference | Woodend | 187 | 929 | 386 | 404 |
| | Other | 169 | | 1,051 | |

Table 5-2: 2048 Forecast Peak Period Travel Demands - with and without the Proposal (1,900 households)

| | | 7:00-9:00am | | 4:00-6:00pm | |
|------------|---------|-------------|-------|-------------|-------|
| | | Woodend | Other | Woodend | Other |
| KAC | Woodend | 309 | 2,748 | 491 | 1,956 |
| | Other | 1,020 | | 3,389 | |
| Stokes | Woodend | 542 | 3,924 | 978 | 2,469 |
| | Other | 1,236 | | 4,721 | |
| Difference | Woodend | 233 | 1,176 | 487 | 513 |
| | Other | 215 | | 1,333 | |

5.14 Since all trips within the Woodend area will be typically less than 5 km long, there is a greater potential that residents will choose to travel by modes other than a private vehicle where this is practicable. Bob Robertson Drive has been designed to accommodate a bus service and **Appendix 1** indicates that new local services are flagged in the Greater Christchurch Spatial Plan. Although I am not aware of any planned dates for introducing new services, the establishment of a local bus service

through Ravenswood will also contribute to reducing the number of vehicle trips on the network.

- 5.15 With the greater number of households, there will be an increased travel demand from the Site onto Bob Robertson Drive as this provides the primary link to SH1. In the morning peak, the roundabout at the Bob Robertson Drive / Kesteven Place intersection is forecast to operate with an average vehicle delay of less than 20 seconds which represents 'LOS B'. The SH1 roundabout is forecast to operate with 'LOS D' in both the morning and evening peak periods. In my opinion, this represents an acceptable LOS for the peak periods.
- 5.16 As I stated in my primary evidence, I would expect the operating performance of all intersections to improve if the existing public transport services are expanded to service the Ravenswood Key Activity Centre and the local area as this would contribute to reducing the private vehicle mode share. The Greater Christchurch Spatial Plan indicates that new services will be established between Rangiora, Woodend, Ravenswood and Waikuku. I am also aware that an expansion to the existing commuter services to Christchurch is being considered by the Canterbury Regional Council because of increasing demand for these services. The residential development enabled by the Proposal would significantly increase the local population and demand for public transport services.
- 5.17 In summary, I consider that the traffic effects associated with the increased yield from the Proposal are acceptable, and can be accommodated within the existing network.

6 CONCLUSION

- 6.1 For the reasons outlined above, I remain of the opinion that the Proposal is acceptable from a transport perspective, and that there are no transport reasons to decline it.

Chris Rossiter

2 August 2024

Appendix 1: Christchurch Spatial Plan - Transport

