

Before the Queenstown Lakes District
Council

In the matter of The Resource Management Act 1991 (RMA)

And The Queenstown Lakes Proposed District Plan Stage 3
Stream 17 (General Industrial Zone)

Statement of evidence of Andy Carr for Tussock Rise Limited #3128

21 May 2020

Qualifications and experience

- 1 My full name is Andrew (“Andy”) David Carr.
- 2 I am a Chartered Professional Engineer and an International Professional Engineer (New Zealand section of the register). I hold a Masters degree in Transport Engineering and Operations and also a Masters degree in Business Administration.
- 3 I served on the national committee of the Resource Management Law Association between 2013-14 and 2015-17, and I am a past Chair of the Canterbury branch of the organisation. I am also a Chartered Member of Engineering New Zealand (formerly the Institution of Professional Engineers New Zealand), and an Associate Member of the New Zealand Planning Institute.
- 4 I have more than 30 years’ experience in traffic engineering, over which time I have been responsible for investigating and evaluating the traffic and transportation impacts of a wide range of land use developments, both in New Zealand and the United Kingdom.
- 5 I am presently a director of Carriageway Consulting Ltd, a specialist traffic engineering and transport planning consultancy which I founded six years ago. My role primarily involves undertaking and reviewing traffic analyses for both resource consent applications and proposed plan changes for a variety of different development types, for both local authorities and private organisations. I am also a Hearings Commissioner and have acted in that role for Greater Wellington Regional Council, Ashburton District Council, Waimakariri District Council and Christchurch City Council.
- 6 Prior to forming Carriageway Consulting Ltd I was employed by traffic engineering consultancies where I had senior roles in developing the business, undertaking technical work and supervising project teams primarily within the South Island.
- 7 I have been involved in a number of proposals which have involved assessing the traffic generation and effects of industrial developments. These have included general industrial units in Wanaka, Queenstown and Christchurch, the rezoning of land to facilitate the North East Ashburton Business Park, several Fonterra milk processing plants, concrete batching plants, a large water storage facility, and gravel extraction facilities. My experience includes assessing request for rezoning (or consenting) land for the purposes of a transportation depot at Ashburton and Rolleston.
- 8 I have also been involved in a number of proposals which have involved assessing the traffic generation and effects of large residential developments (most of which include some element of ancillary development). Within this district, this includes

the residences facilitated by Plan Changes 4 (North Three Parks, 600 residences), 39 (Arrowtown South, 215 residences), 41 (Shotover Country, 770 residences plus commercial development), and 45 (Northlake, 1,600 residences plus community and commercial development). Within Central Otago, my experience includes assessing the transportation effects of Plan Changes 12 (Wooing Tree) and 13 (River Terrace), as well as RC170378 which facilitated residential development at the Cromwell Top Ten Holiday Park. I have also provided advice for Stonebrook (460 sections in Rolleston), Awatea (Christchurch, 139 residences) and numerous others.

- 9 I am presently engaged in assessing the effects arising from the redevelopment of the old Wakatipu High School site in Queenstown town centre. This site is also zoned Business Mixed Use in the Proposed District Plan.
- 10 I have carried out commissions in Queenstown Lakes District for more than 15 years. As a result of my experience, I consider that I am fully familiar with the transportation networks of the district and the particular traffic-related issues associated with applications for industrial activities.

Code of Conduct for Expert Witnesses

- 11 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2014 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this 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 that I express.

Scope of Evidence

- 12 In this matter, I have been asked by the submitter, Tussock Rise Limited, to provide an assessment of the transportation-related effects of its submission setting out that its site and surrounds near Ballantyne Road should be rezoned as Business Mixed Use Zone (**BMUZ**), rather than the General Industrial Zone that is presently proposed.
- 13 The site location is shown below for reference.



Figure 1: Site Location

- 14 I previously assessed this site in the context of its possible use for Low Density Suburban Residential (**LDSR**) as part of Stage 1 mediation.
- 15 In Figure 2 below (taken from the Tussock Rise submission) the full extent of the are proposed to be BMUZ can be seen.

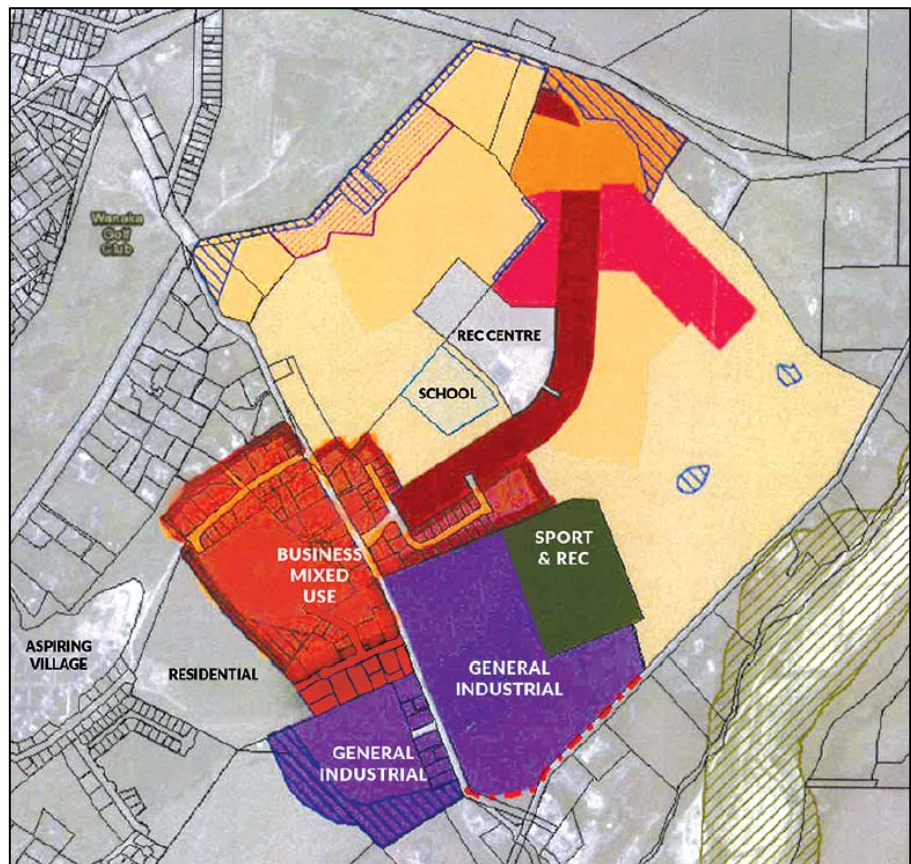


Figure 2: Tussock Rise Submission Rezoning

- 16 As the majority of the land sought to be rezoned to BMUZ is already subdivided and occupied by a range of business and industrial activities, my evidence focuses on the Tussock Rise site which is vacant and likely to be developed under a BMUZ framework.

Transport Networks Adjacent to the Submission Site

- 17 I have visited the site on several occasions during 2019 and 2020, and the following section of my evidence describes the current transportation networks in the vicinity of the submission site.
- 18 The critical parts of the roading network towards the east of the submission site are Gordon Road, Connell Terrace and Frederick Street. These roads serve a mix of industrial and commercial uses including a gym, brewery, contractors and ancillary offices, offices, florists, window manufacturers and retailers, storage units, glass stockists, bakery, kitchen fitters and stockists, flooring stockists, plumbers, graphic designers. While some of these would typically be considered as 'industrial'-type uses, others are more aligned with general commercial or business activities.
- 19 Gordon Road is presently a short (360m long) cul-de-sac with numerous driveways on each side of the road. The legal road width is 20m, the carriageway width is 13.0m and parking is permitted on both sides. There is one 1.2m wide footpath on the southern side of Gordon Road.



Photograph 1: Gordon Road Looking West

- 20 Gordon Road meets Ballantyne Road at a priority intersection, and traffic on Ballantyne Road retains the right of way. The intersection does not have any auxiliary turning lanes, although the width of Gordon Road means that two vehicles can queue side-by-side at the limit lines. There is an informal parking lane which

runs along Ballantyne Road in this location. Sight distances for vehicles turning at the intersection are excellent.



Photograph 2: Ballantyne Road / Gordon Road Intersection Looking North

- 21 Connell Terrace has a slight gradient, falling from north to south, and comprises of two straight sections of road connected by a curve. The legal road width is 20m, the carriageway width is 11m and parking is permitted on both sides. There are multiple driveways on each side of the road. There are 1.5m wide footpaths on each side of the road.



Photograph 3: Connell Terrace Looking North

- 22 Frederick Street is flat and straight, with a carriageway width of 11m and parking permitted on both sides. The legal road width is 20m and there are multiple

driveways on each side of the road. There are 1.5m wide footpaths on each side of the road.



Photograph 4: Frederick Street Road Looking West

- 23 Frederick Street meets Ballantyne Road at a priority ('give-way') intersection, where traffic on Ballantyne Road retains the right of way. The intersection does not have any auxiliary turning lanes, although the width of Frederick Street means that two vehicles can queue side-by-side at the limit lines. Sight distances for vehicles turning at the intersection are excellent.



Photograph 5: Ballantyne Road / Frederick Street Intersection Looking North

- 24 Southwest of the site, Avalon Station Drive has been newly constructed and has a flat vertical alignment but a sinusoidal horizontal alignment. The legal road width is

20m, and the carriageway is 8.4m wide (with occasional indented parking lanes.) Vehicles were observed exclusively parked along the northern side of the road, although there are no parking restrictions on the southern side.



Photograph 6: Avalon Station Drive Looking East

- 25 At its eastern end, Avalon Station Drive presently terminates in a temporary arrangement with no turning head provided, since it is to be extended to Gordon Road in due course. Towards the west however, it meets Cardrona Valley Road at a priority ('give-way') intersection where traffic on Cardrona Valley Road has priority. Stone Street joins Cardrona Valley Road on the western side and the centrelines of Stone Street and Avalon Station Drive are 23m apart, meaning that the intersection is formed as a right-left stagger. An auxiliary lane is provided for traffic turning right into both Avalon Station Drive and Stone Street of 2.5m width, and sight distances for vehicles turning at the intersection are excellent.
- 26 There are footpaths of 2.5m width on both sides of Avalon Station Drive, and the southernmost one curves onto Cardrona Valley Road where it extends for 30m before terminating at a pedestrian refuge.



Photograph 7: Cardrona Valley Road / Avalon Station Drive Intersection, Looking South (Cardrona Valley Road / Stone Street Intersection in Foreground)

Existing and Potential Future Traffic Volumes Adjacent to the Submission Site (without Submission Site Rezoning)

- 27 Although Queenstown Lakes District Council carries out regular traffic counts on the key vehicle routes throughout the district, there are a number of changes underway in Wanaka which mean that the future volumes will change, both as a result of new developments that will generate new travel demands, and also as a result of new road links that mean existing trips could use new routes.
- 28 One particular aspect of the latter is that various strategic plans for the area around the adjoining Bright Sky Special Housing Area (**SHA**) show that in due course Avalon Station Drive is expected to be extended to meet Gordon Road, to provide a new east-west link. This will have the effect of changing travel patterns immediately adjacent to the site.
- 29 I understand that the SHA application has now been withdrawn (although for convenience, I refer to this site as the 'SHA site' within my evidence). However it is an LDSR zoned area and can therefore be developed under the proposed District Plan framework. Consequently, I have allowed for the traffic generation associated with the SHA site in my analysis. In passing, in the event that development of the site does not proceed, this means that there is additional capacity available for further development in the area, meaning that my analysis is overly conservative.
- 30 Notwithstanding that the SHA has now been withdrawn, if the site is developed under its LDSR zoning then I consider that it is reasonable that the Avalon Station

Drive extension to Gordon Road will be developed. I have therefore allowed for this roading link within my assessment.

31 I previously assessed the transportation effects arising from the nearby Bright Sky SHA. As part of this assessment, the Council made available their strategic transportation model for the area. This takes into account changes to development and roading patterns, and since it has been reviewed by the Council and found to be fit for purpose, it represents a robust way in which future traffic volumes can be found.

32 The modelled traffic flows, plus those associated with the SHA, are shown below.

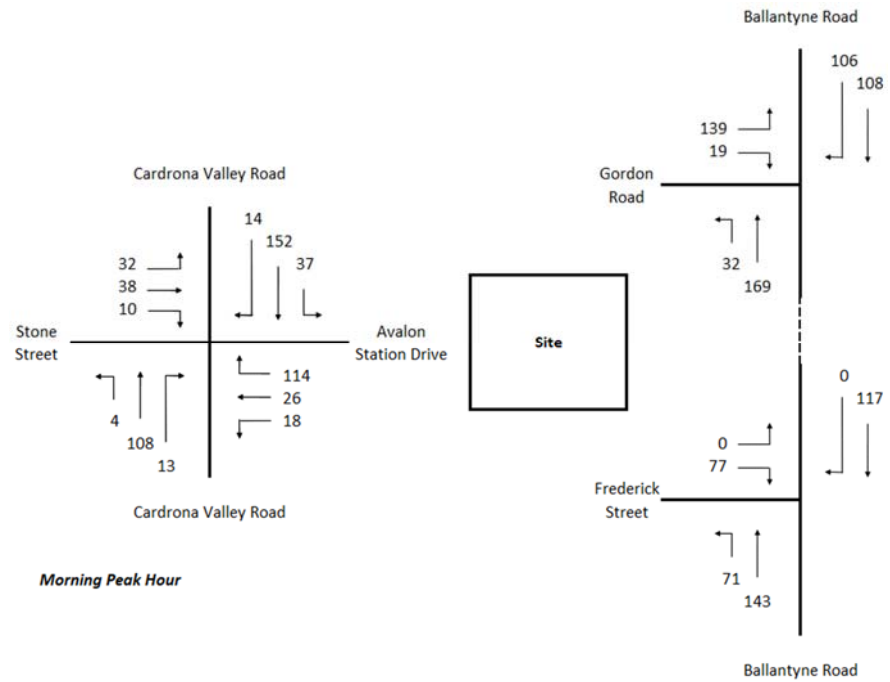


Figure 3: 2028 Morning Peak Hour Modelled Traffic Flows

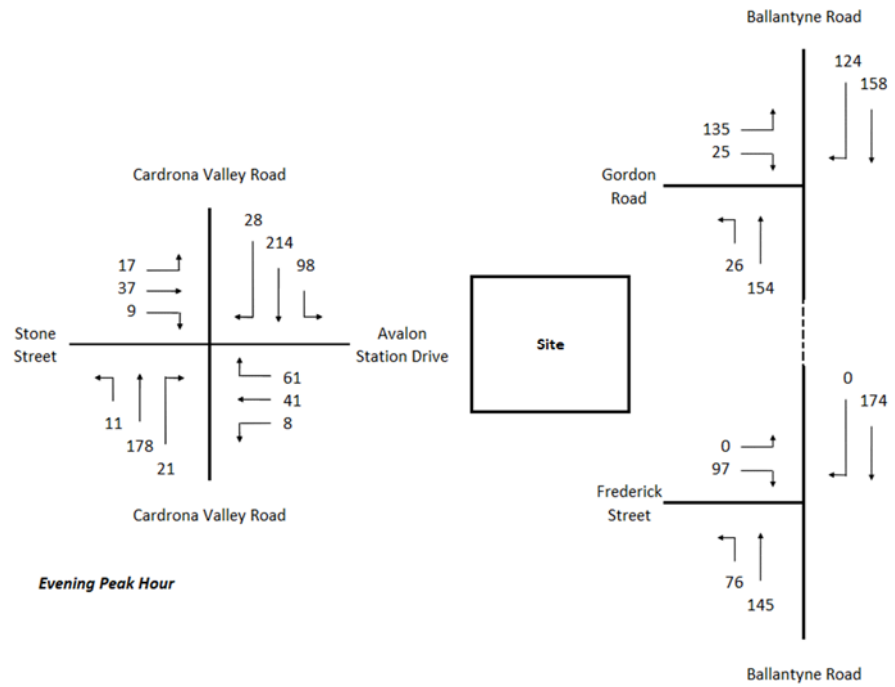


Figure 4: 2028 Evening Peak Hour Modelled Traffic Flows

Efficiency of Adjacent Intersections (without Submission Site Rezoning)

33 I have modelled each of these intersections using the computer software program Sidra Intersection using the traffic flows above and the results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Cardrona Valley Rd	R	5.2	0	A	5.8	0	A
Avalon Station Drive	R	10.1	1	A	13.2	1	B
Cardrona Valley Rd	R	5.0	0	A	5.3	0	A
Stone Street	R	8.5	0	A	11.9	1	B

Table 1: 2028 Peak Hour Levels of Service at the Cardrona Valley Road / Avalon Station Drive Intersection, No Rezoning of Submission Site

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Ballantyne Road (north)	R	6.7	1	A	6.6	1	A
Gordon Road	R	8.3	1	A	8.6	1	A

Table 2: 2028 Peak Hour Levels of Service at the Ballantyne Road / Gordon Road Intersection, No Rezoning of Submission Site

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Ballantyne Road (north)	R	6.7	0	A	6.7	0	A
Frederick Street	R	7.3	0	A	7.8	0	A

Table 3: 2028 Peak Hour Levels of Service at the Ballantyne Road / Frederick Street Intersection, No Rezoning of Submission Site

- 34 The modelling shows that the intersections provide an excellent level of service with negligible queues and delays.

Existing Road Safety / Crash Patterns (without Submission Site Rezoning)

- 35 I have used the NZTA Crash Analysis System to establish the location and nature of the recorded traffic crashes in the vicinity of the submission site. All reported crashes between 2015 and 2020 were identified for Cardrona Valley Road (100m north and south of Avalon Station Drive), Avalon Station Drive, Frederick Street, Connell Terrace, Gordon Road, and Ballantyne Road (100m north of Gordon Road to 100m south of Frederick Street).
- 36 This showed that there were have only been two reported crashes. One crash occurred on Gordon Road when a driver struck a parked car. This did not result in any injuries. Another crash occurred when a driver emerged from Sir Tim Wallis Drive and struck a southbound cyclist. The detailed report notes that the crash occurred during dim light and the cyclist had no lights illuminated and was wearing a black top. These factors suggest that the driver did not notice the cyclist, rather than the intersection geometry being deficient. The crash resulted in minor injuries.
- 37 On this basis, I do not consider that the records indicate any existing road safety deficiencies in the area. In part, the good crash record will be as a result of development in this area being relatively recent, as prior to this there was less traffic and fewer points of potential conflict. However because parts of the infrastructure are new, they will have been constructed to meet current guides and standards. It therefore can be expected to have a good safety record in future.

Key Transportation Aspects of the Submission

- 38 Under the LDSR zoning, I understand that the submission site was able to accommodate around 91 lots (allowing for setbacks, roads and the like). Some of these lots may have residential flats attached, and I therefore previously allowed for up to 135 residences to be permitted within this area.
- 39 Under a BMUZ, the range of activities is much greater and also allows for a greater density of residential development. However, increased traffic flows can only occur as a result of changed land use, and in turn, these changes can only occur if the site is subdivided. Subdivision requires resource consents and cannot take place as of right. This therefore affords the opportunity to the Council to consider whether any improvement measures are needed to any of the transportation networks in order to accommodate the traffic flows.
- 40 In view of this, within my evidence I have adopted two approaches. One is to evaluate the traffic effects with a notional level of development within the site. The purpose of this is not to specify what development will occur, but to show that the transportation networks are already able to accommodate a high level of development without any improvement schemes being put in place. The second approach is to identify whether there are any constraints to roading improvements in the event that the traffic generation of the submission site is greater than assessed.
- 41 Given that the zoning of the whole site as LDSR zoning would facilitate 135 residences, for my assessment I have allowed for a notional development of 50% more than this, with 200 residences. I have not explicitly assessed any business-type of use, because any such vehicles would be travelling in the opposite direction to the residential traffic – that is, in the morning peak hour employee-related vehicles would travel into the site (when residents are travelling away) and in the evening peak hour, employee-related vehicles would travel away from the site (when residents are returning home). Since these vehicles are traveling in the opposite direction, it means that they use different turning movements to the residential traffic, and thus affect the capacity on different approaches.
- 42 The location of Connell Terrace means that it is highly likely in my view to form a means of access into the submission site. The site location also creates the opportunity for Connell Terrace to be extended further north to connect to Gordon Road. Hence in practice, for any development within the submission site, there are likely to be three points of connectivity:
- a. Gordon Road towards the north, and then east onto Ballantyne Road
 - b. Gordon Road towards the north, and then west onto Avalon Station Drive (and Cardrona Valley Road further west); and

- c. Connell Terrace and Frederick Street towards the south, and then east onto Ballantyne Road

43 It is possible that there would be further roading links through the SHA site towards the southwest of the submission site. I have not allowed for these, as the development pattern in the SHA site is not confirmed.

Traffic Generation of the Submission Site

44 For the purposes of my assessment, I have initially allowed for the submission site to be used for residential development (as permitted under the BMUZ).

45 Traffic generated by residential developments is known to vary for a variety of reasons, with one such reason being the proximity (or otherwise) to employment and community facilities. Where a residential unit is some distance from these types of facilities, the traffic generation rates tend to be lower than for residences that are closer due to 'trip chaining', that is, the tendency of a resident to carry out multiple visits to different destinations during the same trip away from the dwelling.

46 In this case the site is close to Wanaka and to employment opportunities, and I have therefore allowed for each dwelling to generate 1 vehicle movement in the peak hours.

47 The yield of the site cannot be forecast with certainty and so at this stage I have allowed for 200 residences (allowing for flats). This is 50% greater than I previously assessed within the site under a LDSR zoning. Consequently, up to 200 vehicle movements could be generated in the peak hours.

48 The exact distribution of traffic is not a matter that can be considered in detail at present as it depends on a number of factors. For a robust assessment however I have assessed the effects of traffic on each of the approaches increasing by 100 vehicle movements in the peak hours (that is, allowing for each of the three routes noted above to accommodate 50% of the generated traffic). This approach ensures that even with differences in the trip distribution, the intersections most likely to be affected by the requested rezoning have been suitably assessed.

Efficiency of Adjacent Intersections (with Submission Site Rezoning)

49 I have remodelled each of the intersections set out above using the computer software program Sidra Intersection, using the traffic flows above plus those calculated for the rezoning of the submission site. The results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Cardrona Valley Rd (south)	R	5.3	0	A	56.0	0	A
Avalon Station Drive	R	12.3	3	B	15.9	2	C
Cardrona Valley Rd (north)	R	5.0	0	A	5.3	0	A
Stone Street	R	8.9	1	A	12.4	1	B

Table 4: 2028 Peak Hour Levels of Service at the Cardrona Valley Road / Avalon Station Drive Intersection, with Rezoning of Submission Site

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Ballantyne Road (north)	R	6.7	1	A	6.7	1	A
Gordon Road	R	8.6	1	A	9.5	1	A

Table 5: 2028 Peak Hour Levels of Service at the Ballantyne Road / Gordon Road Intersection, with Rezoning of Submission Site

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Ballantyne Road (north)	R	6.7	0	A	7.2	0	A
Frederick Street	R	7.6	1	A	8.2	1	A

Table 6: 2028 Peak Hour Levels of Service at the Ballantyne Road / Frederick Street Intersection, with Rezoning of Submission Site

- 50 The modelling shows that the intersections continue to provide an excellent level of service with low queues and delays.
- 51 Within an urban area, it is common that intersection approaches have a level of service ranging from A (the best) to D. In this case, the worst level of service is C, meaning that the intersection continues to have ample available capacity. Consequently in the event that traffic flows are greater than I have tested, the intersections will still have available capacity to absorb the increase.
- 52 This conclusion also applies in the event that the site was to be used for solely business activities. In the first instance, the likely traffic generation of the site would be lower than I have tested, due to non-residential developments generally having lower trip generation rates than the same size of residential developments. Further, although the direction of travel will have changed (the traffic generated would be

entering the site in the morning peak hour and exiting in the evening) the available capacity of the intersections means that this can be accommodated.

53 It also follows that if a solely residential and a solely commercial development can be accommodated by these intersections, then the intersections can also accommodate a mix of the two types of activity.

54 I therefore do not consider that any intersection improvements will be required as a result of the requested rezoning.

Efficiency of Adjacent Roads (with Submission Site Rezoning)

55 Avalon Station Drive, Connell Terrace, Gordon Road and Frederick Street all have a 20m legal width.

56 Under the Council's Code of Practice for Subdivision, a 20m legal width is sufficient to accommodate traffic flows of up to 8,000 vehicles per day. This is considerably greater than will arise in this instance, even with a much greater density of development. By way of example, the traffic flows set out above equate to around 40% of the maximum capacity of the road.

57 I therefore do not consider that the rezoning of the site will lead to any requirement for improvements on the surrounding road network. In the event that improvements were required, the legal width is ample to accommodate these.

58 Similarly, the legal width of the roads is sufficient to accommodate any auxiliary turning lanes at any of the intersections, should any be required in future.

Effects of Traffic Flows with Submission Site Rezoning on Road Safety

59 My review of road safety records did not identify any road safety concerns in the immediate area. As noted, I consider that in part, the low crash rate reflects the low traffic flows within the immediate area.

60 If accepted, the submission will result in increased traffic flows and thus there is an increased potential for a higher number of crashes (since crash numbers are generally proportional to traffic flows). At the same time however, the roads are relatively newly-constructed and have ample available capacity, meaning that it is unlikely that any adverse road safety issue will arise. In the unlikely event that there are any safety issues, the legal widths are sufficiently wide to easily implement any local safety improvements.

61 Overall then, I do not consider that the rezoning sought by the submission will result in adverse road safety effects arising.

Non-Car Connectivity

- 62 The current levels of pedestrian provision on Avalon Station Drive, Connell Terrace, Gordon Road and Frederick Street are set out above. Given the legal widths of the road, there is sufficient space available for wider footpaths, or even a 3m shared walking and cycling route.
- 63 I therefore do not consider that there are any reasons why Connell Terrace, Gordon Road and Frederick Street could not be upgraded, if required, to better provide for non-car movements due to the legal width of each.

Mix of Residential and Industrial Vehicles

- 64 In the event that the site is occupied by both residential and non-residential activities, as is possible under a BMUZ zoning, there is the possibility that industrial-type traffic and residential traffic will both be present.
- 65 In my experience it is generally better to attempt to reduce the extent to which industrial traffic mingles with residential traffic. Industrial vehicles tend to be larger and therefore require greater carriageway widths to manoeuvre, and drivers do not necessarily expect to encounter cars moving to and from properties. Conversely, wide roads result in higher vehicle speeds by cars, and the presence of larger vehicles can make reversing from driveways more difficult.
- 66 There are a number of ways that this could be managed in this instance. The easiest approach will be to develop a roading network within the site such that it is evident where the two types of traffic are expected to be, and the two are separated. For example, access to the residential development could be provided solely through the SHA site towards the southwest. Another option would be to construct the roads serving the residential development with gateways/thresholds or other constraints to prevent larger vehicles from using them.
- 67 In each case however, I consider that this is a matter for detailed design rather than for the over-arching zoning. Overall, the presence of two different activities within the same site does not in my view present any significant transportation difficulties.

Mix of Road Users

- 68 I am aware that within the s32 report for the General Industrial Zone, Council has expressed concern that if non-industrial uses are allowed then there may be conflicts created between the different types of road user. Particular examples raised include high traffic and pedestrian volumes that result in conflicts arising, and limited and/or disjointed active transport networks.

- 69 With regard to this particular site, as set out above, there are three potential points of connection, to Gordon Road, Avalon Station Drive and Connell Terrace / Frederick Street. As noted above:
- a. Gordon Road has a 1.2m footpath on one side, and the road reserve is 20m wide;
 - b. Avalon Station Drive has 2.5m footpaths on each side, and the road reserve is 20m wide
 - c. Connell Terrace and Frederick Street have 1.5m footpaths on each side, and the road reserves are 20m wide
- 70 Accordingly, Avalon Station Drive, Connell Terrace and Frederick Street already have good provision for pedestrians. In terms of the footpath provision, Avalon Station Drive meets the Council's Code of Practice for a road carrying up to 8,000 vehicles per day. Connell Terrace and Frederick Street meet the Council's Code of Practice for roads carrying up to 2,000 vehicles per day, In neither case are specific cycle lanes required. Accordingly, I consider that both of these roads are already suitable for serving a BMUZ.
- 71 The current level of provision on Gordon Road falls below the current Code of Practice, although I would expect that the road cross-section will be reassessed in future when Avalon Station Drive connects into it, since it would be unusual for such a sudden change in roading environment to occur. Irrespective, the legal width of the road is sufficient that the existing footpath can be widened and/or a second footpath added, such that the provision made for pedestrians meets the Code of Practice. Again, specific cycle lanes are not required (although in passing, when the road cross-section is reassessed, there is the opportunity to create a shared walking/cycling route on one side if desired).
- 72 On this basis, two of the roading connections already meet the Code of Practice for walking and cycling provision, and only relatively minor changes are required for the third connection in order to meet the Code. I therefore do not consider that the concerns of the Council regarding the mix of road users are relevant for this particular site.

Internal Layout of Submission Site

- 73 From a transportation perspective, the site is undeveloped and therefore there are no impediments to achieving the Council's Code of Practice for Subdivision in full. If there are any deviations from the Code, these can be assessed when subdivision consents are applied for. However at this stage I do not consider that there are any reasons why any variations to the Code of Practice would preclude the requested site rezoning.

Conclusions

- 74 Having assessed a notional yield for the submission site, and taking account of the expected changes to the surrounding area (including development of the nearby SHA site and the Avalon Drive extension), I consider that there are no traffic and transportation reasons why the submission could not be approved, and the submission site rezoned as BMUZ.
- 75 My analysis does not indicate that there will be any need for intersection or roading improvements, even when the site is fully developed. Rather there is ample capacity already available. However, if improvements were to be required, they can be accommodated within the existing legal roads, which are 20m wide.

Andy Carr

Dated this 21st day of May 2020