

**BEFORE THE HEARINGS PANEL  
FOR THE QUEENSTOWN LAKES PROPOSED DISTRICT PLAN**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** Stage 3 of the Proposed  
District Plan

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**THIRD STATEMENT OF EVIDENCE OF MICHAEL ANDREW SMITH  
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**TRANSPORT – SETTLEMENT ZONE**

**LAKE MCKAY PARTNERSHIP REZONING SUBMISSION**

**18 March 2020**

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## 1. PROFESSIONAL DETAILS

- 1.1 My full name is Michael Andrew Smith. I hold the position of Principal Transportation Engineer at Stantec, who I have been with since 1996.
- 1.2 I hold a Masters of Engineering in Transport (MET) from the University of Canterbury. I am a Chartered Professional Engineer of Engineering New Zealand (CMEngNZ / CPEng), and a Registered Professional Engineer Queensland (RPEQ).
- 1.3 I have 25 years' experience in traffic engineering, and regularly undertake assessments of resource consent applications for transport matters for various local authorities across NZ.
- 1.4 I have experience in road safety, traffic engineering, construction and assessing development applications from a traffic compliance and impact perspective. I have assessed numerous development applications in the Queenstown Lakes district.
- 1.5 I have been engaged by the Queenstown Lakes District Council (**QLDC** or **Council**) to provide evidence in relation to the requested rezoning by Lake McKay Partnership Limited (**3196**) (**Lake McKay**) on Stage 3 of the Queenstown Lakes District Plan (**PDP**).
- 1.6 Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witness contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.
- 1.7 The key documents I have used, or referred to, in forming my view while preparing this evidence are:
- (a) QLDC operative District Plan (**ODP**);
  - (b) Chapter 20 PDP;

- (c) QLDC Land Development and Subdivision - Code of Practice (CoP);
- (d) NZTA Manual of Traffic Signs and Markings; Parts 1 & 2;
- (e) NZTA State Highway Geometric Design Manual (Draft);
- (f) AUSTROADS Guide to Road Design; Part 3: Geometric Design; 2017; and
- (g) AUSTROADS Guide to Road Design; Part 3: Geometric Design; 2009.

## **2. EXECUTIVE SUMMARY**

**2.1** The key conclusions of my evidence are:

- (a) The Lake McKay submission does not provide adequate evidence or assessment demonstrating effects of the rezoning on the existing road network.
- (b) I consider that the requested rezoning, if granted, would not have significant effects on the existing road network, but would require specific consideration of appropriate treatments at the land subdivision and resource consent stages.
- (c) The NZ Transport Agency (NZTA) will be affected by the increase in traffic onto SH 6, and therefore recommend that consideration by NZTA should be considered for any impacts, or improvement standards to meet their specific requirements.
- (d) Consequently, I do not oppose the relief sought by Lake McKay Partnership Limited from a traffic perspective.

## **3. GENERAL DESCRIPTION OF THE LAKE MCKAY SITE**

**3.1** The submission is located at 24 Atkins Road, Luggate, demonstrated by the red pin on Figure 1 below. The site bounds Atkins Road to the north. Access from the site to State Highway (SH) 6 is via Atkins Road. In this location, the SH is defined as a two-way carriageway, with a single lane in each direction, with no overtaking markings installed for the cresting vertical curve some 200 metres to the northeast of Atkins Road.



Figure 1: Submitter Site location,  
*Source: Google Earth*

- 3.1** Atkins Road is a narrow sealed rural road (QLDC recorded width is 6.4 metres), with a priority Give Way control. Atkins Road is measured as being approximately 224 metres in length, with an Average Daily Traffic (ADT) of approximately 85 vehicles per day (**vpd**) recorded close to the SH 6 intersection.
- 3.2** SH 6 in this location is scheduled as a Limited Access Road (**LAR**) by NZTA. NZTA has specific rules and requirements for any direct access onto a LAR. NZTA list an Annual Average Daily Traffic (**AADT**) volume of 4,318 vpd (Estimate; 2018<sup>1</sup>), and approximately 9% of that volume being Heavy Commercial Vehicles (**HCV**).

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1 Source, MobileRoads RAMM database

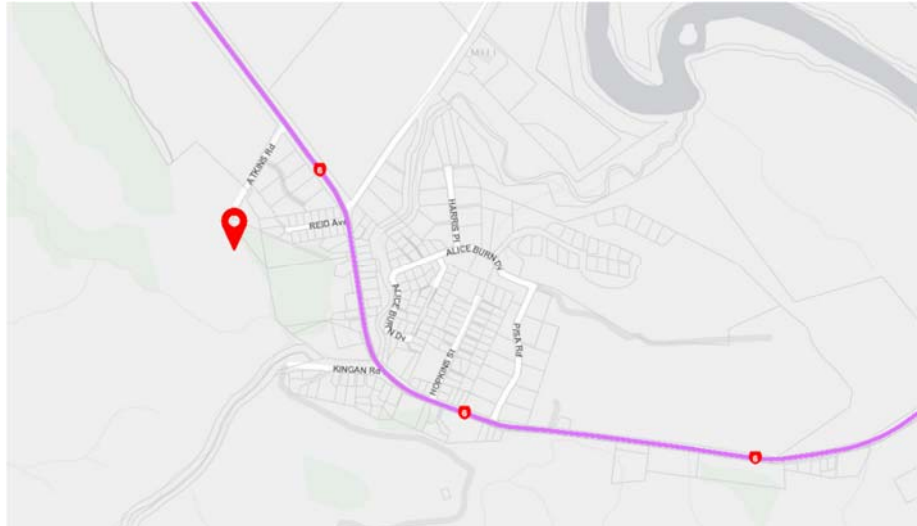


Figure 2: Submitter Site location, SH LAR road sections

Source NZTA GIS website

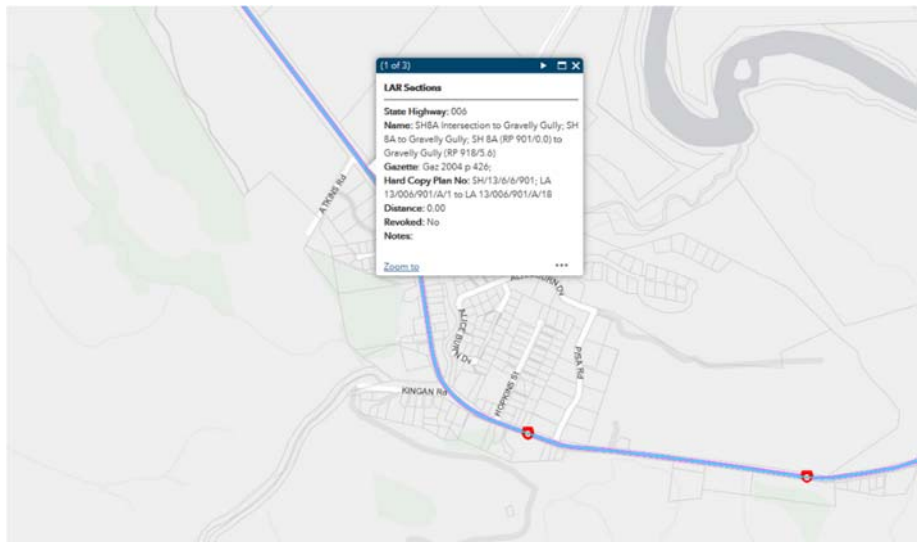


Figure 3: SH LAR road section details.

Source NZTA GIS website.

- 3.3** I have been advised by Ms Bowbyes that the current zones, whereby the RRZ applies to 12.3ha of land, and the balance area is zoned Rural (landscape category RCL) can yield approximately 24 lots, and the SETZ would yield approximately 122 lots. This would result in an increase of approximately 97 lots.

#### **4. GENERAL ROADING ELEMENTS**

- 4.1** The following section details the elements identified for the submission site.
- 4.2** The land parcel as outlined by the submitter appears to have access only via Atkins Road. I have therefore undertaken this assessment on that basis.

##### **Crash history**

- 4.3** To understand the nature of the current safety of the road environment, an analysis of the NZTA Crash Database was undertaken. A 5-year crash period was utilised due to the site being rural adjacent to a township, and to allow a comparison as improvements have been made on the highway.
- 4.4** A single non injury crash is recorded for SH 6, approximately 350 metres south of Atkins Road. This records a southbound movement, loss of control off road to left. Factors detail alcohol / medical as causative factors. It is considered that this location is outside of the influence of the Atkins Road intersection.
- 4.5** The diagram below indicates the location and nature of the recorded crash. It is important to note other non-injury crashes could have occurred, with only an insurance claim / exchange of information being made, therefore no official Police record would be created.

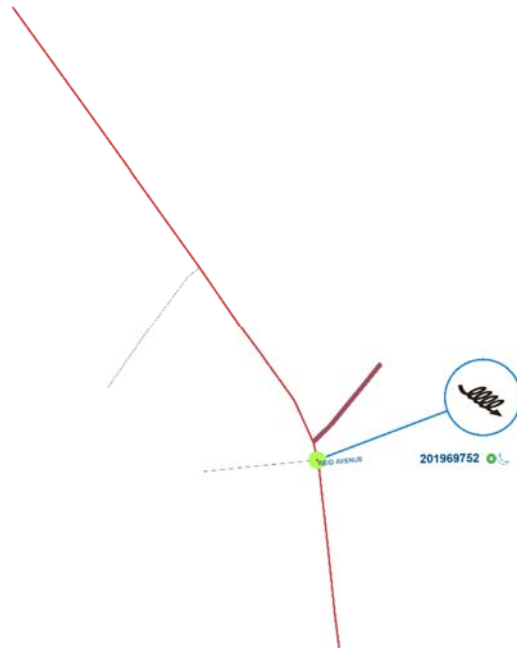


Figure 4: Crash Data,  
Source NZTA CAS Database

### Speed Environment

- 4.6** The current SH 6 / Atkins Road junction is appropriate for the current level of development. It is noted that SH 6 in the location of the Atkins Road intersection, has a legal speed limit of 100 km/h. It is noted that NZTA has consulted on lowering the speed limit within the Luggate Township. At the time of writing this evidence, I was not aware of any proposed changes for the current 100 km/h rural approaches to Luggate.
- 4.7** Atkins Road is outside of the Luggate urban form, and as such is subject to the open road speed of 100 km/h. Given the form and length of the current road, it is presented that this speed would not be achievable for the normal road user.
- 4.8** It is my opinion that any new development should include a speed limit review for Atkins Road, in accordance with the Setting of Speed Limits Review requirements.



## **SH 6 Intersection form**

- 4.9** The presence of the cresting vertical curve to the north of the Atkins Road Junction has a limiting factor on the available approach sight lines for drivers. Likewise, the horizontal curve leading into the Church Road junction forms a limiting factor for driver sight lines to the south. The south approach is controlled by the urban speed limits within the Luggate Township.
- 4.10** Visibility at the junction is in excess of 250 metres in each direction, for the exiting driver. The sight distance along Atkins Road, towards the intersection of Atkins Road / SH 6 is in excess of 200 metres.
- 4.11** This meets the required distances as stated in AUSTRROADS Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections. Reference is made to:
- (a) Table 3.1: Approach Sight Distance (side road); 100 km/h;  $R^T = 2.0s$  (Reaction time = 2.0 seconds); and
  - (b) Table 3.2: Safe Intersection Sight Distance. 100 km/h;  $R^T = 2.0s$
- 4.12** It is considered that the current intersection location and sightlines are appropriate for the current level of development and proposed rezoning.
- 4.13** The proposed rezoning to Settlement Zone will require a reassessment of the intersection form, considering the NZTA requirements for possible inclusion of a right turn facility and associated widening, if required. This has not been provided with the submission. I refer also to my comments below on the suitability of Atkins Road in its current formation.

## **5. ATKINS ROAD**

- 5.1** As stated, Atkins Road is characterised as a sealed road of some 240 metres in length, with a width recorded as 6.4 metres. The roadside is

formed as a gravel shoulder with grass berms to the rural property boundary.

- 5.2** Atkins Road approaches SH 6 at an angle of approximately 80 degrees, forming a junction that is not square to the SH. It is noted that the road rotates towards the State Highway immediately in the intersection throat.

## **6. ADJACENT DEVELOPMENT – ATKINS ROAD**

- 6.1** There is a rural residential development access onto Atkins Road approximately 126 metres southwest of the SH 6 intersection. It is noted on available aerial maps, that this development has direct access onto Atkins Road via the internal road structure only.

## **7. REQUIRED ROAD FORM FOR REZONING**

- 7.1** There has been no assessment presented on the possible yield of housing for the proposed Settlement Zone at the submission site. However, Ms Bowbyes has advised that the SETZ area would yield approximately 122 lots
- 7.2** Utilising the Operational District Plan with consideration of the Proposed District Plan, and the QLDC Land Development and Subdivision Code of Practice (Table 3.2: Road Design Standards), it is noted that a road width (Rural) of some 6.4 metres meets the requirements for 1 – 20 domestic units (Rural Live and Play – E2 Style). Any increase in domestic units above 20 would require a E3 style road form (1 to 150 domestic units). This will require physical works improvements to meet the QLDC standards for Atkins Road.



**Mike Smith**

**Principal Transportation Engineer – Road Safety**

**18 March 202**