

To: Jeff Fuller
Queenstown Lakes District Council

From: Chris Rossiter

Project/File: 310205960 / 0784

Date: 18 June 2026

Reference: FTAA - Mount Iron Junction Housing Scheme [FTAA-2602-1173]

This report has been prepared by Chris Rossiter in accordance with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note (2023). Mr Rossiter's qualifications and experience are summarised in Appendix A.

Executive Summary

Mt Iron Junction Limited is seeking approvals under the Fast-track Approvals Act (FTAA) to develop approximately 6 ha of Rural zoned land at the base of Mt Iron in Wānaka primarily for residential development but with some commercial and retail activity (Project). The Project represents an increase in the intensity of development and associated traffic generation compared with the level of activity approved by the Environment Court under the previous consents held for the site.

External Effects

The only vehicle access to the site is via Junction Road to the roundabout intersection with State Highway 6 (SH6), State Highway (SH84) and Riverbank Road. The analysis and observations of the existing roundabout performance indicate that the roundabout is already under pressure during the afternoon peak period with long delays and queues on the western approach (SH84).

The Applicant's analysis of the roundabout has been informed by traffic surveys in July 2025 but does not comment on seasonal effects. Since July represents a less busy period on the road network, the lack of any seasonal correction to an underestimate of delays that could reasonably be expected for a large proportion of the year.

The Applicant has assessed the potential effects of the development traffic on the operation of the roundabout with the development traffic being entirely additive to the background growth. In practice, the Project would represent just one of the many contributing sources to the general growth in traffic movements in the area. As a result, any forecast reduction in the operational performance cannot be directly attributable to the Project. The analysis of future year scenarios by the Applicant with different levels of growth indicate that travel demands at the roundabout will exceed its capacity in five to seven years' time even without any development of the Application Site. This reflects the fact that traffic volumes on the transport network have been rising far faster than was anticipated when the roundabout was designed.

While it is not possible to fully separate the effects of the Project from background growth effects, I broadly agree with the overall conclusion which indicates that regardless of whether this Project is

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approved, capacity improvements to the roundabout will be necessary in the medium term, five to ten years.

Connectivity

There are no existing footpaths along the state highway frontages to the Project site and none are proposed as part of the Project. This means that the site is poorly connected to the existing pedestrian network with the only connection being via the Mt Iron Track which is within reserve land and has not been formed for use in all weather or all lighting conditions.

With the northern part of Three Parks being within 1 km of the western site boundary, walking is a practical travel mode to access the northern parts of Three Parks but is unlikely to be an attractive option without a safe sealed and lit footpath being available, ideally beside the highway. Since the site is also located within the catchment area for Te Kura o Take Karara, many students will travel on foot or micro-mobility devices which will require an all-weather surface to be available.

The lack of paths on the SH6 frontage may also act as an obstacle to residents choosing to walk or cycle to destinations to the north.

Overall, the development site has poor connection to the existing wider pedestrian network with the only connection being via the Mt Iron Track which is not suitable or use in all weather conditions.

Internal Site Layout

The internal site layout provides for good internal circulation for motor vehicles and access to off-street parking areas. However, the footpath network only allows for a connection to an existing informal track that links to the Mt Iron Track. While the plans indicate that this track will be upgraded, a single connection to wider urban path network represents a poor outcome from a safety perspective because the path is not suitable for use in all weather and lighting conditions.

Although the proximity of the site to Three Parks and Ballantynes Road industrial zones makes cycling a practical travel mode choice, the site layout does not include specific provision for cycle storage or parking. Although cycle parking is not required within residential zones generally, the need for cycle parking to support mode shift has been recognised in the Te Pūtahi Ladies Miles Zone. One potential consequence of not providing space for cycles is that cycle ownership may not be practical for many residents.

The site plans provide a mix of off-street and on-street parking in addition to garage parking spaces. The total number of parking spaces is commensurate with expected demands and is unlikely to result in any off-site parking demands.

The dimensions of the parking bays are generally consistent with the District Plan requirements but there are some parking areas which will need amending to achieve compliance. There is a discrepancy between the aisle width requirements in the District Plan and the national standard for off-street parking for parking bay widths of 2.7 m. One potential consequence is that compliance with the District Plan will not provide the manoeuvring space required under the national standard and that access to parking bays may require multiple manoeuvres. This can be addressed with some minor changes to the parking layouts on Road 1.

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The proposed conditions allow for up to 80 percent of units to be used for Residential Visitor Accommodation but do not identify any constraints on where this can happen. If no control is provided on the locations for Residential Visitor Accommodation, then all parking should be designed to meet Class 2 user requirements. Currently the site has a mix of Class 1 and Class 2 standard spaces.

Overall, the site layout provides a high level of compliance with the District Plan transport standards but there are some areas where this could be improved.

Reference: FTAA - Mount Iron Junction Housing Scheme

1 Introduction

Mt Iron Junction Limited is seeking approvals under the Fast-track Approvals Act (FTAA) to develop approximately 6 ha of Rural zoned land at the base of Mt Iron in Wānaka, primarily for residential development but also incorporating some commercial and retail activity (Project). The Project represents an increase in the intensity of development and associated traffic generation compared with the level of activity approved by the Environment Court.

Since the Project will create 257 residential lots and represents a Restricted Discretionary Activity under the High Trip Generating Activity rule 29.4.11 of the Queenstown Lakes PDP (**PDP**).

QLDC has requested that Stantec review the transportation related aspects of the application, in particular:

- Access and parking;
- Intersection with the State Highway;
- the level of compliance with Council's standards;
- the level of compliance with the QLDC Land Development and Subdivision Code of Practice; and,
- whether the proposed development could impact upon the safety and efficiency of the roading network and/or result in unsafe transport outcomes.

This review has been based on the following parts of the FTAA application:

FTAA Application Data

1. Application for Fast Track Approval – Mt Iron Junction
2. Appendix C – Architectural Drawings
3. Appendix F – Preliminary Engineering Drawings
4. Appendix K – Integrated Transport Assessment (ITA) Internal
5. Appendix K1 – Integrated Transport Assessment External
6. Appendix Q – Draft Conditions

Fast Track Application Further Information Response

7. Mt Iron Junction – Fast Track Application Information Response, Pattersons 7 May 2026
8. Consent Engineering Design Plans, P2401013 Rev 2, Pattersons
9. Mt Iron Fast-Tracks Application, Wānaka: Response to Council Queries, Carriageway Consulting, 7 May 2026

Reference: FTAA - Mount Iron Junction Housing Scheme

2 External Effects

2.1 Traffic Generation

The approach taken to establishing the likely traffic generation of the Project reflects good practice and is based on published rates. One omission from the calculation of movements at the roundabout is the service station. Although this does not form part of the Project, it does represent part of the consented environment and will add to turning movements to and from Junction Road.

The omission of the service station traffic from the modelling could result in an under-estimate of the effects of the development as a whole, including the service station, on the roundabout because it will influence turning movement demands.

3 Transport Modelling

The ITA includes a summary of vehicle turning movement volumes at the roundabout in July 2025 and adopts these as the basis for estimating growth and establishing the baseline intersection performance in 2025.

Figure 2-1 shows the average daily volume of traffic that I have calculated using NZTA count data on a week by week basis for 2025 on State Highway 84. It indicates that there are strong seasonal variations in traffic movements with the lowest volumes being recorded in the middle of the year and the highest volumes in the summer months. Traffic volumes at the end of July were about 7% lower than the annual average, and nearly 20% below the 90th percentile level.

Adopting the July survey data as a basis for assessing future growth creates a risk that the growth rate has been underestimated and as a consequence, the existing spare capacity of the roundabout has been over-estimated.

There is also a concern that the Applicant's SIDRA model is not well calibrated to existing conditions as it reports queues of nine vehicles on the SH84 approach compared with the observed queue lengths reported in the ITA of 30 or more vehicles. My observations in the evening peak in April 2026 recorded queues extending beyond the Puzzling World entrance, that is, queue lengths of more than 800 m.

Reference: FTAA - Mount Iron Junction Housing Scheme

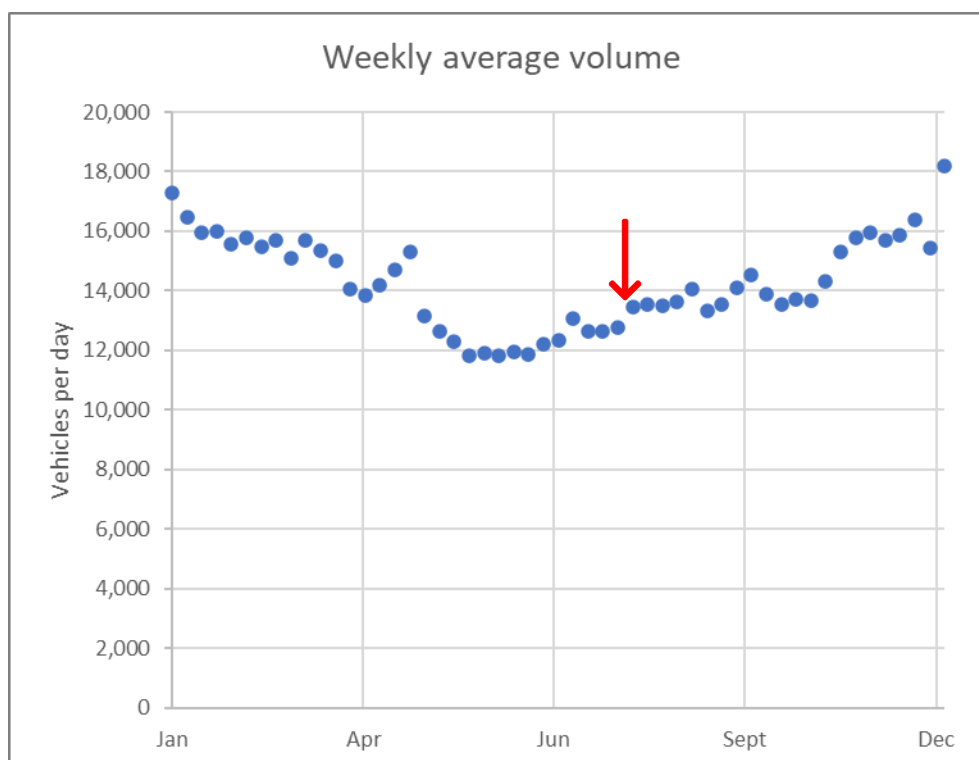


Figure 2-1: Average daily volume on SH4 by week in 2025 (July volume arrowed)



Photograph 2-1: Evening peak queues on SH84 (21 April, 5:00PM)

The potential effects of the development traffic on the operation of the roundabout have been assessed with the development traffic being additive to the background growth which represents good

Reference: FTAA - Mount Iron Junction Housing Scheme

practice In practice, this can result in the assessment being somewhat conservative in nature because it effectively increases the overall growth rate. Since the roundabout performance will be influenced by the overall growth in traffic volumes associated with development in the surrounding area and the Project will form part of that growth, that is, it may not be entirely additional to the surrounding area development growth. As a consequence, the modelling may overestimate changes in delays or queue lengths at the roundabout.

One criticism of the modelling is that it does not take into account the vehicle movements of the consented service station. The exclusion of the service station traffic is likely to contribute to some underestimation of the effects of the Project on the roundabout.

Overall, while there are some concerns with the modelling and the calculations of growth in traffic volumes, it does demonstrate that the existing roundabout is likely to be operating at its capacity within five to seven years regardless of this Project. It is acknowledged that this reflects the much higher rate of development within the surrounding area that has occurred than was anticipated when the roundabout was designed.

4 Internal Site Layout

4.1 Connectivity and Permeability

The proposed site layout effectively comprises two separate residential areas. The western area is structured around two cul-de-sacs with a private lane between them. The eastern area is more grid-like in structure with two east-west roads and multiple connecting road and lanes.

The site layout as a whole provides good connections to the strategic road for vehicle movement and is located close to the Mt Iron Track which would attract some use for active mode travel to Three Parks and Wānaka. The design plans show provision for a connection from the boundary of the site along an unformed legal road to the Mt Iron Track but do not state what formation will be provided. This represents a design detail that could be confirmed as part of the Engineering Approvals.

Since the site is also located within the catchment area for Te Kura o Take Karara (a primary school located in Three Parks), many students will travel on foot or micro-mobility devices which will require an all-weather surface to be available between the site and Te Kura o Take Karara.

The nature of the Mt Iron Track within a reserve means that the surface is not suitable for all types of path user and also does not include lighting. Although the path may be suitable for use by pedestrians and cycles, it is not suitable for micro-mobility devices with smaller wheels. The establishment of residential development can also be expected to increase the demand for path use in low light or dark conditions which creates safety concerns because of the lack of lighting.

The formation of a formed and sealed path beside the highway with a potential connection to the footpath that currently ends at Puzzling World represents the most desirable outcome but does require consideration of both path and highway lighting.

The site does not include any provision for active mode connections to the north beside SH6. Although this will have lower travel demand than beside SH84, the lack of a safe path effectively removes active modes as a travel option. Ideally, a path would be formed beside SH6 between the

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Project and the Aubrey Road intersection so that pedestrians and cyclists can avoid travelling in or close to the SH6 carriageway in this high volume, high speed section of the network. Again, there is a need to ensure that any path includes appropriate lighting.

There are crossing facilities through the splitter islands on the approaches to the roundabout primarily to support cycle movement, but which could be used by pedestrians. However, any pedestrian demand is likely to be low because there are no current footpaths beside the state highway which would attract pedestrians.

Although there are currently no public transport services in Wānaka, as noted in the ITA, one option for a service linking Hāwea, Albert Town and Wānaka would involve bus travel along SH6 and SH84 past the site with bus stops likely to be close to the roundabout. This means that the site would be well positioned to access future public transport services. In the event that bus services were established and bus stops were provided, it would be necessary to construct some additional footpaths, along with appropriate facilities to cross main roads. It is recognised that future public transport falls outside the scope of this application.

4.2 Parking Supply

The ITA includes a comprehensive assessment of the likely parking demands based on household vehicle ownership rates recorded during the last census. I accept this analysis and agree that the level of parking being proposed is appropriate to accommodate the anticipated level of demand. The use of allocated parking within private lanes will ensure that all dwellings have access to a single parking space with any additional parking demands being met within communal or public parking areas.

5 District Plan Transport Standards

5.1 Rule 29.4.11 High Trip Generating Activities

The proposed development represents a High Trip Generating Activity under the Proposed District Plan (**District Plan**) rules. The application has been supported by ITA reports which address internal and external effects. Although the ITA provides details of traffic generation and intersection performance, it does not address what intersection improvements may be necessary to address effects directly related to the application. However, I accept that it may not be practical and potentially not possible to completely separate the effects of this development from the effects of the other residential development in the wider area. This represents a matter for NZTA to address as the Road Controlling Authority for the highway network.

5.2 Parking and Loading

5.2.1 Rule 29.5.2 Size of Required Parking Spaces and Layout

I am aware that there are discrepancies between the parking bay dimensional requirements of the District Plan and those in national off-street parking standard NZS2890.1:2004. I understand that

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QLDC elected to defer any alterations to the parking bay dimension requirements in the PDP to address the discrepancies until the NZS2890.1 standard was revised. I was subsequently involved in the working group that developed a proposed new standard and I am aware that the analysis of the New Zealand vehicle fleet had identified a need for a change to parking bay sizes to accommodate the larger vehicles that are now present compared with the vehicle fleet in 2004. Work on the standard is currently on hold. One consequence is that parking layouts designed to meet the absolute minimum aisle width requirements of the PDP can be partially obstructed by larger vehicles and larger vehicles may require multiple manoeuvres to access parking spaces.

The ITA adopts a bespoke method to determine required aisle widths for parking bay widths that are not tabulated in the District Plan. Mr Carr has inferred a linear relationship that does not exist in practice and is not present in NZS2890.1:2004. Although this method may provide a useful approximation for required aisle widths where required widths are greater than 7 m, I consider that this method is flawed when applied to aisle widths below 7 m, because the aisle width requirements are not linearly dependent on parking bay width and are constrained by the manoeuvring ability of a vehicle. For example, if Mr Carr's approach was adopted for a 2.8 m wide parking bay, then his approach would suggest that an aisle width of 5 m would be sufficient to accommodate manoeuvres, which is not the case.

The NZS2890.1:2004 standard recommends a minimum manoeuvre aisle width of 5.8 m based on 5.4 m deep spaces being provided. While the standard allows parking bays to be marked to a depth of 5 m within New Zealand, it still requires the same combined kerb to kerb width, that is, a minimum aisle width of 6.2 m. (NOTE: This requirement can also be interpreted as a 6.6 m wide minimum aisle where parking is double sided.)

The vehicle tracking paths for a B85 vehicle within the District Plan indicate a minimum turning circle of 5.8 m excluding any provision for clearance from structures or obstructions such as other parked vehicles. Based on that District Plan diagram, a turning vehicle would occupy a width of about 2.8 m as it crossed into a parking space if the aisle width was 5.8 m wide and a width of about 2.7 m with a 6 m wide aisle. This results in a separation of less than 300 mm from any adjacent parked vehicles and would likely result in additional manoeuvres.

Table 4-1 provides a summary of the proposed parking bay widths and aisles widths with my assessment of compliance against the District Plan and also NZS2890.1:2004 for comparison. The dimensions of parking bays and adjacent aisles are generally aligned with the District Plan requirements and also the national standard for off-street parking NZS2890.1:2004. There are two locations where the parking does not technically meet the District Plan requirements: the right-angle parking on Road 1 and car park 8B. This could be resolved by configuring all parking on Road 1 as angled and by changing the parking in car park 8B from Class 2 to Class 1.

Table 4-1: Parking Dimensions – Assessment of compliance

Location	Width (m)	Aisle (m)	Proposed User Class	District Plan	NZS2890.1:2004
ROW 5	2.6	6.35	Not stated	Class 1 only	Class 1
Car park 1	2.5	7.0	Class 1	Class 1 only	Class 1
Road 1 (1-5)	2.5	5.7	Class 2	Class 2	Class 2

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Location	Width (m)	Aisle (m)	Proposed User Class	District Plan	NZS2890.1:2004
Road 1 (6-12)	2.7	5.7	Class 2	Does not comply (<6.0 m)	Does not comply (<6.0 m)
Road cul-de-sac	2.6	Varies	Class 2	Class 2	Class 2
Car park 2	2.6	7.0	Class 2	Class 2	Class 2
Car park 3	2.6	8.0	Class 2	Class 2	Class 2
Car park 5	2.55	6.6	Class 1	Class 1	Class 1
Road 2	2.5	4.3	Not stated	Class 2	Class 2
Road 3	2.5	4.3	Not stated	Class 2	Class 2
Car park 4 (1-16)	2.5	8.0	Class 2	Class 2	Class 2
Car park 4 (17-22)	2.7	6.5	Class 2	Class 2	Class 2
Car park 6	2.55	6.6	Class 1	Class 1	Class 1
Car park 7A	2.5	6.6	Class 1	Class 1	Class 1
Car park 7B	2.64	6.6	Class 2	Class 1	Class 1
Car park 8A	2.5	6.6	Class 1	Class 1	Class 1
Car park 8B	2.64	6.6	Class 2	Does not comply (< 7.0 m)	Class 1

Where proposed dwellings have garages, these are set back by 5.5 m from road boundaries and there is generally sufficient space between the boundary and in the adjacent carriageway to accommodate the entry and exit manoeuvres. On Road 2 and Road 3, the manoeuvring space for residential driveways is only 5.5 m wide inclusive of 1.5 m across the footpath. The reduced width compared with accepted standards may require drivers to complete an extra manoeuvre to access garages or for vehicles to be parked centrally in the space in front of a garage.

The design plans adopt a range of parking bay widths from 2.5 m to 2.7 m with some spaces being marked as appropriate for Class 1 users and some for Class 2 users. Although there is a proposed condition to restrict the number of units that can be used for Residential Visitor Accommodation (VA), this does not include any control on the location of the VA units. I suggest that a condition of consent is developed that clearly identifies where Residential Visitor Accommodation may occur so that any associated parking is appropriately dimensioned.

5.2.2 Rule 29.5.4 Mobility Parking Spaces

Car park 2 has a marked capacity for 36 spaces including one mobility space. As a public car park and based on the number of spaces proposed, I consider that two mobility spaces should be provided to align with NZS4121:2001 'Design for Access and Mobility – Buildings and Associated Facilities'.

5.2.3 Rule 29.5.12 Bicycle Parking

The District Plan does not include a requirement for cycle parking to be provided for residential activity except within the Te Pūtahi Ladies Mile Zone. The site layout does not include any specific

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storage provisions for cyclists and while I acknowledge that it is not required by the District Plan, I consider that this represents a poor design outcome that could result in lower uptake of cycling as a travel mode option even though the site is well located.

6 Land Development and Subdivision Code of Practice (COP)

6.1 Carriageway Widths

The carriage widths of all new roads are generally aligned with COP requirements. The exception to this is two one-way roads, being Road 2 and Road 3, which have a width of 4 m. Since the roads are proposed to operate one-way and the width is sufficient to accommodate the on-street parking manoeuvres, while a technical non-compliance, I consider that this width is acceptable. The width of the carriageway does mean that parking manoeuvres at the residential driveways will be constrained.

6.2 Road Reserve Widths

The proposed road reserve widths exceed the minimum standards set out in the COP.

6.3 Footpaths

The proposed footpath widths are aligned with the COP requirements.

6.4 Parking

Parking is only permitted within on-street parking bays and where these are not provided, 'no-stopping' lines are proposed. I support this approach to managing parking.

6.5 Corner Radii

There is a conflict in the COP in relation to the design standards for intersections. The COP requires that corner radii are in the range 4 to 6 m and also that a medium length, rigid truck can turn left within a lane. This is not possible without widening carriageway widths beyond the recommended widths set out in the COP.

The subdivision design approach places greater focus on accommodating the larger vehicles than on pedestrians. One consequence is the crossings at intersections are longer which will increase exposure to vehicles and the resulting layouts for tactile paving is poorer. For residential environments, I consider a design approach that ensures low vehicle speeds with small radius corner radii at intersections should be preferred because this results in better outcomes for pedestrians. The traffic regulations anticipate the need for larger vehicles to cross lanes with the driver of any vehicle having a responsibility to assess if it is safe to undertake the turn, without causing a safety or conflict to other motorists.

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7 Other Matters

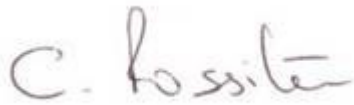
7.1 Emergency Vehicle Access

The FENZ access requirements include a minimum clear width of 4 m so that a fire appliance can stop in a road and access is available to both sides of the appliance. Section 3.3.6 of the Code of Practice requires that "Parking and loading shall not be provided so that it has the potential to obstruct the movement of emergency or service vehicles along a road."

The Application plans include line markings to control on-street parking that would ensure that the required space is available. I support this approach to managing parking.

7.2 Waste Collection

Waste collection involves a combination of public and private services. Although some vehicle tracking has been provided, this is not comprehensive and does not demonstrate that a waste collection vehicle could access all collection points.



Chris Rossiter BSc BA(Open) CPEng
Principal Transportation Engineer
Phone: +64 3 926 2206
Mobile: +64 27 241 9294
chris.rossiter@stantec.com

Appendix A Author

Christopher Rossiter is a Principal Transportation Engineer at Stantec New Zealand Limited (**Stantec**). He has held this position since 2013 and been employed at Stantec (and Traffic Design Group / TDG prior to its incorporation with Stantec) since 2006. Prior to joining TDG (now part of Stantec), he was employed as a Principal Systems Engineer and Technical Manager with BAE Systems in England.

Chris holds the academic qualifications of Bachelor of Science from the University of Exeter and Bachelor of Arts (Open) from the Open University, England.

Chris is registered as a Chartered Professional Engineer with Engineering New Zealand. He has 40 years' engineering experience including 19 years' transportation engineering in New Zealand on a wide range of projects involving transportation engineering design, road safety audits, transportation planning and assessment.

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Chris' role at Stantec includes preparing transportation assessment reports for a wide range of resource consent applications across the country and also providing transportation engineering services for many councils¹. He has prepared expert transport evidence on behalf of councils and also for private developers in relation to a variety of land-use resource consent hearings and plan changes.

This report has been prepared in compliance with the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 as if it was expert evidence presented in proceedings before the Environment Court. Unless stated otherwise, this report is within Chris' area of expertise and does not omit consideration of material facts known to him that might alter or detract from the opinions expressed in this report.

¹ Hastings, Central Hawke's Bay, Gisborne, Palmerston North, Whanganui, Carterton, Upper Hutt, Tasman, Nelson, Buller, Waimakariri, Christchurch, Ashburton, Timaru, Clutha, Queenstown Lakes, Southland and Invercargill.