

BEFORE THE HEARINGS PANEL FOR THE QUEENSTOWN LAKES PROPOSED DISTRICT PLAN

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Stage 3 of the Queenstown Lakes Proposed District Plan

AND

IN THE MATTER Submission of Matakauri Lodge Limited (31033)

STATEMENT OF EVIDENCE OF JASON BARTLETT

29 May 2020

INTRODUCTION

Qualifications and experience

- 1 My name is Jason Bartlett. I am an experienced traffic and transportation engineer. My academic and professional qualifications are:
 - (a) New Zealand Certificate in Engineering, Civil Option obtained in 1993;
 - (b) Bachelor of Engineering (BE) from the University of Canterbury awarded in 1996;
 - (c) Engineering New Zealand Member (MEngNZ), I have been a member since 1995; and
 - (d) Chartered Engineer and Member of the Institution of Civil Engineers (CEng MICE), since 2007.
- 2 I have over twenty years' experience in road design, network management, traffic and transportation engineering including nine years in the UK. During my time in the UK I became a Chartered Engineer and a Member of the Institution of Civil Engineers.
- 3 Since April 2008 I have been working as a traffic and transportation engineer in Queenstown. The first four of these years was for GHD Limited. I now operate my own traffic engineering consultancy, Bartlett Consulting, which I established in July 2012.

Expert witness code of conduct

- 4 I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Consolidated Practice Note dated 1 December 2014. While this matter is not before the Environment Court, I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Involvement in project

- 5 In this matter I have been engaged by Matakauri Lodge Limited (**MLL**) to provide transport engineering evidence relating to access to their site at 569 Glenorchy-Queenstown Road which is legally described as Lot 2 DP 27037 and Section 1-2 Survey Office Plan 434205. This site is accessed via a private road which is called Farrycroft Row. The first portion of Farrycroft Row is located on Crown land which is administered by the Department of Conservation. This land is classified as a Recreation Reserve. The middle portion of Farrycroft Row is located on land owned by the submitter.
- 6 I have previously provided transport engineering advice to MLL, this commenced in August 2016 relating to a possible expansion of the existing luxury lodge at the site. This resulted

in the completion of a transport assessment (dated September 2017) which formed part of a resource consent application (RM171104) to increase the on-site lodge from the current 32 guests (16 guest rooms) to 46 guests (23 guest room). During this resource consent process I provided a further transport information letter (dated 27 March 2018) and through discussion with the Council's transport consultant (Wendy Banks, Stantec) agreed an appropriate series of upgrades to Farrycroft Row. These upgrades are to accommodate the increased traffic from the proposed hotel expansion. I understand this resource consent application has been on hold for some time.

7 MLL subsequently engaged me to provide this evidence associated with their Submission on Stage 3 of the Proposed Queenstown Lakes District Plan.

8 In preparing this evidence I have reviewed the following documents or reports relevant to my area of expertise:

- (a) The MLL Submission (31033) prepared by Mr Scott Freeman (Southern Planning Group) dated 2 December 2019;
- (b) The Notified provisions of Chapter 46, Rural Visitor Zone; and
- (c) QLDC Section 42A Report/Evidence of Ms Emily Grace, Sections 13.3 to 13.10, although this does not include any transport related assessment.

9 I have prepared my evidence based on my:

- (a) Expertise as a traffic and transport engineer;
- (b) Knowledge of the transport provisions of the QLDC Operative and Proposed (Decision Version December 2019) District Plans;
- (c) Familiarity with the Submitter's site and the surrounding transport environment; and
- (d) Familiarity with the above mentioned documents.

Scope of evidence

10 My evidence addresses the following matters:

- (a) Assessment of the transport related elements of the Submission in relation to the transport network near the site;
- (b) Transport considerations of the Notified provisions of Chapter 46, Rural Visitor Zone as they may be applied to the site; and
- (c) Response to transport elements of the QLDC Section 42A Report with respect to the Submitter's site.

SUBMISSION

- 11 The Submission of MLL (31033) requests that their land at 569 Glenorchy-Queenstown Road be rezoned as Rural Visitor Zone. The site is utilised by Matakauri Lodge which has 16 guest rooms used for visitor accommodation with associated amenities such as restaurant, bar and guest services. The site currently is consented for up to 32 overnight guests.

Transport Environment

- 12 The site is accessed from Glenorchy-Queenstown Road via a private road, Farrycroft Row.
- 13 Farrycroft Row is established as a Right of Way with the initial section from Glenorchy-Queenstown Road provided over land owned by the Crown, with the width of this section of the Right of Way easement being limited to 6m. This road then passes through the site, as a Right of Way, providing access to residential dwellings and properties beyond. Aside from the MLL site, it is understood that up to seven other properties have the legal right to use Farrycroft Row.
- 14 Farrycroft Row is formed as a single lane road with a sealed carriageway width of approximately 4m with grass shoulders (of approximately 1m width either side). There are no formed passing bays along Farrycroft Road and passing of oncoming vehicles can only be provided by one vehicle, or both, moving partially onto the grass shoulder area.
- 15 The existing intersection of Farrycroft Row with Glenorchy-Queenstown Road is formed as a simple T-intersection, there is no priority control at this intersection.
- 16 Based on the extent of the existing development, on-site and on adjacent sites, it is likely that the typical traffic flow on Farrycroft Row will be below 150vpd or less than 25vph¹ during the peak hour. With a traffic flow of less than 200vpd, Farrycroft Row is considered a low volume shared access².
- 17 The posted speed limit on Farrycroft Row is 100km/hr based on the speed limit of Glenorchy-Queenstown Road. The width and alignment of Farrycroft Row restricts forward visibility which reduces the operating speed of the road. It is assessed that the operating speed of Farrycroft Row would be less than 30km/hr³.

¹ Based on NZTA RR453 Trips and parking related to land use, Table 7.4 Summary of design trip rates and parking demand in NZ in 2010. For a 16 room hotel (6.4vpd/room, 1.2vph/room) and 4 rural residential dwellings (10.1vpd/unit, 1.4vph/unit).

² Refer LTSA (now NZTA) RTS 6 Guidelines for visibility at driveways considers a low volume access as being one with less than 200vpd.

³ Based on NZS4404:2010, Figure 3.2 – Influence of road geometry on speed. Maximum forward visibility less than 100m with a road width less than 5m.

- 18 Research from the United Kingdom for single track roads of one lane with limited passing opportunities, suggests a two-way operating capacity of between 100vph to 200vph with significant delays and reduced level of service identified at 300vph. For Farrycroft Row the reduced passing opportunities would mean that its operating capacity would be towards the lower end of this range, say 100vph. As provided above the actual hourly traffic flow is estimated to be significantly below this at 25vph.
- 19 Glenorchy-Queenstown Road is an arterial road within the QLDC Road Hierarchy⁴. The function of this road is to provide access between different parts of the District. Traffic flow data for Glenorchy-Queenstown Road is collated by QLDC. The following Table 1 provides a summary of traffic count data for Glenorchy-Queenstown Road between Beakleys Bridge and Moke Lake Road.

Table 1 – Glenorchy-Queenstown Road, Traffic Count Data (from QLDC RAMM Database)

Site	2015	2016	2017	2018	2019
Glenorchy – Queenstown Road, Beakleys Bridge to Moke Lake Road	2404 ⁵	3183 ⁶	3213	-	4166

- 20 This traffic count data is provided as the average of a number of Average Daily Traffic (ADT) for seven day counts across each year. The data shows that the averaged annual growth rate on Glenorchy-Queenstown Road is approximately 15%. This traffic count data is all collected to the east of Moke Lake Road. It is likely that some traffic would turn onto Moke Lake Road before reaching the site access (Farrycroft Row). The latest traffic count data for Moke Lake Road is from 2019 and records an ADT of 516vpd. This suggest that the traffic flow on Glenorchy-Queenstown Road at the intersection with Farrycroft Row is likely to be less than 4,500vpd in 2020.
- 21 Glenorchy-Queenstown Road has a posted speed limit of 100km/hr. However, the operating speed at the intersection with Farrycroft Row is considered to be lower than this. The intersection is located between tight curves which have 55km/hr posted advisory speeds which will restrict approach speeds towards the intersection. NZTA Manual of Traffic Signs and Markings (MOTSAM) Part 1: Traffic Signs, Appendix A3 Guidelines for the Installation of Curve Warning and Advisory Speed Signs provides guidance on where advisory speed signs should be provided. This guidance also states that the 85th percentile speed (operating speed) at the exit point of a signed curve can be assumed to

⁴ Refer QLDC Operative District Plan, Appendix 6, Road Hierarchy, listed as Queenstown Glenorchy Road, from Fernhill Esplanade Road to Oban St 50 kmph sign. The QLDC Proposed District Plan (Decision Version December 2019), Chapter 29 Transport, 29.13 Schedule 29.1 – Road Classification which lists Glenorchy-Queenstown Road between Moke Lake Road and Twelve Mile Delta under Closeburn as an Arterial Road.

⁵ Average of 3 counts.

⁶ Average of 3 counts.

be 20% higher than the rounded advisory speed for that curve⁷. It is therefore considered that an approach operating speed of 70km/hr is appropriate for assessment.

- 22 The absolute minimum Safe Intersection Sight Distance (SISD) for a 70km/hr approach speed is 141m⁸, the available SISD at this intersection is 170m to the west (towards Glenorchy) and 155m to the east (towards Queenstown). The intersection has sufficient visibility sight distance for the assessed operating speed.
- 23 The intersection is formed as a simple T-intersection. The Farrycroft Row approach is narrow with steep verges and with a steeper longitudinal gradient than would normally be expected dropping to Glenorchy-Queenstown Road. This means that drivers will take longer to make a simple left or right turn into the Farrycroft Road than normal. Given the low traffic flow using the intersection, less than 200vpd, and the good visibility sight distance it is considered that this existing gradient and alignment of the existing intersection is acceptable.
- 24 However, the gradient of this access is extremely difficult for larger vehicles such as coaches. There are recorded incidences of similar vehicle types (large rigid trucks associated with previous construction works) being grounded at this intersection as a result of the steep gradient of the Farrycroft Row approach. Larger vehicles such as large rigid trucks or bus/coach vehicles should only use this intersection by turning left from Farrycroft Row (towards Glenorchy) or right to Farrycroft Row (from Glenorchy).

Transport Assessment

- 25 The Submission to apply the Rural Visitor Zone (**RVZ**) provisions to the site may enable a greater level of development at the site than the current lodge. This assessment is therefore theoretical and based on the development possible within the notified provisions.
- 26 The site is currently in the Rural Lifestyle Zone⁹, under this zone any visitor accommodation would be considered as Discretionary activity.
- 27 The RVZ provisions allow for visitor accommodation¹⁰ as well as and other visitor activities (Commercial recreational activities and onsite staff accommodation, or Recreation and recreational activity¹¹) as a permitted activity. Although to enable these types of activities, or at least of a moderate size or greater, will likely require:

⁷ Refer NZTA Manual of Traffic Signs and Markings (MOTSAM) Part 1: Traffic Signs, Appendix A3 Guidelines for the Installation of Curve Warning and Advisory Speed Signs, Section 3.0.

⁸ Refer Austroads Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, Section 3.2.2 Safe Intersection Sight Distance (SISD).

⁹ Refer QLDC Proposed District Plan, Chapter 22 Rural Residential & Rural Lifestyle Zone (Decision Version June 2019) .

¹⁰ Refer QLDC Section 42A Report, Appendix 1 Recommended Rural Visitor Zone Chapter 46, Section 46.4.2.

¹¹ Refer QLDC Section 42A Report, Appendix 1 Recommended Rural Visitor Zone Chapter 46, Sections 46.4.2

- (a) The construction, relocation or exterior alteration of buildings which is a Controlled activity (46.4.6) where Control is reserved to Part *f. Design and location of related carparking*. This matter of control does not specifically identify and address access to and from a site, and
 - (b) It is likely that any visitor accommodation or visitor activity will breach the zone standard 46.5.2.1 (as contained in the Section 42A report) *the maximum ground floor area of any building shall be 500m²*, noting that the existing ground floor area already exceeds this size. This requires a restricted discretionary consent, and I note that the matters of discretion do not extend to transport related elements.
- 28 This suggests that the current visitor accommodation at the site and any future expansions of this activity would be a mixture of controlled activity and a restricted discretionary activity relating to the total maximum ground floor area being exceeded. The existing buildings have a ground floor area of 1,634m² and contain 16 visitor rooms and associated visitor facilities.
- 29 It is noted that any development (or redevelopment) of the site beyond the existing visitor accommodation would be expected to meet the minimum requirements of other aspects of the PDP including the provisions of Chapter 29 Transport.
- 30 I consider that this would be expected under the RVZ Objective 46.2.2 and respective Policy 46.2.2.6 *Ensure development can be appropriately serviced through: Part d. provision of safe vehicle access or alternative water based transport and associated infrastructure*.
- 31 The current access (Farrycroft Row) and its intersection with Glenorchy-Queenstown Road would breach the access site standards of the PDP Chapter 29 Transport. Of particular note are:
- (a) 29.5.14 Access and Road Design; The design of Farrycroft Row would not meet the road design standards of QLDC Land Development and Subdivision Code of Practice based on the potential traffic flow (traffic generation) although it is appropriate for the number of lots served.
 - (b) 29.5.16 Design of Vehicle Crossings (Rural Zones); The intersection of Farrycroft Row (shared access) with Glenorchy-Queenstown Road would not meet the required design standard base on potential traffic flow (traffic generation).
- 32 From the previous work that I have undertaken for Matakauri Lodge the width and alignment of Farrycroft Road and the intersection with Glenorchy-Queenstown Road have been reviewed. This has focused on improving the road and intersection to accommodate expansion of the existing lodge. For instance, the current lodge along with neighbouring

residences results in a traffic flow of less than 150vpd. The resource consent application to expand the current lodge to 46 guests (23 guest rooms and 2,460m² ground floor area) would result in a traffic flow increase on Farrycroft Row and at the intersection with Glenorchy-Queenstown Road. To maintain the safety of this road improvements were recommended and agreed with the Council's traffic consultant. If undertaken, these improvements can be relied upon to allow for additional visitor accommodation facilities at the site with a traffic generation limited such that Farrycroft Row will have a traffic flow of less than 200vpd. The agreed improvements include:

- (a) Road widening to a 5.5m minimum sealed carriageway (two lane) at specific locations to provide passing opportunities. These locations are at points where forward visibility is limited and includes: the approach to the Glenorchy-Queenstown Road intersection, a summit curve approximately 70m from the intersection, and a horizontal curve approximately 160m from the intersection where Farrycroft Row passes into the site.
- (b) Provide curve warning signage on the horizontal curve approximately 160m from the intersection with Glenorchy-Queenstown Road. This would include an advisory speed of 15km/hr to reinforce the current low operating speed of the road.
- (c) Place edge marker posts on the downhill edge of the road to delineate the top of the slope/edge of the grass shoulder which may be used for passing as well as providing delineation for drivers at night.
- (d) Provide seal widening on Glenorchy-Queenstown Road opposite Farrycroft Row similar to the ODP Diagram 3¹². This is a reduced version of the PDP Diagram 9¹³ access type.
- (e) Provide intersection improvements including: a stop control (Stop sign and road marking) on Farrycroft Road at the intersection with Glenorchy-Queenstown Road and provide advance warning signs on Glenorchy-Queenstown road prior to the intersection being visible to drivers.

- 33 These physical works are to improve the safety and efficiency of Farrycroft Row and the intersection with Glenorchy-Queenstown Road should the number of guests be increased in the future. They are based on creating an appropriate environment so that Farrycroft Row may accommodate up to 200vpd. To give this some context 200vpd would represent the traffic generation for the existing lots and Matakauri Lodge with up to 50 guests (25

¹² Refer QLDC Operative District Plan, Appendix 7 Traffic Design Standards, Diagram 3. Private Access (frequent use by heavy vehicles, eg; dairy tankers).

¹³ Refer QLDC Proposed District Plan, Section 29.14.9 Diagram 9 – Access Design.

visitor rooms) or an equivalent ground floor area of approximately 2,600m² for the current luxury lodge.

- 34 Importantly, the current luxury lodge rarely has bus/coach vehicles at the site (maybe monthly). Should the frequency of these vehicles increase it is likely that additional improvements will be required on Farrycroft Row and at the intersection with Glenorchy-Queenstown Road. This may occur should any future on-site activity result in tour groups entering the site or involve visitor accommodation for tour groups. I am comfortable that any change in the existing operation to accommodate increased or different on-site activities (controlled activity) would also result in a restricted discretionary activity approval being required with respect to the current access (Farrycroft Row) under the district wide provisions of PDP Chapter 29 Transport which, I expect, will require an appropriate assessment.

PROPOSED PROVISIONS – Rural Visitor Zone

- 35 I have reviewed the Notified provisions of the RVZ, and the further amendments and recommendations contained in the QLDC Section 42A Planners Report.
- 36 As noted in my transport assessment above the RVZ Objective 46.2.2 and Policy 46.2.2.6 address transport matters. Policy 46.2.2.6 states: *Ensure development can be appropriately serviced through: Part d. provision of safe vehicle access or alternative water based transport and associated infrastructure.* I consider that this Policy identifies that safe vehicle access is important for any development facilitated by the proposed RVZ. The district wide chapter that sets out the planning initiatives to create safe vehicle access is the PDP Chapter 29 Transport.
- 37 The RVZ provisions however do little to promote or direct consideration of the transport chapter. To this end I note that Section 46.3 Other Provisions and Rules under 46.3.1 directs attention to the district wide chapters, but in the table provided listing these chapters, Chapter 29 Transport is omitted. Given that other chapters are specifically listed, this omission could be seen as significant in that compliance with Chapter 29 Transport is not seen as important. Given the listing of the other district wide chapters I suggest that Chapter 29 Transport is added to this list. Although, I expect even if Chapter 29 is not specifically listed it would still be a requirement to comply with this chapter.
- 38 The RVZ rules have a further two elements which can be used to trigger a review of transport related elements, these are also noted in my transport assessment above, which are:
- (a) 46.4.6 The construction, relocation or exterior alteration of buildings which is a Controlled activity where Control is reserved to, amongst others, Part f. Design and location of related carparking. This activity rule infers that this is a visual based

assessment of the site in line with a number of the zone Objectives and Policies. I suggest that part f. is amended to read: *design and layout of site access, on-site parking, manoeuvring and traffic generation*. This change is intended to reflect the requirement that most visitor accommodation (and visitor activities) would need to assess compliance against the PDP Chapter 29 Rules – Standards for activities outside roads (Section 29.5).

- (b) 46.5.2. Building Size. I understand that the Submitter suggested that for this site the maximum building size be increased to 2,500m² which, transport wise, would be relative to the existing luxury lodge with approximately 25 guest rooms (50 guests) or a point where the traffic flow on Farrycroft Row would increase to approximately 200vpd. To manage any adverse effects of increased traffic flow I suggest that a further matter for Discretion is added: *e. Traffic generation*. This would allow further assessment of any effects associated with vehicle access/intersections with the local road network.

39 I note that the only standard that does consider transport and access is *46.5.6 Commercial Recreational Activity*. Should this standard be breached by an outdoor activity with greater than 30 persons the activity would be restricted discretionary, where discretion is restricted to (Part d.) *Transport and access*.

40 I have not reviewed these suggested amendments in respect to other RVZ sites identified or requested through the District Plan review process. I consider that it would be best practice and appropriate to apply these suggested amendments to the RVZ provisions across all sites that are contained in the RVZ.

QLDC SECTION 42A REPORT

41 QLDC Section 42A Report/Evidence of Ms Emily Grace, Particularly Sections 13.3 to 13.10 which specifically considers the MLL Submission. These sections do not include any specific transport related assessment for the Submission.

42 I have reviewed the recommended provisions of the RVZ (Chapter 46) provided as Appendix 1 to the QLDC Section 42A Report. I have made comments regarding these provisions in my previous section.

CONCLUSION

43 The Submission to the QLDC Proposed District Plan by Matakauri Lodge Limited (31033) has requested that their land at 569 Glenorchy-Queenstown Road be rezoned to the Rural Visitor Zone. The site is currently used for visitor accommodation and is known as Matakauri Lodge.

- 44 The site is accessed from Glenorchy-Queenstown Road via a private road, Farrycroft Row, which is provided as a right of way over land owned by the Crown. As well as serving Matakauri Lodge this road also provides access to neighbouring residential dwelling and properties as a Right of Way over the site.
- 45 I have reviewed any potential transport effects should the site be used for a larger visitor accommodation (or other visitor/tourist activity) - activities which may be facilitated under the proposed provisions of Chapter 46, Rural Visitor Zone. The most likely effects would be a greater traffic flow and potentially larger vehicles buses/coaches using Farrycroft Road and its intersection with Glenorchy-Queenstown Road.
- 46 I consider that with minor additions to the proposed Chapter 46 provisions that these potential transport effects can be appropriately assessed and managed through a resource consent application. I suggest the following amendments:
- (a) *46.3.1 District Wide* – That Chapter **29 Transport** is added to the table of District Wide chapters.
 - (b) *46.4.6 The construction, relocation or exterior alteration of buildings* – That the matters for Control, part f is amended as: **f. Design and layout of site access, on-site parking, manoeuvring and traffic generation.**
 - (c) *46.5.2 Building Size* – I note the Submitter has requested an amendment to the building size applied to the site (suggested 46.5.2.2). That a new matter for Discretion is added: **e. Traffic generation.**
- 47 I consider that these amendments are all complementary to the Policy *46.2.2.6 Ensure development can be appropriately serviced through: Part d. provision of safe vehicle access or alternative water based transport and associated infrastructure.* I have not reviewed all the sites identified or requested within the Rural Visitor Zone. However, I consider that it would be appropriate to apply these suggested amendments to the RVZ provisions across all sites that are contained in the RVZ.

Jason Bartlett

29 May 2020