



**Queenstown Lakes District Proposed District Plan
Section 32 Evaluation
Stage 2 Components November 2017**

For:

Chapter 29 Transport

And consequential Variations to Proposed District Plan 26 August 2015:

**Chapter 2 Definitions
Chapter 12 Queenstown Town Centre
Chapter 21 Rural
Chapter 37 Designations
Planning Maps 1 to 41**

Report dated: 1 November 2017

File Reference: PDP Stage 2: Transport

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1. EXECUTIVE SUMMARY

- 1.1. The Stage 2 Proposed District Plan Transport Chapter (**Transport Chapter**) is intended to manage the actual and potential adverse effects of transport on the environment and the effects of activities that occur within roads. The Transport Chapter applies to all the land notified in Stages 1 and 2 of the district plan review and to all roads within the District Plan, regardless of whether they adjoin land/ traverse through zoned land that is not within stages 1 or 2 of the District Plan.
- 1.2. The key transport-related issues facing the district are increasing road congestion; reduced liveability; roads that do not cater well for all modes of travel; land use patterns and parking requirements that affect the affordability of housing and enable the dispersal of employment, commercial, and community activities; and the inadequate provision of onsite parking, access, and loading in some situations.
- 1.3. To address these issues, the proposed Transport Chapter includes:
 - (i) Objectives and policies aimed at establishing a more connected transport network that caters for public transport, motorists, walkers, and cyclists and encourages increased travel by modes other than the private car;
 - (ii) rules that enable a less onsite parking in those zones where alternative modes of travel are available now or will be in the foreseeable future;
 - (iii) rules that enable council to consider a wide range of transport effects and mitigation measures when making decisions on developments and subdivisions that have the potential to generate large amounts of traffic (referred to as 'High Traffic Generating Activities' (**HTGAs**) in this report);
 - (iv) rules that enable a wide range of activities to occur within roads where these comply with standards;
 - (v) rules relating to access, parking, and loading that align with the QLDC Land development and Subdivision Code of Practice;
 - (vi) Code of Practice, relevant national standards, other legislation, best practice, and/ or common practice around NZ in order to avoid contradictory provisions to streamline processes wherever possible;
 - (vii) rules that enable public transport and Park and Ride facilities to be developed in appropriate locations and in an appropriate manner; and
 - (viii) an updated road classification (hierarchy) that reflects the current function of roads.
- 1.4. This report contains a number of technical terms and you are advised to consult the proposed chapter, which introduces definitions for many of these.

2. INTRODUCTION

- 2.1. Section 32 of the Act requires objectives in plan change proposals to be examined for their appropriateness in achieving the purpose of the Act, and the policies and methods of those proposals to be examined for their costs, benefits, efficiency, effectiveness and risk in achieving the objectives.
- 2.2. Transport activities can be an activity in their own right (e.g. a public transport facility) or are often an integral part of land use, subdivision, and development (e.g. the provision of onsite parking and access). In both instances, they can have adverse effects on the transport network, mobility options, landscape, nature conservation values and amenity values in both rural and urban locations that need to be managed.
- 2.3. The evaluation of the appropriateness of the Transport Chapter is based upon the following five issues
- (i) Issue 1 - Increasing road congestion and reduced liveability, amenity, and quality of living.
 - (ii) Issue 2 - Roads that are not laid out or designed in a manner that provide for all modes of transport and do not necessarily provide a quality of urban design appropriate to the location.
 - (iii) Issue 3 - The transport network and parking provisions prioritise travel by private vehicle with considerably less emphasis on alternative modes of travel.
 - (iv) Issue 4 - Localised congestion, safety, and amenity issues in discrete instances due to inadequate parking, access, and loading space being provided onsite.
 - (v) Issue 5 – In some instances, on-site parking requirements and zoning contribute to unaffordable housing through increased development costs and reduced developable area; and enable the dispersal of employment, commercial, and community activities.
- 2.4. This District Wide Transport Chapter applies to all land notified in Stage 1¹ of the Proposed District Plan on 26 August 2015, and all additional land notified in Stage 2. This land collectively forms the geographic area currently subject to Volume A of the District Plan. The District Wide Transport Chapter applies to all land identified as Stage 1 and Stage 2 land on the Planning Maps attached to the Stage 2 notification bundle.
- 2.5. For clarity, **Table 1** below identifies the land area (generally described by way of zone) and various components of the PDP that together comprise Volume A of the District Plan at Stage 2 of the District Plan review as it relates to the Transport Chapter (29). All other land within the District continues to fall into Volume B of the District Plan.

¹ With the exception of land formally withdrawn from the PDP (Plan Change 50 Queenstown Town Centre extension, Plan Change 41 Peninsula Bay North, Plan Change 45 Northlake Special Zone, Plan Change 46 Ballantyne Road Industrial and Residential extension).

Table 1. District Plan Volume A components, showing proposed new Stage 2 components related to the Transport Chapter.

Volume A of the PDP	
Stage 1 Proposed District Plan 26 August 2015	Stage 2 As it relates to the Transport Chapter only
Introduction	
1. Introduction 2. Definitions	<ul style="list-style-type: none"> • New Stage 2 definitions • Variation to Stage 1 Definitions Chapter 2, as related to Stage 2 Transport components.
Strategy	
3. Strategic Direction 4. Urban Development 5. Tangata Whenua 6. Landscapes	
Urban Environment	
7. Low Density Residential 8. Medium Density Residential 9. High Density Residential 10. Arrowtown Residential Historic Heritage Management Zone 11. Large Lot Residential 12. Queenstown Town Centre* (part withdrawn) 13. Wanaka Town Centre 14. Arrowtown Town Centre 15. Local Shopping Centres 16. Business Mixed Use Zone 17. Queenstown Airport Mixed Use Variation 1: Arrowtown Design Guidelines 2016	<ul style="list-style-type: none"> • Variation to Stage 1 Queenstown Town Centre
Rural Environment	
21. Rural Zone 22. Rural Residential and Lifestyle 23. Gibbston Character Zone	<ul style="list-style-type: none"> • Variation to Stage 1 Rural Zone
District Wide Matters	
26. Historic Heritage 27. Subdivision and Development 28. Natural Hazards 30. Energy and Utilities 32. Protected Trees 33. Indigenous Vegetation and Biodiversity 34. Wilding Exotic Trees 35. Temporary Activities and Relocated Buildings 36. Noise 37. Designations	<ul style="list-style-type: none"> • Stage 2 Transport Chapter 29.
Special Zones	
41. Jacks Point 42. Waterfall Park 43. Millbrook	

3. BACKGROUND

District Plan Review

- 3.1. The review of the Operative District Plan (ODP) is being undertaken in stages. Stage 1 commenced in April 2014 and was publicly notified on 26 August 2015. Hearings on Stage 1 components comprising ten individual hearing streams for 33 chapters, 1 variation² and three separate hearing streams for rezoning requests and mapping annotations³ were held from March 2016 to September 2017.
- 3.2. On 29 September 2016 the Council approved the commencement of Stage 2 of the review of the ODP. As part of the 29 September 2016 resolutions, the Council addressed what the plan outcome would be at the end of the partial review. It approved the separation of the District Plan into two volumes, Volume A and Volume B. Volume A (at the point in time of notification of Stage 2) consists of the Proposed District Plan chapters notified in Stages 1 and 2 of the proposed District Plan, which includes variations to Stage 1, and all the land as identified in the Planning Maps forming the Stage 2 notification bundle, as discussed above.
- 3.3. All other land currently forms Volume B of the District Plan. This includes zones that have not yet been reviewed and notified (i.e. Township Zone, Industrial A and B Zones, Rural Visitor Zone), land that has been withdrawn from the district plan review (i.e. the land subject to Plan Changes 46 - Ballantyne Road Industrial and Residential extensions, 50 - Queenstown Town Centre extension and 51 – Peninsula Bay North) and the Frankton Flats B Special Zone and the Remarkables Park Special Zone. All Volume B land is subject to the ODP with the exception that any land that is a 'road' by definition in the PDP and which traverses through Volume B land is subject to the provisions in Chapter 29 that relate to roads.
- 3.4. In summary, this Transport Chapter 29 will apply to:
- (i) Volume A – all zones and roads
 - (ii) Volume B – all roads, but not zones. Activities undertaken outside of roads in a Volume B zone are subject to the provisions of Volume B.

Transport

- 3.5. The Operative District Plan (ODP) transport provisions became operative in 2003. Other than the addition of provisions relating specifically to new zones that have been added to the District Plan since that time, the only district wide changes to the chapter related to residential and visitor accommodation carparking in the Low Density Residential and High Density Residential zones (plan change 8), and to access widths in relation to these zones (plan change 6). Both

² Variation 1 – Arrowtown Design Guidelines 2016

³ Ski Area Sub Zones, Upper Clutha Area and the Queenstown Area (excluding the Wakatipu Basin).

these plan changes became operative in 2009. In summary, the chapter has not been comprehensively reviewed for some 15 years.

Jurisdictional Matters

- 3.6. No decisions have been made on the Proposed District Plan 2015 (Stage 1 and Variation 1) at the time of notification of Stage 2, and therefore this Stage 2 Transport Chapter cannot anticipate what Panel recommendations and subsequently the Council's decision might be, in terms of notifying zone-specific standards. The chapter therefore refers to PDP chapters/zones as notified in Stage 1 and any statutory changes made since notification⁴.
- 3.7. Therefore, for instance, the removal of various definitions (which the transport chapter relies on) in the Council officers' post-hearing reply version of Chapter 2 Definitions has been disregarded and it has been assumed that those definitions will continue to exist in the PDP.
- 3.8. This is a consequence of the staged approach to the review, and can be addressed either through interested parties lodging a submission, or the Council itself lodging a submission on the Stage 2 Transport Chapter 29 to ensure the Stage 2 Transport Chapter 29 ultimately includes any necessary definitions or standards for any new zones or issues, included in the PDP by Council Stage 1 decisions. It is acknowledged that before any submission by Council on the Stage 2 components is lodged, it will need to be passed by a resolution of Council.
- 3.9. Although a decision on provisions is not yet available for Stage 1 of the review, the notified and reply versions of the provisions are indicative of council's strategic approach to the management of land use and development, and the achievement of Part 2 of the RMA.
- 3.10. The 'hierarchy' within the plan (established by the strategic chapters 3-6) means that the lower order zones and chapters need to achieve the higher order objectives and policies. The objectives subject to this s32 analysis for the Transport Chapter are considered to be the most appropriate way of achieving the purpose of the Act, also having regard to the Stage 1 provisions and the strategic hierarchy of the PDP.

4. PURPOSE OF THE REPORT

- 4.1. Section 32 of the Resource Management Act 1991 ('the Act' or 'the RMA') requires objectives in plan change proposals to be examined for their appropriateness in achieving the purpose of the Act, and the policies and methods of those proposals to be examined for their efficiency, effectiveness and risk in achieving the objectives (MFE, 2014). This report fulfils the obligations

⁴ For instance, Variation 1 Arrowtown Design Guidelines, withdrawal of land subject to PC 46, PC 50 and PC 51.

of the Council under section 32 of the Act. The analysis set out below (within sections 14 to 16) should be read together with the reports attached to and referred to in that evaluation, the Proposed Transport Chapter 29, and the various documents that are included in the PDP by reference in that chapter.

4.2. This report provides an analysis of the key issues, objectives and the policy response for the Transport chapter of the PDP under the following headings:

- an overview of the applicable **Statutory Policy Context** (Section 6);
- a description of the **Non-Statutory Context** (strategies, studies and community plans), which have informed the proposed provisions (Section 7);
- a description of the **Issues with the Operative District Plan (ODP)** and the **Resource Management Issues**, which provide the driver for the proposed provisions (Sections 8 and 9);
- A **level of detail** that corresponds to the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposal (Section 32(1)(c) of the RMA) (Section 10);
- an **Evaluation** against Section 32(1)(a) and Section 32(1)(b) of the Act (Sections 11 and 12), that is
 - Whether the objectives are the most appropriate way to achieve the RMA's purpose (Section 32(1)(a) of the RMA);
 - Whether the provisions (policies and methods) are the most appropriate way to achieve the objectives (Section 32(1)(b) of the RMA), including:
 - identifying other reasonably practicable options for achieving the objectives,
 - assessing the efficiency and effectiveness of the provisions in achieving the objectives; and
 - summarising the reasons for deciding on the provisions; and
- Consideration of **Risk** (Section 13).

5. CONSULTATION

5.1. The development of the Transport chapter has built on previous public consultation that was undertaken to develop many of the transport strategies and business cases identified in Appendix 1 of this report.

5.2. In addition:

- (i) a meeting was held with private sector traffic engineers to gauge their key concerns and gather comments and ideas for improvements;
- (ii) all transport related submissions on Stage 1 of the District Plan review were consolidated and considered;
- (iii) an 'all of council' internal project team was established and several meetings were held;
- (iv) meetings were held with New Zealand Transport Agency and the draft chapter provided to the Agency for comment;
- (v) written communication was sent to the Otago Regional Council; and

(vi) written communication was sent to iwi authorities.

- 5.3. The RMA was amended in September 2017 to require that Councils engage with iwi authorities on draft plans and policy statements prior to notification (schedule 1 clause 4A) and consider iwi authority advice in Section 32 evaluation reports. An introductory letter, followed by the transport provisions of the PDP were sent to iwi authorities in late 2017 and no comments or advice has been received at the time of finalising this S 32 evaluation report.

6. STATUTORY POLICY CONTEXT

Resource Management Act 1991 (RMA)

- 6.1. Section 5 sets out the purpose of the RMA, which requires an integrated planning approach and direction to promote the sustainable management of natural and physical resources. Guidance as to how the overall sustainable management purpose is to be achieved is provided in the other sections, including sections 6, 7 and 8 of Part 2 of the RMA:

5 Purpose

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*

(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

- 6.2. Section 6 of the RMA sets out a number of matters of national importance. Insofar as transport activities can occur in any location in the district, all of Section 6 is potentially applicable depending on the location of the transport activity taking place.
- 6.3. The assessment contained within this report considers the proposed provisions in the context of advancing the purpose of the RMA to achieve the sustainable management of natural and physical resources.
- 6.4. The Queenstown Lakes District is one of the fastest growing areas in New Zealand and recent estimates (refer to more detail in the Stage 1 Strategic Directions Section 32 report) predict that the District will continue to experience significant population growth over the coming years, off the back of strong forecasted growth in visitors, migration into the district and natural population increases. A strategic policy approach is essential to manage future growth pressures and the management of the transport system is important to enable growth while providing for positive effects and mitigating adverse effects.

- 6.5. Transportation is a key element of all activities in that almost all use and development of natural resources involves transporting people, goods, and services from one place to another which, in turn, requires that vehicles then need to be parked, moored, or otherwise stored either short or long term along the network. Providing for a safe and efficient transport network which encourages cycling, walking, and public transport as well as private car travel is a key element in enabling people to provide for their social, economic, and cultural well-being and for their health and safety in a sustainable manner.
- 6.6. The transportation of people, goods, and services; the need to enable the provision of appropriate space to park and manoeuvre vehicles on both private and public land; and the form and function of the road network and active and public transport all have distinct effects on the environment. Transportation is a key driver of the District's economy and a key determinant of the spatial layout, density, urban design quality, and economic efficiency/ performance of the District. The transport provisions of the District Plan are a key determinant of the development capacity, the feasibility of development, and how developments and subdivisions are ultimately designed. As such, existing inefficiencies with the existing transport network and a heavy reliance on private car travel within the district are key resource management issues, which need to be better addressed through the District Plan in order to achieve the purpose of the RMA.
- 6.7. Section 7 lists "other matters" that Council shall have particular regard to. Those that are most relevant to the Transport Chapter are:
- (b) the efficient use and development of natural and physical resources:*
 - (c) the maintenance and enhancement of amenity values:*
 - (f) maintenance and enhancement of the quality of the environment:*
 - (g) any finite characteristics of natural and physical resources:*
 - (i) the effects of climate change:*
- 6.8. Section 8 requires that Council take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). The principles as they relate to resource management derive from Te Tiriti o Waitangi itself and from resource management case law and practice. They can be summarised as follows:
- (a) That there must be active protection of the partnership between the two parties;
 - (b) That there is an obligation to act with reasonableness and good faith, with both parties being prepared to compromise;

- (c) That dialogue and consultation will be the main way in which to give effect to the three principles outlined above.

6.9. The drafting of the Transport chapter has taken Section 8 into account.

6.10. Section 31 of the RMA states (relevant areas underlined to emphasise the provisions relevant to this evaluation):

31 Functions of territorial authorities under this Act

(1) Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:

(a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district:

(aa) the establishment, implementation, and review of objectives, policies, and methods to ensure that there is sufficient development capacity in respect of housing and business land to meet the expected demands of the district:

(b) the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of—

(i) the avoidance or mitigation of natural hazards; and

(ii) the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances; and

(iia) the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land:

(iii) the maintenance of indigenous biological diversity:

(c) [Repealed]

(d) the control of the emission of noise and the mitigation of the effects of noise:

(e) the control of any actual or potential effects of activities in relation to the surface of water in rivers and lakes:

(f) any other functions specified in this Act.

(2) The methods used to carry out any functions under subsection (1) may include the control of subdivision

6.11. Consistent with the intent of Section 31, the proposed provisions of the Transport Chapter enable an integrated approach to the management of transport-related issues and effects at the time of subdivision and development.

6.12. The Council's management of transport in proposed Chapter 29 is integrated with and complementary to the Otago Regional Council's functions pursuant to section 30 of the Act, associated with the following components of section 30.

Local Government Act 2002

6.13. Sections 14(c), (g) and (h) of the Local Government Act 2002 (**LGA**) are also of relevance in terms of policy development and decision making:

- (c) *when making a decision, a local authority should take account of—*
 - (i) *the diversity of the community, and the community's interests, within its district or region; and*
 - (ii) *the interests of future as well as current communities; and*
 - (iii) *the likely impact of any decision on the interests referred to in subparagraphs (i) and (ii):*
- (g) *a local authority should ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including by planning effectively for the future management of its assets; and*
- (h) *in taking a sustainable development approach, a local authority should take into account—*
 - (i) *the social, economic, and cultural interests of people and communities; and*
 - (ii) *the need to maintain and enhance the quality of the environment; and*
 - (iii) *the reasonably foreseeable needs of future generations*

6.14. As with Part II of the RMA, the provisions emphasise a strong intergenerational approach, considering not only current environments, communities and residents but also those of the future. They demand a future focussed policy approach, balanced with considering current needs and interests. Like the RMA, the provisions also emphasise the need to take into account social, economic and cultural matters in addition to environmental concerns.

6.15. Section 14 of the LGA is relevant in that in the context of determining appropriate transportation provisions, it requires that, the Council:

- take account of whether the provisions provide transport choices that are safe, efficient, and affordable for the whole community;
- take account of how the provisions are likely to impact on the social, economic, and cultural interests of the wider community and future generations; and
- manage the efficient and effective use of its existing and future roading, parking areas, and foreshore/ water-based transport facilities; now and into the future.

6.16. Notably, public infrastructure planning and funding (including transport provision) is managed under both the LGA and Land Transport Management Act (2003) (**LTMA**).

Relevant National Policy Statements

6.17. When preparing district plans, district councils must give effect to any National Policy Statement (NPS). Government has produced the following five National Policy Statements that are in effect:

- National Policy Statement on Urban Development Capacity 2016;
- National Policy Statement for Freshwater Management 2014;
- National Policy Statement for Renewable Electricity Generation 2011;
- National Policy Statement on Electricity Transmission 2008; and
- New Zealand Coastal Policy Statement 2010.

- 6.18. The National Policy Statements that are of most relevance to transport are the National Policy Statement on Urban Development Capacity 2016 (**NPS-UDC**).
- 6.19. The NPSUDC contains several objectives that are relevant to transport provisions in district plans. First, it directs decision-makers to plan for “urban environments that have sufficient opportunities for the development of housing and business land to meet demand, and which provide choices...” (OA2) and “urban environments that, over time, develop and change in response to the changing needs of people and communities and future generations.” (OA3).
- 6.20. These objectives highlight the importance of providing sufficient development capacity to meet future demand, including demands for change. If transport provisions limit development opportunities, they may conflict with this objective.
- 6.21. The NPSUDC also directs decision-makers to plan for “urban environments where land use, development, development infrastructure and other infrastructure are integrated with each other” (OD1). This objective highlights the importance of ensuring that land use and development integrates with the wider transport system and that transport provisions provide for the development of new infrastructure to support development.
- 6.22. The proposed provisions relating to transport are considered to give effect to NPSUDC objectives and associated policies Through providing a framework that ensures that land use and infrastructure will be better integrated and that future planning for the transportation network takes account of and facilitates urban development.

Resource Management National Environmental Standards Regulations (NES)

- 6.23. National Environmental Standards (NES) are regulations made under the RMA that prescribe standards for specific activities. An NES overrides any district plan, unless otherwise stated within the NES. Section 44(7) of the RMA states that every local authority and consent authority must observe national environmental standards.
- 6.24. Section 43A (5) of the RMA states:
- (5) *If a national environmental standard allows an activity and states that a resource consent is not required for the activity, or states that an activity is a permitted activity, the following provisions apply to plans and proposed plans:*
 - (a) *a plan or proposed plan may state that the activity is a permitted activity on the terms or conditions specified in the plan; and*
 - (b) *the terms or conditions specified in the plan may deal only with effects of the activity that are different from those dealt with in the terms or conditions specified in the standard; and*
 - (c) *if a plan’s terms or conditions deal with effects of the activity that are the same as those dealt with in the terms or conditions specified in the standard, the terms or conditions in the standard prevail.*
- 6.25. There are currently 5 NES in effect:

- National Environmental Standards for Air Quality
- National Environmental Standard for Sources of Drinking Water
- National Environmental Standards for Telecommunication Facilities
- National Environmental Standards for Electricity Transmission Activities
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

6.26. In addition, the NES on Plantation Forestry has recently been developed and comes into effect on 1 May 2018. Amendments to the NES for Assessing and Managing Contaminants in Soil are also due to be gazetted in 2018.

6.27. To the extent that telecommunication facilities are often located within roads, the NES is of some, although minor, relevance to the transport chapter but given that the rules relating to these facilities sit wholly within the Stage 1 Energy and Utilities Chapter 30 of the PDP, it is not necessary to discuss it further in this S32 evaluation.

Iwi Management Plans

6.28. When preparing or changing a district plan, Section 74(2A)(a) of the RMA states that Councils must take into account any relevant planning document recognised by an iwi authority and lodged with the territorial authority, to the extent that its content has a bearing on the resource management issues of the district.

The Cry of the People, Te Tangi a Tauria: Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 (MNRMP 2008)

6.29. Relevant to transport issues:

- Section 3.1.1 contains policies in relation to climate change;
- Section 3.4.4 contains policies relating to tourism and the need to consider Transport options for managing visitor and the need for a coordinated approach to infrastructure
- Section 3.4.8 identifies the increased pressure to improve transport networks (land and air) throughout high country and foothill landscapes for development purposes as a tourism related issue and a policy that timely consultation occurs between tangata whenua and developers in relation to such matters;
- Section 3.5.7 relates to Subdivision and Development and includes policies requiring that subdivision proposals provide evidence of long term planning and cumulative effects assessment, and recommending that developers consult with Ngāi Tahu ki Murihiku with regard to providing Ngāi Tahu names for new roads and areas created by subdivision.

Kāi Tahu ki Otago Natural Resource Management Plan 2005 (KTKO NRMP 2005)

- 6.30. Relevant to transport issues, Part 5.6.2 relating to Cultural Landscape identifies the “extension and maintenance of infrastructure (e.g. transport, telecommunications)” as a general issue that can affect cultural landscapes. Other than that, it does not contain any objectives or policies that relate directly to the issue of transport.
- 6.31. The proposed Transport Chapter is consistent with, and gives effect to, the relevant operative RPS provisions.

Regional Policy Statements

Operative Regional Policy Statement 1998

- 6.32. Section 74 of the Act requires that a district plan prepared by a territorial authority must “give effect to” any operative Regional Policy Statement. The operative Otago Regional Policy Statement 1998 (**RPS**) is the relevant regional policy statement to be given effect to within the District Plan.
- 6.33. The RPS includes Policy 9.5.3⁵ and Policy 12.5.3⁶ to promote and encourage the sustainable management of Otago’s transport network and to promote improved energy efficiency through encouraging energy efficient transport modes in Otago.
- 6.34. The RPS also includes policy 9.5.2⁷ which, while not directly related to transport, is relevant in that it promotes and encourages the efficient development and use of Otago’s infrastructure, which would include its roading network.
- 6.35. The proposed Transport Chapter is consistent with, and gives effect to, the relevant operative RPS provisions.

Proposed Regional Policy Statement 2015

⁵ “Promote and encourage the sustainable management of Otago’s transport network through:

- (a) Promoting the use of fuel efficient modes of transport; and
- (b) Encouraging a reduction in the use of fuels which produce emissions harmful to the environment; and
- (c) Promoting a safer transport system.”

⁶ “Promote improved energy efficiency within Otago through encouraging energy efficient transport modes in Otago”.

⁷ “To promote and encourage efficiency in the development and use of Otago’s infrastructure, which would include its roading network.

- (a) Encouraging development that maximises the use of existing infrastructure while recognising the need for more appropriate technology; and
- (b) Promoting co-ordination amongst network utility operators in the provision and maintenance of infrastructure; and
- (c) Encouraging a reduction in the use of non-renewable resources while promoting the use of renewable resources in the construction, development and use of infrastructure; and
- (d) Avoiding or mitigating the adverse effects of subdivision, use and development of land on the safety and efficiency of regional infrastructure.”

- 6.36. Section 74(2) of the RMA requires that a district plan prepared by a territorial authority shall "have regard to" any proposed regional policy statement.
- 6.37. The Proposed Otago Regional Policy Statement (**PRPS**) was notified for public submissions on 23 May 2015, and decisions on submissions were released on 1 October 2016. The majority of the provisions of the Decisions Version have been appealed and mediation is currently taking place. Accordingly, limited weight can be provided to the Decisions Version of the PRPS at this time, however it is unlikely that this will be the case when decisions on these transport provisions are made. The provisions of PRPS are relevant in highlighting the direction given to local authorities managing the potential adverse effects relating to transport. The following is based on the PRPS Decision version: 1 October 2016.
- 6.38. Objective 4.4 (sustainability of energy supplies to Otago's communities) includes Policy 4.4.6. This policy is to enable energy efficient and sustainable transport through encouraging compact and well integrated urban areas; well-connected integrated transport infrastructure in urban areas; prioritising walking, cycling, and public transport, where appropriate; having high design standards for pedestrian and cyclist safety and amenity; and enabling the development or upgrade of transport infrastructure and associated facilities.
- 6.39. Objective 4.5 (Urban growth and development) includes policy 4.5.1. This policy is to manage urban growth and development in a strategic and co-ordinated way by, amongst other things, coordinating urban growth and development and the extension of urban areas with relevant infrastructure development programmes; providing infrastructure in an efficient and effective way; ensuring efficient use of land; and giving effect to the principles of good urban design. Relevantly, the principles of good urban design (cited in schedule 5 of the **PRPS**) include transport networks that are safe, legible, attractive and well connected; the impact of design on people's health; providing for public transport, roading, cycling and walking networks that are integrated with each other and the land uses they serve; prioritising walking, cycling and public transport; and maximising pedestrian connectivity.
- 6.40. These objectives and policies are to be given effect to by a range of methods including via District Plans (Method 4.1). None of the more detailed methods specified in the **PRPS** are relevant to the transport chapter.
- 6.41. Regard has been had to the PRPS and, to the extent it is relevant, the proposed Transport Chapter is consistent with it.

Regional Plans

Otago Southland Regional Land Transport Plans 2015-2021

- 6.42. The Otago Regional Land Transport Plan 2015–2021 (combined with Southland’s Plan) sets out how the local authorities and the NZ Transport Agency (**NZTA**) intend to achieve their vision for transport in the future through funding and providing transport services and infrastructure. The plan sets out objectives and policies⁸ aimed at ensuring the region has a transport system that delivers appropriate levels of service, minimises congestion, provides active transport and public transport that are affordable and appropriate to function, and supports a choice of safe modes and the integration of these modes.
- 6.43. The combined plan then lists and prioritises all the activities and projects recommended by the Otago and Southland Regional Transport Committees (the RTCs) for funding from the National Land Transport Fund (NLTF) administered by the NZ Transport Agency (NZTA). Projects include transport planning, physical projects and walking, cycling, and public transport improvements and for each project, a cost, description, and reason for recommended priority are provided.
- 6.44. The technical note entitled “National and Regional Policy Context” attached to this S32 report as **Appendix 2** provides more detail on this Plan.

Regional Public Transport Plan: Otago 2014, including Addendum: Wakatipu Basin – May 2017

- 6.45. The Regional Public Transport Plan: Otago 2014 and its addendum Wakatipu Basin 2017 (**RPTP**) outline the current public transport situation in the Otago region, and the strategic direction and objectives for public transport in the region, and the programme of projects to achieve the objectives. The **RPTP** outlines a fundamental shift in the approach to public transport services in the region, anticipating more certainty over routes, reduced travel times, more regular frequencies, the application of national standards for buses, and simplification of the fare structure. The technical note entitled “National and Regional Policy Context” attached to this S 32 report as **Appendix 2** provides more detail on this.
- 6.46. In summary, the proposed Transport Chapter is consistent with, and gives effect to these regional plans.

Notified Proposed District Plan (PDP) 26 August 2015

- 6.47. The following objectives and policies of Stage 1 of the notified PDP (Part 2 Strategic) are relevant to transport, and the PDP Transport Chapter needs to take these into account as a means to achieve the higher order objectives and policies of the plan (in addition to Part 2).

⁸ Objectives 2.1, 2.2, 2.3, 4.1, 4.2, 4.3, and Policies 2.11, 2.19, 2.22, 2.23, 4.1, 4.2, 4.3, 4.10 - 4.18, and Policy 4.26

Strategic Direction Chapter 3

Objective 3.2.2.1 Ensure urban development occurs in a logical manner:

- **to promote a compact, well designed and integrated urban form;**
- **to manage the cost of Council infrastructure; and**
- **to protect the District's rural landscapes from sporadic and sprawling development.**

Policies

...

3.2.2.1.3 Manage the form of urban development within the UGBs ensuring:

- *Connectivity and integration with existing urban development;*
- *Sustainable provision of Council infrastructure; and*
- *Facilitation of an efficient transport network, with particular regard to integration with public and active transport systems*

3.2.2.1.4 Encourage a higher density of residential development in locations close to town centres, local shopping zones, activity centres, public transport routes and non-vehicular trails

Objective 3.2.4.8 - Respond positively to Climate Change.

Policies

3.2.4.8.1 Concentrate development within existing urban areas, promoting higher density development that is more energy efficient and supports public transport, to limit increases in greenhouse gas emissions in the District.

6.48. The Transport Chapter achieves these objectives and policies by providing more detailed objectives and policies, together with methods, that are well aligned to Strategic Directions of the Stage 1 PDP, as notified.

Urban Development Chapter 4:

Objective 4.2.1 - Urban development is coordinated with infrastructure and services and is undertaken in a manner that protects the environment, rural amenity and outstanding natural landscapes and features.

4.2.1.3 Encourage a higher density of residential development in locations that have convenient access to public transport routes, cycleways or are in close proximity to community and education facilities.

4.2.1.4 Development enhances connections to public recreation facilities, reserves, open space and active transport networks

Objective 4.2.3 – Within Urban Growth Boundaries, provide for a compact and integrated urban form that limits the lateral spread of urban areas, and maximises the efficiency of infrastructure operation and provision.

Policies

4.2.3.1 Provide for a compact urban form that utilises land and infrastructure in an efficient and sustainable manner, ensuring:

- *connectivity and integration;*
- *the sustainable use of public infrastructure;*
- *convenient linkages to the public and active transport network; and*

- *housing development does not compromise opportunities for commercial or community facilities in close proximity to centres.*

4.2.3.2 *Enable an increased density of residential development in close proximity to town centres, public transport routes, community and education facilities.*

...

4.2.3.4 *Urban development occurs in locations that are adequately serviced by existing public infrastructure, or where infrastructure can be efficiently upgraded.*

4.2.3.5 *For urban centres where Urban Growth boundaries apply, new public infrastructure networks are limited exclusively to land within defined Urban Growth boundaries.*

4.2.3.6 *Development improves connections to recreational and community facilities, and enhances the amenity and vibrancy of urban areas*

...

Queenstown

4.2.4 Objective - Manage the scale and location of urban growth in the Queenstown Urban Growth Boundary.

Policies

4.2.4.1 *Limit the spatial growth of Queenstown so that:*

...

- *residential settlements become better connected through the coordinated delivery of infrastructure and community facilities*
- *transport networks are integrated and the viability of public and active transport is improved*
- *the provision of infrastructure occurs in a logical and sequenced manner*

4.2.4.2 *Ensure that development within the Queenstown Urban Growth Boundary:*

...

- *provides a diverse supply of residential development to cater for the needs of residents and visitors*
- *provides increased density in locations close to key public transport routes and with convenient access to the Queenstown Town Centre*
- *Provides infill development as a means to address future housing demand*
- *Maximises the efficiency of existing infrastructure networks and avoids expansion of networks before it is needed for urban development*
- *Supports the coordinated planning for transport, public open space, walkways and cycleways and community facilities*
- *Does not diminish the qualities of significant landscape features*

6.49. The PDP encourages consolidation of urban growth within the urban growth boundaries and existing settlements and recognises that, integral to this is the sustainable, efficient, logical, and sequenced use and development of infrastructure; increased density; connectivity and integration; convenient linkages and connections; integrated transport networks; and the provision of infrastructure.

6.50. The Transport Chapter achieves these objectives and policies by providing more detailed objectives and policies, together with methods, that are well aligned to urban development chapter of the Stage 1 PDP, as notified.

Tangata Whenua Chapter 5

Objective 5.4.3 *Protect Ngāi Tahu taonga species and related habitats.*

Policies

5.4.3.1 *Where adverse effects on taonga species and habitats of significance to Ngāi Tahu cannot be avoided, remedied or mitigated, consider environmental compensation as an alternative.*

Objective 5.4.5 *Wāhi tūpuna and all their components are appropriately managed and protected.*

Policies

5.4.5.1 *Identify wāhi tūpuna and all their components on the District Plan maps and protect them from the adverse effects of subdivision, use and development.*

5.4.5.2 *Identify threats to wāhi tūpuna and their components in this District Plan.*

5.4.5.3 *Enable Ngāi Tahu to provide for its contemporary uses and associations with wāhi tūpuna.*

5.4.5.4 *Avoid where practicable, adverse effects on the relationship between Ngāi Tahu and the wāhi tūpuna.*

6.51. The Transport Chapter achieves these objectives and policies by imposing limitations on earthworks within roads and requiring accidental discovery protocols to be followed within areas that are of significance to Māori. Also, the Transport Chapter is structured so that any Sites of Significance to Maori and associated rules that are added to Chapter 26 (historic heritage) through subsequent stages of the PDP will apply to roads, in the same way they will to zoned land.

Landscapes Chapter 6

Objective 6.3.3 - *Protect, maintain or enhance the district's Outstanding Natural Features (ONF).*

Policies

6.3.3.1 *Avoid subdivision and development on Outstanding Natural Features that does not protect, maintain or enhance Outstanding Natural Features.*

6.3.3.2 *Ensure that subdivision and development in the Outstanding Natural Landscapes and Rural Landscapes adjacent to Outstanding Natural Features would not degrade the landscape quality, character and visual amenity of Outstanding Natural Features.*

Objective 6.3.4 - *Protect, maintain or enhance the District's Outstanding Natural Landscapes (ONL).*

Policies

6.3.4.1 *Avoid subdivision and development that would degrade the important qualities of the landscape character and amenity, particularly where there is no or little capacity to absorb change.*

Objective 6.3.5 - *Ensure subdivision and development does not degrade landscape character and diminish visual amenity values of the Rural Landscapes (RLC).*

Policies

6.3.5.1 *Allow subdivision and development only where it will not degrade landscape quality or character, or diminish the visual amenity values identified for any Rural Landscape.*

6.52. The landscape classifications, and therefore the above objectives and policies, will apply to transport infrastructure activities that occur within roads in the same way that they apply to zoned land. As such, while activity on a road in the rural area will not be subject to the rules of the rural chapter, any buildings located within roads associated with public transport facilities or public toilets will be subject to the rules in the rural chapter and any earthworks, utilities, or signs will be subject to those respective rules. Wherever consent is required and Council retains control or discretion over landscape effects, then the Part 6 objectives and policies will apply. All public transport facilities, park and ride, or other transport-related activities on zoned land will be subject to restricted discretionary activity consent/ the zone provisions and also to the Part 6 objectives and policies. As such, the Transport Chapter will support the management of the actual and potential adverse effects of transport activities where these could affect the District's landscape values.

Council Reply versions following hearings on submissions

6.53. Following the consideration of submissions and hearings, Council filed recommended reply versions of the PDP chapters, where changes were supported by Council officers appearing at the hearings. While these versions do not have any statutory status, they are important in the context of whether the Council's position on a matter has shifted from the notified PDP.

6.54. On the whole, it is considered that the reply provisions have not made any fundamental changes, which would affect the general approach of the proposed Transport Chapter. However, the reply version recommended that the following notified definitions be removed from the PDP:

- Backpacker Hostel
- Balcony
- Bar (Hotel or Tavern)
- Elderly Persons Housing Unit
- Health Care Facility
- Place of Assembly
- Place of Entertainment
- Rural Selling Place

6.55. In the event that the Council's decision on the Definitions Chapter (2) deletes these definitions from the Definitions Chapter (2) in accordance with Council's position and evidence, then the Transport Chapter may need to be amended and the definitions reinstated in order to avoid interpretation difficulties. If necessary, this will need to be undertaken either via submission or a Variation.

Relationship with other stage 1 and 2 district wide chapters

- 6.56. As it would apply to roads, the stage 1 Noise Chapter (36) permits sound from vehicles on public roads, imposes a noise limit on telecommunications within roads, requires construction noise to be in accordance with the relevant NZ Standard, and requires that vibration levels not exceed the relevant guideline with regard to noise. While the proposed chapter 29 provisions do not impose noise limits on activities other than construction within the road, no other permitted or controlled activities pose any significant threat from a noise perspective. As such, the rules as notified in the PDP are considered appropriate.
- 6.57. As it would apply to roads, the Signs Chapter (31) notified as part of Stage 2 of the PDP proposes a rule (31.5.23) that lists signs that are permitted on or above roads (with breaches to the rule requiring discretionary activity resource consent). In addition, proposed Rule 31.5.13, (which identifies off site signs as a discretionary activity), and proposed Rule 31.5.14, (which identifies hoardings as a prohibited activity), would also apply to roads. The proposed Signs Chapter also highlights that signs on Council land (including roads), irrespective of whether or not resource consent is required, will require approval of the Council as landowner. The proposed Signs Chapter is considered to manage any effects of signs on and above roads in an appropriate manner.
- 6.58. As it would apply to roads, the Earthworks Chapter (25) notified as part of Stage 2 of the PDP permits unlimited volumes and area of earthworks within roads (proposed rule 22.5.7), except where the road is identified as being within an Outstanding Natural Feature as defined on the Planning Maps. Earthworks within roads are also subject to the standards for earthworks (i.e. maximum area of earthworks (Rule 22.5.11) and accidental discovery of archaeological material (Rule 25.5.15), except Rules 25.5.16 and 25.5.17 height of cut and fill, as they apply to roads. The proposed Earthworks Chapter is considered to manage any effects of signs on and above roads in an appropriate manner.
- 6.59. As it would apply to roads, the stage 1 Temporary Activities and Relocated Buildings Chapter (35) permits any temporary filming without limitation and temporary events up to a certain scale. Consistent with events located on zoned land, such events need not comply with noise limits, although on zoned land, they need to comply with night time noise limits in most instances. Given the existing processes in place to control effects of these two activities on roads, the above-mentioned Signs Chapter rule 31.5.23(d) permitting signs associated with these activities, and the importance of both activities to the economic and social and cultural wellbeing of the community, the approach is considered to be appropriate.
- 6.60. As it would apply to roads, the stage 1 Utilities and Renewable Energy chapter (30) permits or imposes controls on utilities that are likely to occur on roads, including applying additional constraints on ONLs and other sensitive areas. The Utilities and Renewable Energy chapter is considered suitable to manage any effects of utilities on roads in an appropriate manner.

- 6.61. As it would apply to roads, the stage 1 Heritage chapter (26) contains heritage rules, heritage precincts, and heritage landscape overlays and the wording does not require there to be an underlying zone. E.g. heritage items exist on roads, and heritage precincts and landscapes span the roads. Many listed historic heritage items, such as bridges, are within roads. As such, it is considered that the chapter appropriately manages any effects that activities within roads may have on heritage values in an appropriate manner.
- 6.62. As it would apply to roads, the stage 1 Natural Hazards chapter (28) establishes objectives and policies, which will apply to all parts of the District, including roads, and irrespective of whether a zone applies.
- 6.63. As it would apply to roads, the Wilding Exotic Trees Chapter (34) covers all land irrespective of whether it is zoned. This is appropriate.
- 6.64. As it would apply to roads, the Indigenous Vegetation and Biodiversity Chapter (33) covers all land irrespective of whether the land is zoned and specifically references 'roads'. This is appropriate.
- 6.65. As it would apply to roads, the Protected Trees Chapter (32) provides objectives, policies, and rules in relation to scheduled protected trees, scheduled character trees in the Arrowtown Residential Historic Management Zone, and unscheduled trees on streets within the Arrowtown Residential Historic Management Zone. This is appropriate.

7. NON-STATUTORY CONTEXT

- 7.1. Many Councils throughout the country, along with NZTA⁹ have developed guidelines on Integrated Transport Assessments, street and road designs, and the design of public transport facilities, which are intended to supplement the provisions in the District Plan and improve their effectiveness. Many also have active and public transport network plans, which identify the key routes such that this can be referred to when deciding on the most appropriate design for a new or existing road; whether to install new public transport infrastructure as part of a development; and whether a development needs to contribute cycle and walking paths and the location and form of those.
- 7.2. Section 3 of the Council's Land Development and Subdivision Code of Practice 2015 (**Code of Practice/ COP**) guides the design of roads and accesses based on the anticipated function and traffic volumes and this is referred to in both the proposed Transport Chapter (29) and

⁹ <http://www.nzta.govt.nz/assets/resources/research/reports/422/docs/422.pdf>

Subdivision Chapter (27). However, it lacks any detailed guidance on the design and location of public transport or cycling infrastructure and the types of design measures that would assist in achieving the target speeds outlined in the Code of Practice. The Code of Practice is currently being updated but, at this stage, it is not known whether it will provide further detailed guidance on these matters.

- 7.3. The QLDC Subdivision Design Guidelines (2015) - A design guide for subdivision in the urban zones¹⁰ provides guidance on how neighbourhoods can be structured so the layout of streets, lots, parks and connections achieve maximum benefit to the developer and the wider community. It includes sections on transport and connections and street layout and orientation, which discuss the importance of encouraging walkable and cycle friendly neighbourhoods, creating direct connections between roads and pathways, minimising cul-de-sacs, safe roads through design, avoiding cul-de-sacs with no pathway connections, small block sizes, efficient walking and cycling connections to existing and planned public transport; and providing for future public transport.
- 7.4. The use of Active Network Plans and Public Transport Network Plans is referred to in the proposed Transport Chapter as a tool to guide the provision of public transport, cycling, and walking infrastructure on the basis that, while these do not currently exist, the Council has committed to commencing the preparation of both types of Network Plans in the foreseeable future.
- 7.5. The issue of providing more non-statutory guidance is further discussed in the Technical Note entitled “Developer Provision of Public Transport and Active Modes Infrastructure” attached as **Appendix 2** to this S 32 Report.

8. ISSUES WITH THE OPERATIVE DISTRICT PLAN (ODP)

While there is no presumption that the ODP provisions are the most appropriate, it is useful to briefly consider the known problems with them in order to determine whether they are, indeed the most appropriate means of achieving the purpose of the Act and the objectives of the District Plan

- 8.1. The District Plan Monitoring Report Section 14: Transport (2012) identified the following general issues with the operative Transport Chapter:
 - (i) the rules are not efficient or effective;
 - (ii) the provisions do not align with the Council’s Code of Practice, NZ standards, or best practice;

¹⁰<http://www.qldc.govt.nz/assets/Uploads/Planning/District-Plan/Incorporation-of-Documents-by-Reference/QLDC-Subdivision-Design-Guidelines-May15.pdf>

- (iii) the provisions do not align with the Council's transportation strategies, which focus on encouraging an integrated transportation network that caters for cycling, walking, public transport, and private vehicles;
- (iv) many of the objectives and policies could be relocated to the district wide/ strategic chapter;
- (v) other than for the Three Parks Zone and the Frankton Flats Zone, there are no provisions that relate to travel demand management (TDM), bicycle parking, end of trip facilities, or specifically in relation to public transport;
- (vi) the structure of the chapter could be amended to only include district-wide provisions, with zone-specific rules moved to the zone chapter;
- (vii) there are issues with some specific parking provisions, including the Frankton industrial zone parking ratio, the manner in which visitor accommodation parking ratios are interpreted (for dual key visitor accommodation and in relation to coach parking for visitor accommodation activities for example);
- (viii) minor practical issues with the provisions relating to the design of access points, particularly in relation to shared access point, off street manoeuvring space, vehicle crossings, pedestrian safety within car parking areas, surfaces used on steeper gradients, and the design and provision of street lighting;
- (ix) the Road Hierarchy and Traffic Design Standards need to be updated; and
- (x) most roads are not listed as designations and consideration should be given to including a reference which confirms a blanket approach to road designations.

8.2. In summary, on the basis of the above report and further work undertaken as part of this review (as outlined throughout this s32 analysis), the operative Transport Chapter is not considered to be the most appropriate way of achieving the purpose of the RMA.

9. RESOURCE MANAGEMENT ISSUES

Introduction

9.1. The preceding discussion has identified that transport activities are an integral component of land use and development. It is also clear that the actual and potential adverse effects of transport need to be managed in order to ensure that sustainable management of natural and physical resources are promoted.

9.2. The following key issues have been identified as the central themes associated with transport effects in the Queenstown Lakes District. While the issues are more acutely experienced in the Queenstown/ Frankton area than in Wanaka and Arrowtown, for the most part, the issues are considered to be district wide, as if they are not addressed now they will manifest or worsen in some or all of those places within the life of the District Plan. For example, Wanaka also

experiences significant traffic and parking congestion on peak days and a growing urban area requires future proofing of the transport network.

9.3. Many of the issues identified below are also identified in some or all of the following Council documents:

- . Frankton Business Case (2017).
- . Queenstown Town Centre Business Case (2017).
- . Wakatipu Public Transport Programme Business Case (2017)
- . Queenstown Integrated Transport Programme Business Case (2017)

Key Issues

Issue 1 - Increasing road congestion and reduced liveability, amenity, and quality of living

9.4. Significant growth in visitors, residents, and vehicles combined with a heavy reliance on travelling by private vehicles is increasing road congestion, which is affecting trip reliability and the efficiency of the road network, while reducing amenity (especially in the Town Centres). Conflicting demands between pedestrian, cyclists and vehicles in a physically constrained area are degrading the Queenstown Town Centre experience. This is affecting the liveability and attractiveness of the area, particularly around Frankton and the Queenstown Town Centre and the economic wellbeing of the community.

9.5. There is limited opportunity to increase capacity on Frankton Road due to physical constraints which prevent adding additional lanes along much of the route and due to the large number of driveways and connector roads along the route.

9.6. Wanaka's roads are congested in peak times, particularly within and around the Town Centre.

Issue 2 - Roads that are not laid out or designed in a manner that provide for all modes of transport and do not necessarily provide a quality of urban design appropriate to the location

9.7. With the exception of a small number of streets in the Town Centres, space within existing road corridors is almost entirely allocated to the movement and parking of private vehicles. There are currently no priority lanes for public transport, no dedicated on-road cycle lanes, and often footpaths are narrow and/ or are only on one side of the road, and are poorly connected. This is one of the reasons for the communities' current common practice of travelling by car in preference to using other modes of travel. The provisions of the transport chapter can require or encourage changes to the current network design which can in turn support changes in behaviour to other modes of travel.

9.8. Very often, new roads are not laid out or designed in a manner that enables them to be serviced efficiently by public transport, or which enables people to easily walk or cycle within or

beyond the immediate area. They have previously been allowed to include unconnected streets / cul-de-sacs which do not enable an area to be serviced efficiently by buses (or refuse trucks or other heavy vehicles) and which reduce the walkability and safety of the area. Such subdivisions or large scale developments have not been required to provide the infrastructure or, at times, even the physical space to support walking, cycling and public transport in the future, which will make it considerably more difficult for people to choose these modes in the future.

- 9.9. Wanaka is growing rapidly and it is important that new and existing roads provide a well-connected roading network that is designed in a manner that future proofs them for all modes of transport, regardless of whether a public transport system exists at this point in time.

Issue 3 - The transport network and parking provisions prioritise travel by private vehicle with considerably less emphasis on alternative modes of travel

- 9.10. Travelling by private vehicles continues to be the predominant mode of travel throughout the district. While an affordable and efficient public transport system is planned to commence servicing the wider Queenstown and Arrowtown areas in November 2017, there is currently a costly, low frequency public transport service operating in these areas and no public transport service in Wanaka. This has contributed to relatively low uptake of public transport. Furthermore, with the exception of those living or staying within easy walking distance of the Town Centres, relatively low numbers of people commute by foot or bicycle.

- 9.11. The existing car-oriented transport system, together with Town Centre parking charges that are low relative to public transport fares and free and abundant parking at other key destinations, further inadvertently encourages private vehicle travel. Requiring a relatively high number of parking spaces to be provided on residential sites also contributes to high car ownership rates. The lack of an efficient and affordable public transport system or safe and well linked cycle and walking networks also plays an important role in how people are choosing to travel. The growth of self-drive tourism in the district exacerbates these issues. Under the current situation, public transport is unable to compete with the private car, which contributes to traffic congestion in the Wakatipu Basin. District Plan provisions are an important part of a comprehensive suite of initiatives that are required to address this issue.

- 9.12. The problems raised under Issue 2 are also relevant to this issue.

Issue 4 Localised congestion, safety, and amenity issues in discrete instances due to inadequate parking, access, and loading space being provided onsite.

- 9.13. Land use activities do not always provide sufficient onsite parking and rely, instead, on parking on the street and nearby reserves and grass verges. This is due variously to dispensations being granted to allow less parking than the District Plan requires; occupants not obtaining the necessary consents required; over-crowding within residential dwellings and high car ownership

amongst occupants; and the provision of 'free' on street parking in many areas. A specific related issue is the increasingly common practice of rental vehicle businesses parking large numbers of vehicles on streets. While ensuring the District Plan provisions appropriately address this issue, updating the Traffic and Parking Bylaw (as is currently underway); and ongoing enforcement of the Bylaw and the District Plan are likely to be the key methods of addressing this issue.

- 9.14. Access, manoeuvring, and loading needs to be managed to ensure that such activity does not cause safety and congestion issues on roads but this needs to be weighed up against the need to enable land to be used as efficiently as possible.
- 9.15. A related issue is the high occupancy of available carparks in the Queenstown and Wanaka Town Centres¹¹. This indicates that current parking management policies, including any use of parking prices and time limits, may not be sufficient to respond to peak demand issues. It may also indicate that additional shared parking supply could be needed to meet demand, although this would depend upon the financial viability of developing new parking facilities. It is also the likely result of a lack of a regular, affordable public transport system up until this time. One consequential effect of this is that commuter parking is occurring on 'residential' streets within close proximity to the Wanaka and Queenstown Town Centres.

Issue 5 On-site parking requirements and zoning contribute to unaffordable housing and enable the dispersal of employment, commercial, and community activities.

- 9.16. Requirements to provide onsite parking increase the overall cost of development as they require land or space in buildings to be set aside for parking, rather than being allocated to housing or business uses. In areas where land values are high or where there are geographical or zoning constraints that make it challenging to develop more, this may also reduce the amount of housing and business space that can be provided.
- 9.17. The most pronounced effect of this is that if the parking requirement is too high it disincentivises the development of smaller, more affordable units and worker housing; both of which are important elements of addressing housing affordability in the district. As a further consequence, larger and more expensive housing typologies will be developed, which can more easily absorb the high cost of parking provision, but which may not make as effective a contribution to improving housing affordability. The technical note entitled "Parking Advice" attached to this S32 report as **Appendix 2** provides more detail on this.
- 9.18. There are various zones (such as the Jacks Point Zone and the Local Shopping Centre Zone) that enable a considerable amount of commercial, retail, and community activity to be

¹¹ Queenstown Carparking Survey 2017 and Wanaka Carparking Survey July 2017.

developed. Where these activities are large scale and in zones that are relatively remote and not well connected to the majority of the population or to public and active transport networks, there is a risk that they will generate large amounts of traffic and affect the wider transport network. As such, it is important that the wider impacts on the transport network are considered and mitigated at the resource consent stage.

10. SCALE AND SIGNIFICANCE EVALUATION

10.1. S32(1)(c) of the RMA requires that this s32 analysis contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal. In making this assessment, regard has been had to whether the objectives and provisions:

- (i) fulfil the Council's role and functions under the Act as required by ss 31 and 74(1)(b);
- (ii) impose increased costs or restrictions on individuals, communities, or businesses;
- (iii) result in a significant variance from the existing baseline in ODP Chapter 14;
- (iv) have effects on matters of national importance;
- (v) adversely affect those resources overseen by special interests groups and statutory bodies;
- (vi) involve effects that have been considered implicitly or explicitly by higher order documents; and
- (vii) are more appropriate than the existing provisions.

10.2. The level of detail of analysis in this report is moderate to high for the following reasons:

- (i) Providing for transport needs is an anticipated component of many land uses but the effects on the adverse transport network need to be managed, while ensuring that land can still be developed efficiently and that the level of certainty and the administration cost/ transaction cost involved in obtaining resource consent are reasonable;
- (ii) The provisions have the potential to affect a wide sector of the community;
- (iii) The provision of on-site parking is a significant cost of development. Other than for hospitals and day care facilities, the proposed accessory parking requirements for all other activities are the same or less than under the ODP and therefore, with those exceptions, this is not expected to impose a significant additional cost on applicants or the wider community and, in many cases, will result in significant economic benefits;
- (iv) The provisions will impose consenting requirements in relation to establishing non accessory parking, park and ride, and public transport facilities. The consenting is expected to provide greater direction/ certainty and, on balance, impose less cost on applicants than the current regime in residential and rural zones. While there will be less certainty that it will be approved in business zones the consenting costs of obtaining consent for such activity is likely to not be significantly greater;

- (v) The provisions that apply to roads will impose less costs on Council than under the ODP whereby all roads are designated and therefore an outline plan or waiver is required for all work undertaken
- (vi) The provisions requiring consent be obtained for High Traffic Generating Activities (**HTGAs**) district-wide and rental car businesses in those zones where it is currently permitted will impose increased restrictions and costs on individuals applying for such activities but will reduce costs currently borne by communities;
- (vii) The provisions requiring cycle parking and end trip facilities will impose increased costs on individuals applying for activities that require these facilities but these additional costs are likely to be minor; and
- (viii) The operational provisions, relating to matters such as sight distances, parking design and layout, and access design, are not a significant departure from those in the ODP and are intended to make consent processing and District Plan interpretation simpler and more cost-effective.

11. EVALUATION OF PROPOSED OBJECTIVES SECTION 32(1)(a)

- 11.1. The identification and analysis of issues has helped define how Section 5 of the RMA should be articulated and has helped to determine the most appropriate objectives to give effect to Section 5 of the RMA in light of the issues.
- 11.2. Section 32(1)(a) requires an examination of the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the Act. The following summarises how the Objectives serve to address the key Strategic objectives in the PDP and are the most appropriate way of achieving the purpose of the RMA.

Table 2 - Appropriateness of proposed Objectives	
Proposed Objective	Appropriateness
<p>29.2.1 <i>An integrated, safe, and efficient transport network that:</i></p> <p>(i) <i>provides for all transport modes and the transportation of freight;</i></p> <p>(ii) <i>provides for future growth needs and facilitates continued economic development;</i></p> <p>(iii) <i>reduces dependency on private motor vehicles and promotes the use of public and active transport;</i></p> <p>(iv) <i>contributes towards addressing the effects on climate change; and</i></p> <p>(v) <i>reduces the dominance and congestion of vehicles in the Town Centre Zones.</i></p>	<p>This Objective, along with the others, is the most appropriate way to meet the purpose of the RMA because it:</p> <ul style="list-style-type: none"> • recognises that establishing a transport network that provides for people’s safety; the efficient use of resources (including land, transport infrastructure, and fuel) are all integral components of achieving sustainable management; and • specifically enables people to provide for their social and economic wellbeing by providing for all modes of transport and turn providing for a wider spectrum of the community; and • acknowledges the importance of providing for future generations and ongoing economic development which, given the rapidly evolving technological advances in transportation planning, is particularly relevant. <p>In turn, this Objective, along with the others:</p> <ul style="list-style-type: none"> • achieves the relevant Strategic Direction Objectives identified in this S32 evaluation; • establishes a policy framework within which to implement the Council’s function required under s31 of the RMA; • recognises the interrelationship between Part 5 of the RMA, while (relevantly) having regard to sections 7(b), (c), (f), (g), and (i) of the RMA relating to the efficient use and development of resources, amenity values, the quality of the environment: finite characteristics, and climate change; and • gives effect to the RPS and NPS-UDC where relevant.
Proposed Objective	Appropriateness
<p>29.2.2 <i>Parking, loading, access, and onsite manoeuvring that are consistent with the character, scale, intensity, and location of the zone and contributes toward:</i></p> <p>(i) <i>providing a safe and efficient <u>transport network</u>;</i></p> <p>(ii) <i>compact urban growth;</i></p> <p>(iii) <i>economic development;</i></p> <p>(iv) <i>Facilitating an increase in walking and cycling; and</i></p> <p>(v) <i>Achieving the level of residential</i></p>	<p>This Objective, along with the others, is the most appropriate way to meet the purpose of the RMA because it requires that onsite parking, loading, access, and onsite manoeuvring be provided and designed in a manner that is suitable to its location and does this in a manner that contributes toward safety, efficiency, quality compact growth, economic development, and increased walking and cycling. As such, a balance needs to be found in all applications between the various components of the Objective and a solution found that is appropriate to the location.</p> <p>For example, providing too much parking and loading space or not enabling access onto roads could compromise achieving quality compact growth and increased public transport use while, being too lenient on access and loading standards could result in safety and congestion issues that would compromise economic wellbeing and safety.</p> <p>In turn, this Objective, along with the others:</p> <ul style="list-style-type: none"> • achieves the relevant Strategic Direction objectives identified in this S32 evaluation;

<p><i>amenity and quality of urban design anticipated in the zone.</i></p>	<ul style="list-style-type: none"> • enables Council to achieve its function required under s31 of the RMA; • has regard to sections 7(b), (c), (f), (g), and (i) of the RMA; and • gives effect to the RPS and NPS-UDC where relevant.
<p><i>29.2.3 Roads that facilitate continued growth, provide for the safe and efficient use of roads for all road users and transport modes, and are compatible with the level of amenity anticipated in the adjoining zones.</i></p>	<p>This Objective, along with the others, is the most appropriate way to meet the purpose of the RMA because it requires roads to be provided and designed in a manner that provides for all modes of transport (including the transportation of freight) while managing adverse effects on adjoining zones.</p> <p>In so doing, it recognises the importance of providing a movement network that services the whole community, (not only those in cars), the economic importance of the roading network in getting goods from a) to b), and the an efficient transport network is an essential component of sustainable management in that, without it, land use and development is significantly limited and as a consequence, so is the ability of people and communities to provide for their social, economic, and cultural well-being and for their health and safety</p> <p>In turn, this Objective, along with the others:</p> <ul style="list-style-type: none"> • achieves the Strategic Direction objectives identified in part 15 of this S32 evaluation; enables Council to achieve its function required under s31 of the RMA; • has regard to sections 7(b), (c), (f), (g), and (i) of the RMA; and • gives effect to the RPS and NPS-UDC where relevant.
<p><i>29.2.4 An integrated approach to managing <u>subdivision</u>, <u>land use</u>, and the <u>transport network</u> in a manner that:</i></p> <p>(i) <i>supports improvements to active and public transport networks;</i></p> <p>(ii) <i>increases the use of active and public transport networks;</i></p> <p>(iii) <i>reduces traffic generation;</i></p> <p>(iv) <i>manages the effects of the <u>transport network</u> on adjoining land uses and the effects of adjoining land uses on the transport network.</i></p>	<p>This Objective, along with the others, is the most appropriate way to meet the purpose of the RMA because it:</p> <ul style="list-style-type: none"> • requires that the effects of land use and transport are integrated rather than considered in isolation; and • will contribute to land being developed in a way, or at a rate, that minimises the adverse effects of increased traffic generation and maximises improvements to the public and active transport networks and the uptake of those modes of transport <p>In turn, this Objective, along with the others:</p> <ul style="list-style-type: none"> • achieves Strategic Direction objectives identified in part 15 of this S32 evaluation; enables Council to achieve its function required under s31 of the RMA; and have regard to sections 7(b), (c), (f), (g), and (i) of the RMA; and • gives effect to the RPS and NPS-UDC where relevant.

12. EVALUATION OF THE PROPOSED PROVISIONS SECTION 32(1)(b)

12.1. Section 32(1)(b) requires the Council to:

Examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—
(i) identifying other reasonably practicable options for achieving the objectives; and
(ii) assessing the efficiency and effectiveness of the provisions in achieving the objectives; and
(iii) summarising the reasons for deciding on the provisions

12.2. The following table identifies the reasonably practicable options for achieving the objectives outlined above. In accordance with section 32(1)(c) of the RMA, the consideration of practicable options has been undertaken to a level of detail that corresponds to the scale and significance of the effects that are anticipated from the implementation of the chapter and, as such, not all possible options for all approaches are included below.

Reasonably practicable options for achieving the objectives (s32(1) (b)(i))

Table 3 - Reasonably practicable options
<p>Options for managing the effects from transport activities within roads and enabling activities to occur within roads</p> <ol style="list-style-type: none">1. Rely on the other district wide rules to manage signage, earthworks, effects on natural and historic heritage values, utilities, temporary activities, natural hazards, and noise2. Include additional rules in the transport chapter to manage these effects <p>➤ Option 1 is preferred, for the reasons outlined in Table 4, below.</p>
<p>Options for what roads to include as ‘roads’</p> <ol style="list-style-type: none">1. Include only vested roads2. Include vested and private roads used by the general public3. Include formed and unformed roads <p>➤ Options 1 and 3 are preferred, for the reasons outlined in Table 5, below.</p>

Options for managing activities within roads

1. Notify a 'whole of network' road designation
 2. Retain the existing deeming rule, which deems all roads to be designated
 3. Zone all roads as Transport Zone
 4. Deem all land that meets the definition of a 'road' as a road (which is as defined under the LGA 1973)
- Option 4 is preferred, for the reasons outlined in Table 5, below.

Options for determining the classification of roads

1. Retain the road hierarchy in the ODP
 2. Apply the One Network Road Classifications (**ONRC**)
 3. Apply a simplified version of the ONRC (i.e. 3 rather than 8 classifications)
 4. Apply a simplified version of the ONRC and not include the specific classifications of the state highways but, rather, simply list them under the heading of state highways in the schedule.
 5. Apply a simplified version of the ONRC but where Council has signalled that the function of certain roads will likely change in the future (e.g. through the creation of Inner Links around the Queenstown Town centre and the increased pedestrianisation of the centre) then reflect this in the District Plan classification .
- Option 4 is preferred, for the reasons outlined in Table 5, below and, in addition, due to the fact that there is insufficient certainty around projects such as the Inner Links and the Queenstown Masterplan to provide the necessary evidence base for Option 4.

Options for managing the effects of buildings within the road corridor

1. Allow all buildings associated with transport infrastructure and public amenities as permitted
 2. As above but require buildings related to public transport systems or public toilets to comply with standards relating to building height, building height to boundary, and recession planes of the zone adjoining the road and if they do not, make them restricted discretionary activity
 3. Require all or those buildings identified in 2) above to obtain resource consent consistent with the rules (including design control) of the adjoining zone. e.g. a bus shelter adjoining the Town Centre or Rural Zone would require a restricted discretionary activity or discretionary consent, respectively, as well as needing to comply with the standards
 4. Require private overhanging built form (e.g. verandas) to obtain resource consent consistent with what would be required in the adjoining zone.
 5. Rely wholly on the licence to occupy process to consider the bulk, location, and design of buildings within roads
- Options 2 and 4 are preferred, for the reasons outlined in Table 5, below.

Options for providing for water-based public ferry services

1. Provide policies supporting water-based public ferry services in the transport chapter
 2. Provide more enabling rules for new piers and jetties (and buildings thereon) used by scheduled ferry operations
 3. Include ferry terminals in the definition of 'public transport facilities' and, through that, provide more enabling rules than currently exist in the Rural and Queenstown Town Centre Zones.
 4. Provide more enabling rules for defined water-based public ferry services (i.e. the boating activity on the surface of the water).
 5. Provide for specific locations where ferry terminals are enabled through designations or specific zoning.
- Options 1, 3, and 4 are preferred, for the reasons outlined in Table 6, below.

Options for enabling the provision of public transport facilities and park and ride outside of roads

1. Enable transport network activities that occur off the road as a restricted discretionary activity throughout the respective zones (e.g. park and ride, public transport facilities including bus interchanges, and walking and cycle trails), while managing the effects of such facilities
 2. Permit walking and cycling trails, bicycle parking, and bus shelters but require a restricted discretionary consent for other transport network activities
 3. As above but apply a different activity status to each activity depending on the zone and the effects it is likely to cause in that zone
 4. Permit all transport network activities and rely on the HTGA rules to manage the effects of larger scale activities (e.g. a park and ride area or large scale bus interchange)
 5. Designate all such facilities
- Option 2 is preferred, for the reasons outlined in Tables 4 - 6, below.

Options for managing carparking in the Town Centre Zones

1. Require all activities within the Town Centre Zones to provide on-site parking
 2. Require some activities (e.g. visitor accommodation, residential, and retail of a certain scale) within the Town Centre Zones to provide on-site parking
 3. Require all or some activities within the Queenstown Town Centre Transition Sub-zone to provide on-site parking but not elsewhere in the Town Centre Zones
 4. Impose no minimum parking requirement on any activities in any part of the Town Centre Zone and rules requiring restricted discretionary consent to provide either accessory or non-accessory parking within the Town Centre Zones
 5. Impose maximum parking requirements on all activities in any part of the Town Centre Zone
- Option 4 is preferred, for the reasons outlined in Tables 3 and 6, below.

Options for managing the provision of on-site parking in relation to residential development in different zones

1. Require minimum on-site parking ratios to be provided on site which align generally with an upper-percentile of peak parking demands, which will result in under-utilised spaces much of the time
 2. Remove on-site minimum parking requirements in those higher density areas that are most accessible to other modes of travel and for residential flats throughout the district
 3. Reduce on-site minimum parking requirements below what is currently required by the ODP in those areas that are most accessible to other modes of travel and for residential flats
 4. Option 2, 3, or 4 above plus impose maximum on-site parking requirements
- Option 3 is preferred, for the reasons outlined in Tables 4 and 7, below.

Options for managing the safety and efficiency of accesses, loading, and parking spaces (i.e. list all those in MWH report where we considered standards)

1. Retain the ODP rules
 2. Duplicate or base all rules on NZS4404:2004, AS/NZS2890.1:2004, NZS4121:2001, the Building Act 2004, the Road and Traffic Standards 6 (RTS 06), the NZTA Policy Manual (PM), or the council's Land development and Subdivision Code of Practice 2015 (which is based on NZS4404), as relevant/ wherever an equivalent rule exists
 3. Update/ improve the specific standards within the rules, where necessary (from those in the ODP version) and also state that compliance with the relevant national document is an acceptable alternative way of complying with the rule), thereby allowing applicants to choose which they comply with
 4. Amend the ODP rules to reflect best practice, duplicate standards from the documents listed above wherever they are relevant, applicable to the Queenstown Lakes District, and sufficiently certain, and include reference to other documents in the assessment matters, indicating that failure to meet the rule may be acceptable provided the relevant national standard is complied with.
- Option 4 is preferred, for the reasons outlined in Table 7, below.

You are also referred to the report entitled Operative Queenstown Lakes District Plan Operational Standards Review August 2017, attached as **Appendix 3** for more detailed discussion of these options.

Options for HTGAs (High Traffic Generating Activities)

1. Require a controlled consent (rather than restricted discretionary) for those HTGAs where the activity itself is permitted in the zone (e.g. commercial use in the business zones) and is not accessed by a State Highway or arterial and require a restricted discretionary consent for all other HTGAs
2. Require a controlled consent for those HTGAs (rather than restricted discretionary) for those activities where there is already control or discretion over transport,

traffic or trip-generation effects for the activity in the applicable zone rules or precinct rules and require a restricted discretionary consent for all other HTGAs

3. Both options 1 and 2.
 4. Require a restricted discretionary consent for all HTGAs
- Option 4 is preferred, for the reasons outlined in Tables 4 and 5, below.

Options for ensuring rental vehicle activities provide sufficient onsite vehicle parking

1. Rely on the notified PDP zone rules to manage the effects. These permit rental vehicle activities in all the business zones; permit it as part of a home occupation or a complex containing more than 20 units in the High Density Residential Zone; and make it non-complying if under 100m² GFA in the Low Density Residential and Medium Density Residential Zones (noting that it cannot meet the home occupation rule as it includes activity outdoors)
 2. Require a non-complying consent for the parking of rental vehicles that are not rented out to a customer on roads
 3. Rely on the Traffic and Parking Bylaw (2013)¹² to prevent the parking of rental vehicles that are not rented out to a customer on roads
 4. Update the Traffic and Parking Bylaw (2013) (which is currently under development) to prevent any 'rental services vehicle' from stopping within the road unless currently hired out.
 5. Require a restricted discretionary consent for rental vehicle activities in all zones with the discretion limited to the provision of sufficient on-site or off-site (but off road) vehicle parking and effects on the road network
 6. As above, except require a non complying consent for rental vehicle activities in the Town Centre Zone to discourage them from locating there
 7. Require a restricted discretionary consent for rental vehicle activities in all zones where commercial activities (including retail activities) are permitted
- Options 7 and 4 are preferred, for the reasons outlined in Table 7, below.

¹² "15.2 - Without the prior written consent of the Council, no person shall: ... 15.2.5 Stop, stand or park any rental service vehicle on any road or in any public place, except in a parking place or transport station so designated under this Bylaw for the use of rental vehicles provided however nothing in this paragraph applies to any rental vehicle actually under hire."

Evaluation of the costs and benefits (section 32(1)(b)(i))

12.3. The following tables identify the preferred option and further evaluates whether these proposed provisions are the most appropriate way to achieve the relevant objectives. In accordance with Section 32(1)(b)(ii) and Section 32(2), this evaluation considers the costs and benefits of the proposed provisions and whether they are effective and efficient.

12.4. The evaluation of the proposed provisions is grouped by resource management issue. Where a provision or set of provisions addresses a number of issues, it is evaluated under the most relevant issue and is then cross referenced in the other tables.

Table 4: Issue 1 - Increasing road congestion and reduced liveability, amenity, and quality of living

Issue 3 - The transport network and parking provisions prioritise travel by private vehicle with considerably less emphasis on alternative modes of travel

Issue 5 - On-site parking requirements and zoning contribute to unaffordable housing and enable the dispersal of employment, commercial, and community activities

All the objectives, policies, rules, and assessment matters are relevant to addressing these issues. In summary, the following proposed provisions are the most relevant in terms of addressing these issues and giving effect to the objectives:

- . Policies 29.2.1.1 – 29.2.1.5
- . Policies 29.2.2.1 – 29.2.2.12
- . Policies 29.2.3.1 – 29.2.3.3
- . Policies 29.2.3.5 – 29.2.3.7
- . Policies 29.2.4.1 – 29.2.4.9
- . Rules:
 - imposing no minimum parking requirement in the Town Centre Zones;
 - requiring sufficient accessory parking to meet foreseeable demands in most locations while imposing lower minimum requirements in those zones that are most accessible to public transport, and walking and cycling;
 - providing for the establishment of off-site parking and enabling some or all of the parking associated with residential activity to be located off-site;
 - requiring HTGAs to mitigate effects of traffic generation through improvements to active and public transport infrastructure, employing travel plans, etc.;

- enabling public transport facilities, transport infrastructure, water-based public ferry services, and active transport networks as permitted or restricted discretionary activities outside roads, depending on nature and scale;
- requiring certain activities to provide cycle parks and end of trip facilities;
- exempting sites that front the most pedestrian-focused town centre streets from the onsite loading requirements; and
- ensuring roads are designed in manner that caters for all modes of transport.

Rule	Costs	Benefits	Effectiveness & Efficiency
No minimum parking requirement in the Town Centre Zones ¹³	<p>Environmental</p> <ul style="list-style-type: none"> • If developers respond by providing insufficient parking to meet demands in areas where other modes of travel are not practical options, this may result in a) amenity effects from parking spillover on residential streets, grass verges, etc. and b) localised congestion from people searching for parking. • If developers respond by still providing excess parking requirements (to meet perceived demand) then this may compromise environmental objectives to encourage walking and cycling. This scenario may also result in ‘under development’ which may impact on the realisation of housing or business capacity. <p>Economic</p> <ul style="list-style-type: none"> • Costs to Council associated with implementing new time limits, pricing, and/ or residential permits, and the cost of 	<p>Environmental</p> <ul style="list-style-type: none"> • Supports the growth, intensification, and improved pedestrian amenity of these zones. • Helps to support public transport use, cycling, and walking. • Results in higher quality urban design, safer streets, and less congestion as there is less through traffic. • Enables the intensification of land, more compact growth, and lively Town Centres¹⁴. • Encourages activities that are likely to attract traffic to locate on the edge of the Town Centres, where they will be most accessible to parking facilities, thus discouraging traffic in the core of the Town Centres. • Likely reduces the number of vehicle crossings, thereby making the street safer and more appealing for pedestrians and 	<p>Effectiveness:</p> <p>These provisions will be most effective at:</p> <ul style="list-style-type: none"> • achieving Strategic Direction Objectives 3.2.2.1 and 3.2.48 and Urban Development Objectives 4.2.1, 4.2.3, and 4.2.4 (which relate to achieving a compact integrated urban form and infrastructure that responds to climate change with a clear emphasis on achieving higher density development in convenient locations); • achieving Queenstown Town Centre Zone Objectives 12.2.1, 12.2.2, and 12.2.4, the Wanaka Town Centre Zone Objectives 13.2.1, 13.2.4, and 13.2.6, and the Arrowtown Town Centre Zone Objectives (which relate to

¹³ Also refer to the Technical Note entitled “Parking Advice” attached as Appendix 2 for further background and discussion of the costs and benefits.

¹⁴ Refer Memorandum entitled “Onsite loading for Queenstown Town Centre Zone” dated 28 August 2017 attached as **Appendix 4** for advice from Beca (the lead consultants to QLDC on the Queenstown Master Plan Project) in relation to the application of the onsite loading requirements in the Queenstown Town Centre.

	<p>enforcing and monitoring this.</p> <ul style="list-style-type: none"> If people are discouraged from visiting Town Centres due to a shortage of parking this may be an economic cost to individual businesses but not to the wider economy as that spending would occur elsewhere. <p>Social & Cultural</p> <ul style="list-style-type: none"> If residents are discouraged from visiting Town Centres as outlined above, it may reduce the community vibrancy of the Town Centres. 	<p>cyclists.</p> <p>Economic</p> <ul style="list-style-type: none"> Enables more efficient land use. Reduces the cost of development as more land can be dedicated to housing rather than parking, which is expected to improve the economic viability of the Town Centres and enables them to compete more favourably with other centres, as well as improving the affordability of developments and housing. Encourages more walking in town centres can improve the shopping environment, which in turn leads to increased retail spending and less predominance of convenience shopping <p>Social & Cultural</p> <ul style="list-style-type: none"> Increased walking and therefore more interaction and improved sense of place and social wellbeing. 	<p>safety, accessibility, quality, remaining relevant to residents by enabling more efficient land use, and providing for off-street parking at the edge);</p> <ul style="list-style-type: none"> achieving Objectives 16.2.1 and 16.2.2 of the Business Mixed Use Zone (which relate to achieving a high intensity mix of compatible residential and non-residential activities and high quality development); achieving Objectives 9.2.1, 9.2.2, and 9.2.6 of the High Density Residential Zone. These relate to a decreased reliance on private cars in favour of other modes, enabling lower parking rates, high quality, and housing diversity; achieving Objectives 8.2.1, 8.2.2, 8.2.5 and 8.2.7 of the Medium Density Residential Zone. These relate to decreased reliance on private cars in favour of other modes, assisting development feasibility close to public transport and active networks, and high quality development. <p>The provisions also align with and</p>
<p>Lower minimum parking requirements for residential development in some zones¹⁵</p>	<p>Environmental</p> <ul style="list-style-type: none"> If developers respond by providing insufficient parking to meet demands in areas where other modes of travel are not practical options, this may result in a) amenity effects from parking spillover on residential streets, grass verges, etc. and b) localised congestion from people searching for parking. 	<p>Environmental</p> <ul style="list-style-type: none"> Supports the growth, intensification, and improved pedestrian amenity of these zones. Helps to support public transport use, cycling, and walking. Results in higher quality urban design, safer streets, and less congestion as there 	<p>The provisions also align with and</p>

¹⁵ Also refer to the Technical Note entitled "Parking Advice" attached as Appendix 2 for further background and discussion of the costs and benefits.

	<p>Economic</p> <ul style="list-style-type: none"> Costs to Council associated with implementing new time limits, pricing, and/ or residential permits, and the cost of enforcing and monitoring this. <p>Social & Cultural</p> <ul style="list-style-type: none"> None identified 	<p>is less through traffic.</p> <ul style="list-style-type: none"> Enables the intensification of land, more compact growth, and lively neighbourhoods¹⁶. Reflects the fact these zones are accessible to daily needs via public transport, walking and/ or cycling. Enables these zones to be intensified in the anticipated manner and in a form that will help achieve Council's urban development objectives. Refer Appendix 5 for an assessment of the various zones against various criteria. Encourages more efficient use of cars by encouraging less car ownership, where realistic alternatives exist and makes public transport, cycling, and walking relatively more attractive. <p>Economic</p> <ul style="list-style-type: none"> Enables more efficient land use Improves the economic viability of developing a range of housing types and densities in these zones, thereby encouraging more affordable home prices and rents. <p>Social & Cultural</p> <ul style="list-style-type: none"> Increased walking and therefore more interaction and improved sense of place and social wellbeing. In conjunction with enforcement of the 	<p>effectively support achieving the:</p> <ul style="list-style-type: none"> Arrowtown Design Guidelines 2016; Queenstown Town Centre Guidelines 2014; Wanaka Town Centre Character Guidelines 2011; The Queenstown Town Centre Master Plan working drafts (2017). <p>Efficiency</p> <ul style="list-style-type: none"> The benefits of the provisions will outweigh the costs and, in turn, are considered to be efficient.
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¹⁶ Refer Memorandum entitled "Onsite loading for Queenstown Town Centre Zone" dated 28 August 2017 attached as **Appendix 4** for advice from Beca (the lead consultants to QLDC on the Queenstown Master Plan Project) in relation to the application of the onsite loading requirements in the Queenstown Town Centre.

		<p>Traffic and Parking Bylaw, may discourage overcrowding of houses where there are not adequate parking options for residents; resulting in social and health benefits.</p> <ul style="list-style-type: none"> • May make it more feasible for permanent residents, including families to live in areas close to Town Centres, thereby supporting their role as the civic centres of the district. • Encouraging lower car ownership rates and less private vehicle travel overall will result in health benefits and consequent economic benefits. 	
<p>HTGAs as a restricted discretionary activity¹⁷</p>	<p>Environmental</p> <ul style="list-style-type: none"> • None identified. <p>Economic</p> <ul style="list-style-type: none"> • Less certainty for those developing HTGAs due to the restricted discretionary activity status. • More cost, uncertainty, and potentially time delays for those developing HTGAs in that a restricted discretionary consent may be more onerous than would otherwise be required for the activity itself (which may be permitted or controlled) although in most instances the activity will already be subject to a restricted discretionary consent for other reasons. 	<p>Environmental</p> <ul style="list-style-type: none"> • Enables a broader assessment of transport effects and solutions than is possible under the various zone-specific rules, thereby ensuring the most appropriate mitigation measures are undertaken. • Enables council to require that improvements be made to the active and public transport network, as well as the road network¹⁸. • Enables, in extreme cases, a HTGA to be declined if it is not possible to satisfactorily mitigate the traffic generation effects. <p>Economic</p> <ul style="list-style-type: none"> • Potentially less overall development costs 	

¹⁷ Also refer to the Technical Note entitled “High Traffic Generating Activities Provisions” attached as Appendix 2 for further background and discussion of the costs and benefits.

¹⁸ Refer *Matakana Coast Trail Trust v Auckland Council* ([2017] NZEnvC 149) in relation to the jurisdiction to impose conditions requiring such infrastructure to be provided by the applicant.

	<ul style="list-style-type: none"> • May discourage large scale developments resulting in economic costs to the wider community. <p>Social & Cultural</p> <ul style="list-style-type: none"> • None identified. 	<p>as HTGAs enable alternative, less costly solutions to roading upgrades if they are found to be more appropriate.</p> <ul style="list-style-type: none"> • Cost and time savings to the community from adding less traffic to the road network • Internalises the true costs of such activities on the transport network to the developer <p>Social & Cultural</p> <ul style="list-style-type: none"> • Where a HTGA results in improvements to the active and public transport infrastructure, there will be environmental, social, and health benefits to the wider community. In such instances, this is likely to result in a net benefit to the community. • Improves liveability due to the social and health benefits of traffic generation and less impacts on road congestion 	
<p>Non-accessory and off-site parking as restricted discretionary¹⁹</p>	<p>Environmental</p> <ul style="list-style-type: none"> • Requiring restricted discretionary consent to establish non-accessory parking in business zones (rather than controlled in the ODP) may discourage it from being provided and result in insufficient parking to meet demands, if the cost and uncertainty associated with consenting is perceived to be too high. Until other travel modes are adopted this may result in amenity effects from people parking illegally on residential streets, grass verges, etc. • Requiring restricted discretionary consent to 	<p>Environmental</p> <ul style="list-style-type: none"> • Will enable Council to control the amount and location of parking provided in the Town Centres and in other areas to ensure it does not undermine objectives around increasing travel by public transport, cycling, and walking. • Will enable Council to control the design and location of parking, which, particularly in the Town Centres, will result in higher pedestrian amenity and improved urban design outcomes. 	

¹⁹ Also refer to the Technical Note entitled "Parking Advice" attached as Appendix 2 for further background and discussion of the costs and benefits.

	<p>establish off-site parking in business zones (rather than controlled in the ODP) could discourage it from being provided and encourage site-by-site parking which could have a greater effect on amenity, urban design outcomes, and the pedestrian and cycling environment.</p> <p>Economic</p> <ul style="list-style-type: none"> Less certainty and higher consenting costs for developers than under controlled or permitted activity status. Policy encouraging parking on the edge of Town Centres may discourage their development and increase development costs (due to a limited land supply). This could either increase the cost of parking and/ or result in insufficient parking, which may discourage people from visiting Town Centres and reduce the retail spend. Costs in enforcing parking illegally on grass verges and on streets as a consequence of insufficient parking prior to people adopting other modes of travel. Requiring consent to establish off-site parking could encourage site-by-site parking instead, resulting in less efficient land use in that the intensive provision of parking can be more efficient. <p>Social & Cultural</p> <ul style="list-style-type: none"> If residents are discouraged from visiting Town Centres, they may lose their community feeling. 	<p>Economic</p> <ul style="list-style-type: none"> Controlling the amount of parking provided district-wide can be an effective way of encouraging the uptake of public transport and cycling and walking, thereby making public transport investments more efficient. While making the provision of such parking a restricted discretionary activity in the residential and rural zones is more permissive than under the zone provisions, it provides significantly greater direction and certainty regarding the instances when such parking may be appropriate. This will result in more efficient District Plan administration. <p>Social & Cultural</p> <ul style="list-style-type: none"> Controlling the location of accessory parking will reduce traffic congestion in the core parts of the Town Centres, encourage walking, make them more people-places, and encourage more social interaction. 	
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Table 5. Issue 2 - Roads that are not laid out or designed in a manner that provide for all modes of transport and do not necessarily provide a quality of urban design appropriate to the location

Issue 3 - The transport network and parking provisions prioritise travel by private vehicle with considerably less emphasis on alternative modes of travel

All policies, rules and assessment matters are relevant to addressing these issues to some extent. The proposed provisions of the Transport Chapter that are most relevant to these issues and give effect to the most relevant objectives (29.2.1, 29.2.3, and 29.2.4) are:

- Policies 29.2.1.1 – 29.2.1.5
- Policies 29.2.2.1 – 29.2.2.3
- Policies 29.2.2.6 – 29.2.2.9
- Policies 29.2.2.11 – 29.2.2.12
- Rules:
 - permitting transport infrastructure (including, by definition, public transport facilities and systems, footpaths, and cycle facilities) within roads;
 - permitting public amenities within roads;
 - providing Council with control/ discretion over the external appearance of buildings that overhang roads and require public buildings within roads to meet key bulk, location, and external appearance standard;
 - requiring HTGAs (including large scale subdivisions) to mitigate effects of traffic generation including through appropriate street layout and design;
 - requiring accesses to be designed in accordance with the QLDC Land development and Subdivision Code of Practice 2015 (Code of Practice).
- Schedule 1 insofar as this influences the design of an existing road and its contribution to the multi modal network, at the time of any road upgrades.

Relevant provisions in other chapters:

- Policy 27.2.1.1 that subdivision be consistent with the Code of Practice
- Rule 27.4.1 requiring that all subdivision obtain a discretionary activity consent²⁰

Rule	Costs	Benefits	Effectiveness & Efficiency
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²⁰ The Council's Reply version of the subdivision chapter (<http://www.qldc.govt.nz/assets/Uploads/Planning/District-Plan/Hearings-Page/Hearing-Stream-11/Section-42A-Reports-and-Council-Expert-Evidence/Bundle-to-Accompany-Reports/18.-Reply-Chapter-27-Subdivision-and-Development-with-subsequent-recommendations-in-other-hearings-included.pdf>) recommends that subdivision be a restricted discretionary activity and controlled in those zones with a structure Plan. Should that recommendation be accepted, the respective rules will still assist in addressing Issues 2 and 3.

<p>Permissive approach to managing activity and buildings within roads²¹</p>	<p>Environmental</p> <ul style="list-style-type: none"> Other than those associated with utilities (which are managed by chapter 30), buildings on roads within SNA's, ONL's and ONF's may adversely affect landscape, amenity, or natural conservation values. While there is a risk that the design, amenity, and landscaping of a building within the road could be inappropriate, this risk is low given the Council is the landowner of roads and, as such, processes outside the District Plan can manage the effects of any building. <p>Economic</p> <ul style="list-style-type: none"> Imposes a cost to owners having to apply for consent for verandas, etc. overhanging roads but this will almost always be in conjunction with a consent for building or alteration within the site adjacent to the road. This will incur a minor additional cost, if any. <p>Social & Cultural</p> <ul style="list-style-type: none"> Buildings permitted on roads (including those permitted by the utilities chapter) could have adverse effects on the character of the ARHMZ. 	<p>Environmental</p> <ul style="list-style-type: none"> Permits a wide range of transport facilities and infrastructure which will encourage public transport, cycling, and walking within roads and, in turn encourage a reduction in car use and the environmental benefits of that. The design and location of buildings will be subject to non-RMA consultation and design review processes and, if promoted by a private party, will also be subject to the 'Licence to Occupy' process That the effects of a bus interchange would be mitigated by having to meet height (and in some zones, reflectivity) standards. Effects from earthworks and buildings associated with utilities on landscape, amenity, or natural conservation values will be appropriately managed Via the utilities chapter, utilities that one would expect to occur within roads are provided for, while managing any adverse effects (deriving from reflectivity, height, or where overlays exist in the District Plan). <p>Economic</p> <ul style="list-style-type: none"> Avoids the need to apply for an outline plan approval or waiver for all works (as would be the case if all roads were designated), removes the ultra vires deeming rule in the ODP, representing a cost saving to council. Reduced costs to Council (i.e. wider 	<p>Effectiveness:</p> <p>As outlined in Table 4 above, and in addition these provisions will be most effective at achieving:</p> <ul style="list-style-type: none"> subdivision Objective 27.2.1 (which relates to creating quality through, amongst other things, consistency with the Code of Practice and guidelines and ensuring the requirements of other agencies are integrated into the planning process); subdivision Objective 27.2.2 (which relates to subdivision design including the importance of connectivity and integration); and subdivision Objective 27.2.5 (which relates to ensuring subdivision protects and enhances landscape, vegetation, indigenous biodiversity, and heritage items. <p>Efficiency</p> <ul style="list-style-type: none"> Relying on the definition of 'road' to trigger rules minimises vires issues relating to deeming rules (e.g. associated with zoning roads), meaning the provisions will be more effective and efficient.
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²¹ Also refer to the Technical Note entitled "Providing for Public Transport and Active Modes" attached as Appendix 2 for further background and discussion of the costs and benefits.

		<p>community) from not having to apply for consent for these buildings within road reserve</p> <ul style="list-style-type: none"> Avoids unnecessary cost and duplication of process for the construction of artworks, public amenities, bicycle parking, noting that a) where undertaken by private parties, these will also be subject at least to the process of obtaining a 'Licence to Occupy'; and b) where undertaken by council, the project will be subject to non RMA consultation and design review processes. <p>Social & Cultural</p> <ul style="list-style-type: none"> Permits a wide range of public amenities within roads, including artworks and community spaces, which will encourage them to be developed and will enrich the visitor and resident experience and community life. 	<ul style="list-style-type: none"> It is efficient to avoid duplicate design control processes
<p>The definition of 'road' and classification of roads.</p>	<p>Environmental</p> <ul style="list-style-type: none"> The Queenstown Arterials Business Case (Inner Links) is not sufficiently advanced to re-classify roads in and around the Queenstown Town Centre in line with future plans. This may result in roads being inappropriately developed in the interim. However, given the roads are maintained by council the risk of this occurring is low. By not including private roads as 'roads', rules relating to reverse manoeuvring, the number of crossing points, and access and sight distances, etc. are not managed by the Transport Chapter. However, the risks are low as such matters can be managed via subdivision and most private roads are low volume, local roads in any case. 	<p>Environmental</p> <ul style="list-style-type: none"> The updated classification will require new and existing roads to be designed and upgraded based on current traffic data and for accesses and intersections to be designed in a manner that is appropriate to the roads' current function. This will result in reduced congestion (especially on the arterial roads) and a more efficient transport network. Not including private roads as 'roads' provides greater control over activities (pursuant to consents required by the underlying zone), including the location and design of public transport facilities, built form, pathway design, more control over earthworks, etc. This will appropriately 	

	<p>Economic</p> <ul style="list-style-type: none"> The classification will become outdated in time and a plan change will be needed for it to be updated, imposing costs on council and the wider community Not including private roads as 'roads' means all works within them are subject to the relevant zone rules which means they would need consent for many activities that would be permitted within a (vested) 'road'. Developers will incur the costs of this. <p>Social & Cultural</p> <ul style="list-style-type: none"> None identified 	<p>avoid or mitigate effects on the environment.</p> <p>Economic</p> <ul style="list-style-type: none"> Cost savings from the classification being up to date as there will be greater certainty and less disagreement at the time of subdivision. The updated classification will result in more efficient land use in that access design and location will be appropriately designed and spaced relative to the function of the adjoining road. Classifying all state highways as "state highways" (as opposed to arterials) enables the district plan to apply rules to development adjoining state highways, which are consistent with the NZTA Planning Policy Manual 2007, This will result in time and cost savings for applicants in that it will avoid proposals that meet the District Plan but not the NZTA's requirements. <p>Social & Cultural</p> <ul style="list-style-type: none"> The updated classification will improve safety. 	
<p>HTGA rules - Large scale land use and subdivision to provide appropriate street layout and design²²</p>	<p>Environmental</p> <ul style="list-style-type: none"> None identified <p>Economic</p> <ul style="list-style-type: none"> As listed for HTGAs in Table 4 Potential costs to developers from layouts 	<p>Environmental</p> <ul style="list-style-type: none"> Connected (multi-modal) streets increase the uptake of public transport, walking, and cycling and reduce travel distance; resulting in less traffic generation and less pollution and higher amenity values. 	

²² Also refer to the Technical Notes entitled "Providing for Public Transport and Active Modes" and "High Trip Generating Activities" attached as Appendix 2 for further background and discussion of the costs and benefits.

	<p>that require more land to be devoted to streets. However, such layouts very often result in less long narrow driveways/ rear sites and less need for off-road pathway connections and higher quality outcomes such that the cost is non-existent or minimal.</p> <p>Social & Cultural</p> <ul style="list-style-type: none"> None identified 	<ul style="list-style-type: none"> Connected (multi-modal) streets increase the uptake of walking and cycling will improve the safety for all road uses by reducing traffic volumes (relative to other modes), encouraging lower speeds, and safer driving behaviour. Connected streets buses to service the area effectively <p>Economic</p> <ul style="list-style-type: none"> Increases in walking and cycling within Town Centres and other commercial centres will increase the economic viability/ user spend in those areas Connected streets result in reduced travel time, representing a cost saving to the community <p>Social & Cultural</p> <ul style="list-style-type: none"> Increases in walking and cycling within Town Centres and other commercial centres and within residential neighbourhoods will improve way finding, increase social interaction, and improve the quality of the human experience and social wellbeing. Connected streets result in reduced travel time, which results in wide social benefits and a better quality of life Increased walking and cycling results in health benefits 	
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Table 6. Issue 3 - The transport network and parking provisions prioritise travel by private vehicle with considerably less emphasis on alternative modes of travel

All the transport chapter objectives are relevant to this issue and all the policies, rules and assessment matters in chapter 29 are relevant to this issue to some extent. In addition to those already discussed above in Tables 4 and 5, the following proposed provisions of the Transport Chapter are also relevant to this issue:

- Policies 29.2.1.1 – 29.2.1.5
- Policies 29.2.2.1 – 29.2.2.11
- Policies 29.2.3.1, 29.2.3.3, and 29.2.3.5
- Policies 29.2.4.1 – 29.2.4.5 and 29.2.4.9
- Rules:
 - permitting bus shelters and walking and cycling trails and facilities beyond the road network;
 - providing for park and ride and other public transport facilities;
 - requiring bicycle parking to be provided

Relevant provisions in other chapters:

- Policy 12.2.5.7 - Water based public ferry services
- Rule 12.4.17.5 - Surface of Water - Water based public ferry services
- Rule 21.5.43A - Water based public ferry services

Rule	Costs	Benefits	Effectiveness & Efficiency
Water-based public ferry services as a restricted discretionary activity²³	<p>Environmental</p> <ul style="list-style-type: none"> • Potential adverse effects on amenity (from noise and a loss of privacy) for residents living along the river or lake shore or in the vicinity of wharfs and terminals • Potential adverse effects on the remoteness 	<p>Environmental</p> <ul style="list-style-type: none"> • Encourages the establishment of a scheduled ferry service • Protects against cumulative effects of a proliferation of ferry services by requiring such boating activity to be of a certain 	<p>Effectiveness</p> <p>As for tables 4 and 5 and, in addition, these provisions will be most effective at achieving:</p> <ul style="list-style-type: none"> • Queenstown Town Centre Objective 12.2.5. regarding the

²³ Also refer to the Technical Note entitled “Providing for Public Transport and Active Modes” attached as Appendix 2 for further background and discussion of the costs and benefits.

	<p>of some parts of the lake (and rivers)</p> <p>Economic</p> <ul style="list-style-type: none"> The Council and Otago Regional Council will likely incur a cost to run such a ferry service, which will be an increased cost to ratepayers. <p>Social & Cultural</p> <ul style="list-style-type: none"> None identified 	<p>nature and scale to be deemed a ferry service.</p> <p>Economic</p> <ul style="list-style-type: none"> Increased certainty and reduced consenting costs for applicants wishing to establish a ferry operation Reduced road congestion will result in lower costs in relation to roading improvements and maintenance. Potential reduced travel time for all travellers resulting from less congestion and the provision of quicker water based-options for some residents, resulting in cost savings to the wider community. <p>Social & Cultural</p> <ul style="list-style-type: none"> Health and social benefits deriving from less private vehicle use. 	<p>water-land interface; and</p> <ul style="list-style-type: none"> Rural Objective 21.2.12. regarding protecting and enhancing the surface of water through managing activities thereon) <p>Efficiency</p> <ul style="list-style-type: none"> An enabling rule is more flexible than designating or spot zoning areas for terminals in the absence of insufficient information.²⁴
<p>Park and ride and public transport facilities as restricted discretionary²⁵ and permitting bus shelters and walking and cycling infrastructure, outside roads.</p>	<p>Environmental</p> <ul style="list-style-type: none"> The construction of Park and Ride and public transport facilities could adversely affect rural character or residential amenity (resulting from traffic, general activity, and associated buildings) depending on location and design. The risk is low as built form is also managed also by zone provisions. The construction of ferry terminals could adversely affect views to the wider landscape from the Queenstown Town 	<p>Environmental</p> <ul style="list-style-type: none"> Increases the uptake of public transport, which will reduce road congestion and the effects on amenity, pollution, and liveability that derive from that. Requires that the effects of facilities on the environment are avoided or mitigated. Protects against the cumulative effects of a proliferation of jetties/ terminals by avoiding making all jetties more permissive simply on 	

²⁴ The preparation of a Water-Based Public Transport Business Case has not yet commenced

²⁵ Also refer to the technical notes entitled "providing for Public Transport and Active Modes" and "developer provision of Public Transport and active modes infrastructure" attached as Appendix 2 for further background and discussion of the costs and benefits.

	<p>Centre and landscape values elsewhere on the lake edge if not well managed. Risk is low as built form is also managed also by zone provisions.</p> <ul style="list-style-type: none"> • Potential effects on residential amenity from traffic, activity, and pedestrians using public transport infrastructure (e.g. noise, privacy). • Permitting walking and cycling trails and bus shelters may result in infrastructure that is inconsistent with council standards or which is not well-connected. However, the risk of this is low given they will need to meet standards if a developer wants to vest them and provided they are located in accordance with Council's network plans. <p>Economic</p> <ul style="list-style-type: none"> • The Council will often incur a cost in constructing such infrastructure, although this is considered to be relatively minor compared with the costs incurred by increased road congestion <p>Social & Cultural</p> <ul style="list-style-type: none"> • Less certainty to residents as to where such facilities will locate than if the locations were zoned or designated. • The construction of terminals on the lake edge may detract from or displace other recreational uses of the area. 	<p>the basis they may be used by a ferry service.</p> <p>Economic</p> <ul style="list-style-type: none"> • Resulting increases in uptake of public transport, cycling, and walking will improve the cost-efficiency of the public transport system and make providing the service more cost-effective. • Increases in the uptake of public transport, cycling, and walking will result in lower costs in relation to roading improvements and maintenance, especially given the focus of provisions to target reduction of the peak hour congestion. • Avoids multiple consents under the HTGA rule and public facility/ Park and Ride rule, reducing costs and confusion. • Avoids the need for consents for bus shelters and walking trails, resulting in a cost saving and potentially in the increased provision of such infrastructure by the private sector. • Improves visitor and resident experience, which will result in economic benefits to the wider community #. • Improves access to the Town Centre Zones and other key commercial centres, which will result in economic benefits to the business owners and the wider community. <p>Social & Cultural</p> <ul style="list-style-type: none"> • Enables a greater proportion of the community to travel by public transport and to cycle and walk, therefore resulting in 	
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		social and health benefits.	
<p>Requiring bicycle parking and End of Trip Facilities for certain activities of a certain scale²⁶</p>	<p>Environmental</p> <ul style="list-style-type: none"> None identified <p>Economic</p> <ul style="list-style-type: none"> There will be a modest financial cost and opportunity cost (the inability to use the space for some other use) to developers At times, a consent will be needed to breach the rule where alternative parks and end trip facilities exist within close proximity or where it is unrealistic that people will cycle to the activity given its location, which will impose a consenting cost on developers. <p>Social & Cultural</p> <ul style="list-style-type: none"> None identified 	<p>Environmental</p> <ul style="list-style-type: none"> Will encourage increased uptake in cycling, resulting in less congested roads, higher amenity, and lower pollution levels. <p>Economic</p> <ul style="list-style-type: none"> Will result in lower or deferred costs in relation to having to expand the road network. Increases in the uptake of cycling, will lower costs in relation to roading improvements and maintenance. The detailed assessment matters will limit the cost of consents for breaching the rule. Will result in less road congestion, which will reduce travel times, resulting in economic benefits to the wider community. <p>Social & Cultural</p> <ul style="list-style-type: none"> Will encourage increased uptake in cycling, resulting in health benefits. Will result in less road congestion, which will reduce travel times, resulting in social benefits. 	

²⁶ Also refer to the technical notes entitled “Standards for Cycle Parking and End of Trip Facilities” and “Providing for Public Transport and Active Modes” attached as Appendix 2 for further background and discussion of the costs and benefits of the provision of such facilities.

Table 7. Issue 4 - Localised congestion, safety, and amenity issues in discrete instances due to inadequate parking, access, and loading space being provided onsite.

All policies, rules and assessment matters are relevant to addressing these issues to some extent. The proposed provisions of the Transport Chapter that are most relevant to these issues and give effect to the most relevant objectives (29.2.2 and 29.2.4) are:

- . Policy 29.2.2.1
- . Policy 29.2.2.5
- . Policy 29.2.2.12
- . Policy 29.2.4.6
- . Policy 29.2.4.7
- . Policy 29.2.4.9
- . Rules:
 - requiring a minimum amount of accessory parking to be provided in all zones other than the Town Centre Zone;
 - making offsite and non-accessory parking restricted discretionary activity; and
 - managing the design of parking and loading spaces, vehicle crossings, and access.
- . Schedule 1 insofar as this influences the location/ separation of accesses onto roads, depending on the classification of the road.
- . Schedule 2 (interpretive diagrams).

Relevant provisions in other chapters:

- Policy 27.2.1.1 requiring subdivision to be consistent with the Code of Practice
- Rule 27.4.1 requiring that all subdivision obtain a discretionary activity consent²⁷

Rule	Costs	Benefits	Effectiveness & Efficiency
Minimum Parking rates²⁸	<p>Environmental</p> <ul style="list-style-type: none"> . Requiring 2 parks per unit in most zones, including for LDR Zone, this will encourage 	<p>Environmental</p> <ul style="list-style-type: none"> • In most cases, enables the long term 	<p>Effectiveness</p> <p>As for Tables 4 and 5 and, in addition, these provisions will also be</p>

²⁷ Refer Footnote 19.

	<p>people to continue to own 2 cars per household and to drive to many destinations.</p> <ul style="list-style-type: none"> There will be some parking spillover (and consequent congestion and amenity effects) as the minimum parking requirements will not always provide for peak times, or for higher than usual rates of car ownership Requiring 2 parks per unit in the ARHMZ would mean that redevelopment or change of use may be unfeasible or require alterations/ demolition of heritable buildings in order to meet the MPR. However, the risk of this is low given that the sites are large, the maximum density and building and hard surfacing coverage is low, and any increase in consenting costs as a result of breaching the MRP are low given that all new building and alterations are restricted discretionary activity regardless. <p>Economic</p> <ul style="list-style-type: none"> Imposes a cost on developers by requiring parking to be provided which, at times, may be in excess of what the current tenant/ owner/ activity requires. Where parking requirements have been increased, this will be a potential economic cost to landowners/ developers and discourage development, which may be a cost on the wider community/ economy. More cost, uncertainty, and potentially time delays for those developing rental vehicle businesses, in that a restricted discretionary 	<p>adaptability of buildings if the generic parking requirement is provided, even if it is not needed by the current applicant/ owner.</p> <ul style="list-style-type: none"> A relatively low MPR for offices (relative to other District Plans) will help encourage workers to use other travel modes which, given that offices generate peak hour travel demands, will help to relieve peak hour congestion. A lower MPR for schools will discourage students from being driven or themselves driving to schools, which will help relieve peak hour congestion and the amenity (social and economic) costs of that. Higher MPR's for day care and hospitals aligns these rules helps to address the effects of parking spillover that have been experienced in recent years. Provided the Arrowtown Design Guidelines (2011)²⁹ are adhered to, which require that garaging be setback and that driveways be single width then 2 parks per site will not threaten heritage values and will be effective at avoiding overspill parking on grass verges and swales, which are identified as a key character element of the area. <p>Economic</p> <ul style="list-style-type: none"> Focusing on relieving peak hour congestion in particular will result in less cost in relation to roading improvements and maintenance and consequent economic benefits to the 	<p>most effective at:</p> <ul style="list-style-type: none"> Achieving the Objectives of the (urban) residential and special zones in relation to maintaining residential character and amenity; Achieving the Objectives of the business zones in relation to character, quality, and/ or amenity. <p>Specifically:</p> <ul style="list-style-type: none"> requiring resource consent for rental vehicle businesses provides Council with more effective enforcement tools through the RMA; and the onsite loading exemptions align with and will effectively support achieving the intent of the various Town Centre guidelines, the Draft Queenstown Masterplan (as listed in Table 1), and the Wanaka Lakefront Reserves Management Plan 2014. <p>Efficiency</p> <ul style="list-style-type: none"> The benefits of imposing relatively high minimum parking requirement in those zones where travel by modes other
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²⁸ Also refer to the technical notes entitled "Parking Advice" attached as Appendix 2 for further background and discussion of the costs and benefits.

²⁹ Refer the Arrowtown Design Guidelines (<http://www.qldc.govt.nz/assets/Uploads/Your-Views/Arrowtown-Design-Guidelines-Variation-1/Arrowtown-Design-Guidelines-Part-2.pdf>)

	<p>consent is more onerous than would otherwise be required for the activity in the zone itself.</p> <p>Social & Cultural</p> <ul style="list-style-type: none"> Requiring 2 parks per unit in many zones and parking at key destinations that will generally meet demands will continue to support travelling by private car, resulting in health and social costs. 	<p>community.</p> <ul style="list-style-type: none"> Where parking requirements have been reduced, this will be a potential economic benefit to landowners/ developers and encourage more development, and wider economic benefits to the community. Internalises the cost of storing rental vehicles to the operator, as opposed to the community subsidising those who opt to store/ park vehicles on the street rather than have a yard. <p>Social & Cultural</p> <ul style="list-style-type: none"> Provides choice for residents to own and have the capacity to park two vehicles if they desire. This will be balanced with encouraging walking and cycling, and public transport use through the implementation of other provisions in this chapter. 	<p>than the private car are not well provided for will outweigh the costs and be efficient.</p> <ul style="list-style-type: none"> Policies and assessment matters provide more certainty as to when less parking is likely to be acceptable The rules aim to enable efficient land use and more efficient and practical District Plan administration, while mitigating safety and congestion issues. This means that some rules are more lenient than national standards or other national documents or are simply slightly different to those documents but in each instance where this is the case, the council is satisfied that:
<p>Standards relating to location and design of accesses, loading spaces, parking spaces³⁰</p>	<p>Environmental</p> <ul style="list-style-type: none"> The rules for access locations are relatively more lenient, which may result in more vehicle crossings and adverse effects on the pedestrian environment. The risk of this is low. <p>Economic</p> <ul style="list-style-type: none"> The rules do not always align with the standard, so applicants will need to apply for consent even if they can meet the standards in a national document (thereby incurring costs, time delays, 	<p>Environmental</p> <ul style="list-style-type: none"> Collectively, the rules enable efficient land use while avoiding adverse effects on traffic and pedestrian safety and achieving an appropriate level of pedestrian amenity and quality of urban design³¹. <p>Economic</p> <ul style="list-style-type: none"> Provides a high level of certainty as to whether a consent is required (and therefore efficient processing and high level of effectiveness) 	<ul style="list-style-type: none"> a) There are no known safety issues with the respective ODP rules; b) There would be significant administrative difficulties with inserting the standards from such national documents into the plan; the costs of which would outweigh the benefits of the

³⁰ You are also referred to the report entitled Operative Queenstown Lakes District Plan Operational Standards Review August 2017, attached as Appendix 3

³¹ For example, the rules allow residential tandem parking but require a 5.5 m parking space between the garage and the street in such instances; enable shorter queuing lengths than would under the relevant Standard for small-medium scale development; enable narrower private accesses than under the Code of Practice in certain instances; increase the size of loading spaces in line with best practice, and added design requirements of vehicle accesses to improve the safety for motorists and pedestrians.

	<p>and uncertainty)</p> <ul style="list-style-type: none"> The rules (such as those relating to gradient, queuing, and minimum sight distances) are administratively simpler and more certain than the alternative of including the equivalent rule from the relevant Standard. Relying on the posted speed of a road, rather than the operating speed may lead to accesses etc. being designed and located too conservatively (resulting in inefficient land use potentially) or too liberally (resulting in potential safety and congestion issues). However, there is no evidence of such safety issues arising from this rule. Requiring that some carparks be lit in a manner consistent with the Council's Lighting Strategy may result in administrative difficulties and costs. However, similar difficulties exist if the rule simply states that such carparks 'must be lit'. The minimum distance of vehicle crossings from intersections for roads with a posted speed between 70 and 100kmph may result in less efficient subdivision and land use along those roads as corner sites will need to be relatively big to comply. However, the effect is minor in that, with a few exceptions, these areas are not generally urban. <p>Social and cultural</p> <ul style="list-style-type: none"> Where the rules are more lenient than the standard, they may arguably result in safety or congestion issues but there is no evidence of this. Removing the need for onsite loading on more streets in the Queenstown Town Centre may 	<ul style="list-style-type: none"> Avoids the administrative difficulties, uncertainty, and costs that would arise from the option of duplicating national Standards (e.g. the queuing standard from AS/ NZS2890.1:2004 or the use of operating speed to measure sight distance), which require detailed traffic assessment in order to determine whether or not a proposal complies or consent is needed. Aligning definitions and diagrams (and, standards where they are sufficiently clear and certain) with those included in national standards, NZTA's PPM, and the QLDC Code of Practice improves consistency and reduces administrative costs. Land use efficiencies will make development more feasible and result in economic benefits to developers and the wider community. For example, the access widths of small scale private residential lanes can be narrower than in the Code of Practice and on-site loading spaces are not required in many parts of the Town Centres. <p>Social & Cultural</p> <ul style="list-style-type: none"> The standards will have significant safety benefits to motorists, cyclists, and pedestrians. 	<p>standard providing more site- specific or issue - specific solutions;</p> <p>c) The national standards would not assist in achieving efficient land use or compact growth.</p> <ul style="list-style-type: none"> Aligning many of the rules (e.g. par) with the relevant national documents provides for greater understanding and certainty and more efficient District Plan processing. Incorporating the Code of Practice in Chapter 29 of the District Plan avoids duplicating a considerable amount of information in the District Plan, is readily available to public, and is the most efficient way of ensuring consistency between the 2 documents in relation to access design. This approach is different to that taken in the reply version of the stage 1 subdivision chapter 27 but is considered the most effective and efficient way of managing access design in the transport chapter.
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	increase the need for on-street loading on those streets and the removal carparks.		
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13. THE RISK OF NOT ACTING

- 13.1. Section 32(c) of the RMA requires an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions. It is not considered that there is uncertain or insufficient information about the subject matter of the provisions.

- 13.2. The issues identified and options taken forward are the most appropriate way to achieve the purpose of the RMA. If these changes were not made there is a risk the District Plan would fall short of fulfilling its functions.

Appendix 1. Council documents referenced in the proposed Transport Chapter and/or this S32 Evaluation

Document
NZTA Planning Policy Manual 2007
Plan Change 6 Decision (operative 2009)
Plan Change 8 Decision (operative 2009)
Queenstown Lakes District Plan Monitoring Report Section 14: Transport 2012
Wanaka Town Centre Character Guidelines 2011
Queenstown Town Centre Guidelines 2014
Wanaka Lakefront Reserves Management Plan 2014
QLDC Land development and Subdivision Code of Practice 2015
QLDC Subdivision Design Guidelines 2015
Arrowtown Design Guidelines 2016
Queenstown Town Centre Transport Strategy 2016
Arrowtown Design Guidelines 2016
Queenstown Town Centre Master Plan working drafts 2017
Queenstown Integrated Programme Business Case 2017 (QITPBC)
Queenstown Town Centre Business Case 2017
Frankton Business Case 2017
Wakatipu Basin Public Transport Detailed Business Case 2017
Queenstown and Wanaka Parking Surveys 2017
Wanaka Strategic Case Review Evidence 2017
Queenstown Lakes District Council Southern Light Part One - A Lighting Strategy and Queenstown Lakes District Council Southern Light Part Two – Technical Specifications March 2017.

Appendix 2. Series of Technical Notes (2017) in relation to:

- **Parking**
- **Developer provision of public transport and active modes infrastructure**
- **High traffic trip generating activities**
- **The national and regional policy context**
- **Cycle parking and end of trip facilities**
- **Providing for public transport and active modes.**

Technical Note

Subject: Parking Advice

Project: Queenstown Lakes District Council Transport Chapter Advice

Our file: NZ2217

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1. Background

1.1 Background to this Technical Note

Queenstown Lakes District Council (QLDC) has engaged MRCagney to advise on the strategic direction for parking policy in the Queenstown Lakes District. This is intended to inform QLDC's drafting of parking provisions (rules, policies, and objectives) in the Transport Chapter of the Proposed District Plan. The overarching proposed objectives and policies in Chapters 3 and 4 of the Proposed District Plan (as furnished by QLDC) seek to achieve an integrated transport network that is less reliant on private car use and more multi-modal.

The aim of this technical note is to provide strategic advice on the following parking matters:

- Advice on whether minimum and/or maximum parking requirements are justified in certain zones or locations;
- Advice on continuing to not specify minimum parking requirements in the Town Centre Zone; and
- Advice on rules or methods to hypothecate funds to build non-accessory shared parking facilities in the Town Centre, i.e. dedicated off-street parking facilities (either public or private)

This technical note contains high-level strategic policy recommendations that can inform and guide the upcoming review of the parking sections of the District Plan and QLDC's approach to parking management and operations more generally.

The need for this technical note has also been influenced by a convergence of circumstances, specifically:

- The ongoing review and development of QLDC's Proposed District Plan; and
 - The ongoing development and public consultation of the Queenstown Town Centre Masterplan, which brings together the strategies and projects recommended in the following strategic plans and documents:
 - Queenstown Town Centre Transport Strategy;
 - Queenstown Integrated Transport Programme Business Case; and
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- Wakatipu Basin Public Transport Detailed Business Case;

Now is therefore an opportune time to consider how the parking policies in the Proposed District Plan might be drafted to better align with the QLDC's strategic objectives for the district.

1.2 Scope of work

As expressed in our proposal, the scope of this technical note does not include the detailed drafting of specific provisions (e.g. rules), and the preparation of the section 32 report required to support the proposed provisions, which are the responsibility of Vicki Jones of Vision Planning.

The analysis contained herein is based on a desktop review of existing documents and our previous professional experience, rather than site visits or in-depth data analysis

2. Policy and Document Review

In recent years, QLDC, in collaboration with partner agencies such as the New Zealand Transport Agency (NZTA) and the Otago Regional Council (ORC), has developed several strategic policy documents that address parking management and its implications for related matters such as traffic congestion, town centre design, urban form, public transport, and active transport. In addition, parking surveys are conducted annually to provide baseline information on existing or emerging parking issues.

The first step in this project was to review high-level objectives and outcomes established in the following QLDC or partner agency policy and planning documents, and surveys:

- Queenstown Town Centre Transport Strategy 2016;
- Queenstown Integrated Transport Programme Business Case 2017;
- Wakatipu Basin Public Transport Detailed Business Case 2017;
- Queenstown Town Centre Masterplan Working Drafts 2017;
- Queenstown and Wanaka Parking Surveys 2017; and
- Wanaka Strategic Case Review Evidence 2017

Tension may exist between the objectives of strategic documents, which must be identified, explored, and reconciled prior to developing a coherent parking management strategy within the Proposed District Plan.

In this section, we simply noted where the strategic documents promoted policy that was considered relevant to parking, and second, identified issues affected or influenced by parking.

2.1 Queenstown Town Centre Transport Strategy

General:

- This is a transport strategy jointly developed by QLDC, NZTA and ORC for the planning and delivery of transport policy and projects for the Queenstown Town Centre;

- It is guided by six overarching principles, which seek to:
 - maximise existing network capacity,
 - facilitate freight,
 - improve transport-land use integration,
 - provide an attractive town centre for people and businesses,
 - provide reliable, safe, and pleasant multi-modal access
 - acknowledge the contribution of transport in promoting health and well-being;
- The strategy adopts a series of recommended options, split into three time periods (short ((up to 2017/18), medium (2018/19 to 2024/25), and long-term (2025/2026 to 2044/45)), and categorised into four inter-related areas: Parking and other end-of-trip facilities; roads, roadsides and pathways; transport information; and, public transport services. The recommended options and principles for the management of parking are summarised below.

Parking:

- Maximise the use of existing parking resources and increase parking turnover;
- Ensure parking complements improvements to cycling, walking, and public transport by:
 - Restricting parking availability for commuters and prioritising parking for short-stay visitor parking (irrespective of whether they are residents or tourists);
 - Using parking revenue for transport improvements;
 - Prioritising kerbside space currently used for parking for improving walking and cycling and town centre functions;
- Parking measures which may impact negatively on the convenience and affordability of car travel to the town centre for commuters will be mitigated by improvements to alternative modes;
- QLDC will seek to maintain the supply of publicly available parking spaces at 2015 levels;
- Implement a zone-based parking management scheme (Figure 2.1), involving:
 - Zone 1: Introduce parking charges and increase maximum stay to one hour for on-street parking spaces, and prioritise short-stay parking in the off-street car parks by removing leased parking and all-day parking charges;
 - Zone 2: Maintain the predominant P120 restrictions for on-street parking spaces, remove leased parking, and price parking consistently for the off-street car parks;

- Zone 3: Test the introduction of time limits for on-street parking spaces on Gorge Road (between Boundary and Henry Streets), and maintain the Boundary Street car park's role to service a mix of commuters, visitors, and campervan parking;
- Zone 4: Apply a P180 restriction for on and off-street parking, with the option to purchase coupons for long-stay parking for residents and other users such as commuters and businesses;
- The changes proposed to time limits, pricing and reprioritisation of long-term parking to short-stay parking are programmed to be implemented progressively in the short, medium and long terms.

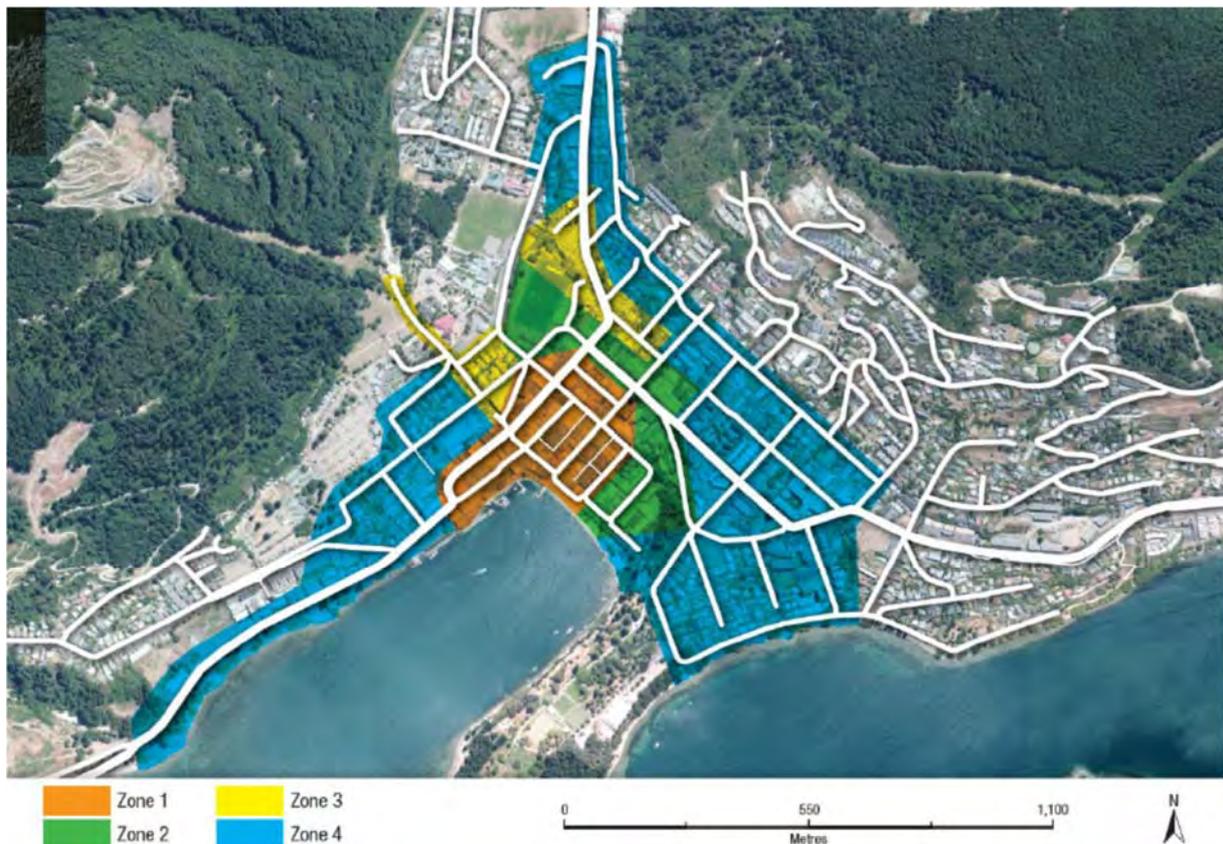


Figure 2.1: Proposed Parking Management Zones in the Queenstown Town Centre Transport Strategy

2.2 Queenstown Integrated Transport Programme Business Case

This programme business case sets out the challenges and opportunities facing Queenstown's transport system over the next 30 years, and presents a recommended integrated transport programme to deliver projects that will address these challenges.

Identified Issues:

- Queenstown's population has increased by 65% between 2001 and 2013 to reach a resident population of 28,224 in 2013. Its population is expected to grow by 2.2% per

annum over the next 20 years, reaching 51,000 by 2033 and nearly 60,000 by 2043, under a medium growth scenario modelled by Statistics New Zealand;

- Queenstown's peak day tourist number is around 66,000 people currently, with an average day tourist number of around 20,000. These tourist numbers are expected to almost double by 2045;
- Growth in population and tourism has contributed to economic growth. Over the last ten years, employment growth in Queenstown and Wakatipu Basin averaged 4.1% per annum compared with 1.2% per annum nationally;
- Vehicle driver trips is the most predominant way of getting to work, with low vehicle occupancy rates for commuting. A survey carried out in 2016 showed the private car mode share for people entering the Queenstown Town Centre via Gorge Road or Frankton Road between 7am to 11am on a typical weekday was between 82% to 88%;
- Queenstown's significant growth places considerable pressures on the transport system, with increasing journey time unreliability by car or public transport currently being experienced, and projected to worsen (in the absence of intervention) in the future;
- A parking survey in April 2016 showed on-street parking occupancy in the town centre was between 77% to 89%, off-street parking occupancy (excluding Man St Car Park) was between 81% to 92%, and the Man St Car Park's occupancy did not exceed 55% due to the low utilisation of leased parking.

Recommended Programme

- A Balanced Public Transport and Active Modes Focus programme was selected as the Recommended Programme as part of the programme business case;
- In relation to parking management, this involved developing and implement a parking strategy between 2018 and 2020 to manage travel demand and encourage mode shift that will:
 - Set and enforce maximum parking durations in and around the central business district;
 - Set parking charges;
 - Consolidate parking to improve access and mitigate unnecessary traffic circulation;
 - Address residents' parking issues;
- The programme also recommends providing park and ride facilities between 2023 and 2025 to enable greater use of public transport. Locations include Frankton, Ladies Mile, Jacks Point, Arrowtown and Arrow Junction.

2.3 Wakatipu Basin Public Transport Detailed Business Case

This detailed business case focuses on public transport service provision (routes, frequencies and fares) in the Wakatipu Basin. Although this document's focus is primarily on public

transport, it identifies several issues related to parking that impact on the use and viability of public transport.

Identified Issues and Assumptions

- Time restricted parking is enforced and “pay and display” parking spaces are available for as little as \$12.50 per week;
- The low cost and high availability of parking is a significant barrier to public transport in the Wakatipu Basin;
- The parking management policy proposed in the Queenstown Town Centre Transport Strategy will improve the attractiveness of public transport and active modes through reducing the affordability and convenience of car travel to the town centre;
- Additional revenue generated through the changes to parking policy, which is assumed to be around \$550,000 per annum, will subsidise improvements to public transport.

2.4 Queenstown Town Centre Masterplan Working Drafts

The Queenstown Town Centre Masterplan can be seen as the blueprint for the Queenstown Town Centre’s future development, and brings together a number of business cases being developed concurrently, such as the aforementioned business cases. Business cases in the areas of parking, arterial routes, the spatial and public realm framework, community and civic facilities, and public transport infrastructure will also be developed in the future.

QLDC has released concept plans for the Masterplan components, including parking, public and passenger transport, town centre arterials, and town centre street upgrades, for public consultation, which is currently ongoing. The following comments relate to the concepts related to parking.

Parking

- Price parking spaces in or close to the Town Centre and adopt location appropriate time restrictions or charges to provide easier access to parking;
- Better enforcement of existing parking restrictions;
- Limit car parking supply to manage traffic and to provide more space for people in the Town Centre, but offer alternative travel options;
- Use smarter parking technology;
- Build multiple new public car parking buildings near the heart of the Town Centre;
- Build new park and ride facilities in peripheral areas (e.g. Gorge Road, Arthurs Point, Frankton, Lake Hayes, Kelvin Peninsula) to support the use of public transport to get into the Town Centre.

2.5 Queenstown Parking Surveys 2017

QLDC conducts an annual parking survey in the Queenstown Town Centre and surrounds, with the latest survey conducted on one day in April 2017. This survey examined both on and off-street parking to report on the occupancy and general availability of short-stay parking in the Town Centre.

Results

- Across the Town Centre, parking occupancy ranged from 37% at 7am, to a peak of 90% at 1pm, dropping to 77% at 4pm;
- Occupancy increased by 10% at 1pm and 4pm compared to the 2016 results;
- On a street basis, the results showed few sections of on street parking have spaces available between 10am to 4pm, with the most availability found in the Man Street car park, Church Street car park, and the Boundary Street car park.
- This is again consistent with the findings of the 2016 parking survey, with a trend showing off-street car parks are occupied less than on-street parking.
- Residential/suburban parking in locations surrounding the town centre experiences a decline in parking availability by at least 30% compared to the base residential occupancy recorded at 7am, which is likely to be a result of commuters spreading out from the town centre in search of all-day and free parking.
- A significant number of vehicles were parked on verges in the surrounding residential areas, but these were not counted in this survey.

2.6 Wanaka Strategic Case Review Evidence

A slideshow on the Wanaka Strategic Case Review Evidence from May 2017 was furnished by QLDC. This provides a recent assessment of the demographic, economic, and transport conditions in Wanaka, and reports on progress towards implementing the projects proposed in the existing Wanaka Transportation and Parking Strategy from 2008. The slideshow also synthesises information from various strategic documents for Wanaka, such as the Wanaka Structure Plan 2007 and Lake Wanaka Tourism Strategic Plan 2012/22.

General

- Wanaka is experiencing current and projected growth in population, households, and tourist numbers;
- Peak tourism period is around the New Year's period, with the total population, including tourists, rising from around 20,000 at the start of December to a peak of 42,000 on 2 January;
- Wanaka is anticipating a 24% increase in visitor arrivals by 2022, and a 23% growth in average stay length;

- Car ownership has increased steadily from 2001 to 2013, with most households owning at least two motor vehicles;
- In 2013, around 80% of commuters drive or are a passenger in a car to go to work, but the percentage of trips to work via walking and cycling exceeds the national average, at over 15%.

Parking

- Measures implemented to downgrade the lakeside Ardmore Street from a cross-town through route to a high amenity street through traffic calming and the use of parking charges; through-routing moved to Brownstown Street;
- A 2015 parking survey showed low parking availability in Wanaka's off-street car parks, with higher availability found in on-street car parks (75% occupied);
- The same survey suggests current time restrictions are not aligned with the demand for parking, which leads to underutilisation of the on-street parking resource or non-compliance with the restrictions;
- The prevalence of unrestricted parking has led to parking spaces being used for storing vehicles long-term, which restricts the spaces available for short-stay and commuter parking;
- Shortage of off-street parking and underutilisation of on-street parking has flow-on effects on traffic congestion as drivers circulate to find a parking space that suits their desired duration of stay

2.7 Wanaka Parking Survey 2017

QLDC conducts an annual parking survey in central Wanaka, with the latest survey conducted on one day in June 2017. This survey examined both on and off-street parking to report on the occupancy and general availability of short-stay parking in central Wanaka.

Results

- Across the Town Centre and its surrounds, parking occupancy ranged from 16% at 7am, to a peak of 60% at 12pm, and dropping to 57% at 3pm;
- Within the Town Centre only, parking occupancy ranged from 19% at 7am, to a peak of 78% at 12pm, and dropping to 74% at 3pm;
- The occupancy recordings for the Town Centre is generally consistent with those recorded for 2016;
- Residential/suburban parking in surrounding streets such as Dungarvon and Helwick Streets experienced high occupancy according to the survey report, possibly due to drivers parking farther from town seeking free all-day parking as these streets are the closest all-day parking option.

2.8 Summary of Commonly Identified Issues (in Strategic Documents)

Based on our review of the relevant strategic planning documents, it is clear there is a common recognition of the transport and land use issues related to or influenced by parking in the Queenstown Lakes District, as well as general alignment on potential measures to address these challenges.

In general, in the absence of appropriate intervention, the population, economic, and tourism growth experienced and projected in Queenstown and Wanaka will pose significant transport challenges in the face of high mode share by private vehicles, high demand for on-street parking, current parking management practices, and the lack of reliability of alternative transport modes.

These strategic documents are generally aligned in their proposed approaches to tackle these challenges. In relation to parking these comprise:

- Improved parking management through location appropriate pricing and time restrictions to address the negative effects of excessively high parking occupancy in the Queenstown and Wanaka town centres;
- The prioritisation of short-stay parking over long-stay commuter parking;
- Consolidation of parking resources in the heart of the Queenstown Town Centre, leaving more space for pedestrians and town centre activity;
- The provision of park and ride facilities at selected peripheral locations to encourage the use of public transport into the Town Centre;

2.9 Identified Tensions

Although the strategic documents are generally aligned in their approach to parking management, it is worth noting potential tensions between some of the desired outcomes. In particular, the Queenstown Town Centre Transport Strategy adopted as a strategy to maintain the quantity of parking in the Town Centre at 2015 levels. However, the Queenstown Town Centre Masterplan discusses the building of multiple car parking buildings in the Town Centre, which would consolidate the location of parking in centralised locations, but there is no clear plan to divest any existing on-street or off-street parking spaces elsewhere, although it has been acknowledged some on-street parking will be removed from streets that will become pedestrianised.

As such, it is not clear how the 2015 public parking supply will be maintained in the event multiple parking buildings are constructed. The construction of multiple parking buildings without a clear plan to divest parking elsewhere risks increasing the net supply of parking in the Queenstown Town Centre, with potential consequences of increased vehicle trips to the Town Centre and the undermining of efforts to increase the attractiveness and viability of alternative modes.

3. Statutory Planning Document Review

The statutory approach to parking management in the Queenstown Lakes District provides context for existing methods to regulate accessory and non-accessory parking in the District. It

also serves as important background for the proposed strategic direction on transport in the Draft Transport Chapter Objectives and Policies for the Proposed District Plan. We examined parking-related rules, standards, objectives and policies in the Operative Queenstown Lakes District Plan.

3.1 Operative Queenstown Lakes District Plan

Non-accessory parking

Off-street parking areas or parking buildings not associated with a land use and typically available to the public, also known as non-accessory parking, are currently controlled activities in a number of zones, including in the Town Centre, Business, and Industrial A and B zones (Rule 14.2.2.2). As a controlled activity, resource consent must be granted to non-accessory parking in these zones.

This is an 'enabling' approach to the supply of publicly available off-street parking, especially in the Town Centre zones (e.g. Queenstown and Wanaka Town Centres). It allows private parking operators to build new shared parking facilities when there is sufficient demand for them.

However, private shared parking facilities have not proliferated in the Queenstown and Wanaka Town Centres. This may reflect the high cost of land in these Town Centres, which can be dedicated to more economically productive and profitable land uses than car parking.

From a consenting perspective, should QLDC wish to advance the consenting of shared parking facilities in the Town Centre zones as proposed in the Queenstown Masterplan, it would be able to do so with relative ease under the controlled activity status in the current Operative District Plan. Park and ride facilities would achieve a similar consenting outcome, if they were in those zones where such activity would be controlled (such as Town Centre, Business, Industrial A and B, Remarkables Park, or the Queenstown Airport Mixed Use zones) or in those zones where such activity would be permitted (such as in the rural general or rural living zones – surface parking only).

Accessory parking

The Operative District Plan requires a minimum amount of parking for different activities throughout the District. It also sets maximum parking requirements in the Frankton Flats Special Zone (B). This is a 'prescriptive' approach as not only are there parking requirements for different types of activities by location, but also separate requirements for residents/visitors, and staff/guests. This approach is not unusual in the New Zealand context, although we note that many councils are moving towards removing or reducing minimum parking requirements in areas outside of their main commercial centres.

Minimum parking requirements do not apply in the Town Centre zones (excluding the Town Centre Transition sub-zone and the Town Centre Lakeview sub-zone) under Rule 14.2.4.1(i)(a), which shall be subject to the existing car parking requirements. The wording around being subject to the existing car parking requirements in our view is vague, but based on correspondence with QLDC, we understand the standard practice is to not apply minimum parking requirements to activities in the Town Centre zones.

Table 6.1, Table 6.2 and Table 6.3 in Appendix A summarise selected minimum and maximum parking requirements for common activities in other main zones. This is provided to enable a discussion of the existing minimum parking management regime in the District in the following sub-section. These tables do not show the minimum parking requirements for a number of special zones such as the Remarkables Park Zone, Mount Cardrona Station Special Zone, and the Three Parks Zone.

3.1.1 Discussion of existing minimum parking requirements

There are several minimum parking requirements in Appendix A set for existing activities which in our opinion, are inconsistent with common practice, and may discourage development of the activity with which the requirement is associated. In particular, these relate to the minimum parking requirements for multi-unit residential activities (e.g. apartments) and industrial activities.

For residential units in zones like the High Density Residential ('HDR') and the Queenstown Town Centre Lakeview sub-zone, parking requirements are currently set at a rate of between 1 to 2 per unit, depending on the exact location¹. A similar rate applies to residential units in the Frankton Flats Special Zone (B). While this parking requirement may be appropriate for low density detached dwellings in the District, it appears inappropriate for higher intensity multi-unit residential development like apartments, particularly in zones where high density development is anticipated such as the HDR. In our view, the effect of applying the aforesaid rate to multi-unit residential developments is to make it more onerous to develop intensively, as around one parking space is required for each unit, even though they are developed more compactly than a traditional detached dwelling in similar high density zones. Consequently, a developer would be required to forego a large portion of land for parking instead of using it for the multi-unit residential development, or go through a resource consent process to seek a dispensation. This may increase the cost of development, either through land costs, regulatory costs or opportunity costs, rendering multi-unit residential development less feasible in these zones.

This approach is in contrast to recent practice in other councils in New Zealand. For instance, the Auckland Unitary Plan (Operative in Part) does not specify minimum parking requirements for residential units in high density zones, and specifies a low or no minimum parking requirement for 1-bedroom units and studios in selected lower density residential zones. In this way, the absence of, or lower parking requirements facilitate dense residential development, rather than discouraging it.

The existing parking requirement for staff of industrial activities at 1 per 25 m² of floor area plus 1 per 100 m² of storage space also appears quite high based on our experience with the setting of requirements for similar activities in other council areas. At this rate, this is comparable to the existing minimum parking requirements for retail activities in the District, even though industrial activities are likely to require less on-site parking, and have less parking turnover than retail. As such, existing minimum parking requirements for industrial activities may also impose high land, development and opportunity costs for the developer, irrespective of their actual need for on-site parking. In this regard, basing parking requirements for industrial activities on actual staff

¹ Noting that some or all of this is able to be located off site provided it is well secured through lease arrangements, etc.

numbers or lowering the rate of parking provision, may facilitate the establishment of industrial activities in the District.

The themes raised about existing minimum parking requirements in this sub-section, concerning the high land, development and opportunity costs associated with requiring on-site parking, are discussed in further detail in the following section, in which we provide an overview of the benefits and costs of parking requirements.

4. Analysis of alternative parking management policies

This section analyses parking management policies in the following areas:

- Parking minimums
- Parking maximums
- Shared parking

This is a relatively high-level analysis that outlines principles for parking management and identifies the relative benefits and costs of alternative policy approaches. The principles we outline here are applicable to all cities and towns, albeit with the need to consider local characteristics.

4.1 Off-Street Minimum Parking Requirements

4.1.1 Rationale for minimum parking requirements – a case for regulation?

Since the 1960s, most local authorities in New Zealand have implemented minimum parking requirements that require new developments to provide for their individual parking demands on-site. As shown above, minimums are typically set based on the size of new developments. For instance, new offices in non-Town Centre locations in Queenstown are required to provide one parking space per 50 m² GFA.

Minimum parking requirements were originally designed as a response to rapidly growing rates of vehicle use and increased demand for public parking that was difficult to manage. However, the conditions under which they were originally implemented have changed: parking management has become cheaper and more sophisticated, and increased demand for land in urban areas has pushed up the cost of providing surface parking by a large amount.

The development of a new Transport Chapter in the Proposed District Plan therefore presents the opportunity to ask two key questions about the rationale for parking policies:

1. Are there any problems that would arise in the absence of minimum parking requirements under the District Plan? If not, regulations could not increase environmental, economic, social, and cultural wellbeing and hence would not meet the purpose of the RMA.
2. Are minimum parking requirements likely to deliver benefits that exceed the costs? If not, regulating would reduce environmental, economic, social and cultural wellbeing and hence would not meet the purpose of the RMA.

We therefore begin this discussion by establishing a framework for economic analysis of minimum parking requirements. This framework directly addresses the requirements of Section 32 of the RMA, and more specifically s32(2), which requires identification and assessment of environmental, economic, social, and cultural effects, including impacts on opportunities for economic growth and employment (s32(2)(a)), quantification of these effects if practicable (s32(2)(b)), and assessment of the risk of acting or not acting (s32(2)(c)).

The Treasury recommends basing an investigation into the desirability of regulatory interventions by asking whether there are any problems that would arise under a ‘status quo’ scenario in which no further regulations were implemented.² The following diagram summarises the questions that economists typically ask when investigating whether there is a case to regulate. However, it is not sufficient to merely establish that there may be a case to regulate – it is also necessary to show that the benefits of regulating exceed the costs. If this is not the case, then regulating is likely to be adverse, not beneficial, to environmental, economic, social, and cultural wellbeing.

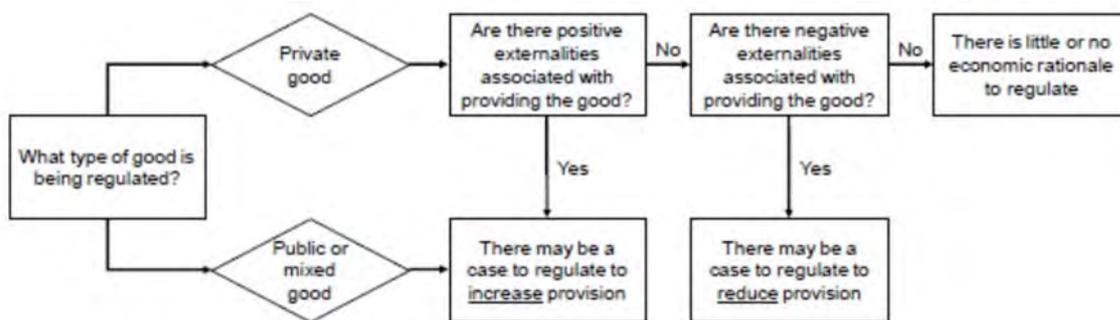


Figure 4.1: Questions to ask when choosing whether and how to regulate

Using the framework described above, it is possible to assess whether or not there is a case to regulate the supply of off-street parking through minimum parking requirements under the RMA. We begin by observing that parking is best seen as a private good, rather than a public good or mixed good, as:

1. Parking is rivalrous – two cars cannot occupy the same parking space at the same time; and
2. Parking is excludable – it is possible to prevent people from using a parking space

Therefore, the rationale to regulate parking rests upon the existence and magnitude of externalities associated with the supply of parking, i.e. ‘spillovers’ to the rest of the transport system or to neighbouring properties. We contend that regulating for increased parking supply will generate several negative externalities in the following areas:

- Negative transport externalities;
- Reduced economic viability of centres leading to lower economic performance;

² See Section 3 of the Treasury’s *Regulatory Impact Analysis Handbook*

- Reduced urban amenity;

We also contend that minimum parking requirements may generate several positive externalities in the following areas:

- Reduced parking spillover;
- Reduced localised congestion from searching for parking

These negative and positive externalities are in turn discussed in the following sub-sections.

4.1.2 Negative externalities

Transport

An abundant supply of low-cost or “free” parking, both residential and commercial, has stimulated excessive demand for vehicle based travel and lifestyle patterns, which will in turn create an incentive to drive more.³ This has three effects. First, it discourages people from using cars more efficiently, such as through car-pooling and trip-linking. Second, it artificially reduces the attractiveness of alternative transport modes, such as walking, cycling, and public transport. Finally, it competes with and to an extent undermines the viability of transport services that reduce the need to travel altogether, such as potential car-share schemes, home delivery services, and telecommuting. Home delivery is a viable service in towns such as Queenstown and Wanaka, but in some places it may struggle to compete due to an abundant supply of free parking.

Minimum parking requirements may also have negative implications for road safety by requiring individual developments to provide parking on a site-by-site basis. Exclusive site based parking requirements create a large number of vehicle accesses to the road system which in turn create more complex vehicle turning movements and increasing conflict between vehicles and pedestrians. This adverse effect has been addressed in part by Rule 14.2.4.1(iv)(e), which allows parking for residential and visitor accommodation units to be provided off-site in a High Density Residential Zone located within 400 m of a public transport route.

Frequent kerb cuts for vehicle access may reduce safety due to increased potential for vehicle-pedestrian conflicts. If every site is required to provide on-site parking, this results in a vehicle crossing for every site, which can proliferate vehicle accessways across busy pedestrian footpaths in areas of high foot traffic. Road safety studies have demonstrated that as accessway density increases, crash frequencies also increase due to the conflict generated between vehicles, pedestrians and cyclists.⁴

³ For a general discussion, see Shoup, D. 2005. *The High Cost of Free Parking*. Chicago: American Planning Association Planners Press. For a review of evidence on the impact of lower parking prices on transport mode choice, see Marsden, G. 2006. “The evidence base for parking policies—a review.” *Transport Policy*, 13(6), pp.447-457. For more specific evidence on the causal impact of increased parking provision on driving, see McCahill, C., Garrick, N., Atkinson-Palombo, C. and Polinski, A. 2015. “Effects of parking provision on automobile use in cities: inferring causality.” *Transportation Research Board*.

⁴ For example, the Infrastructure Risk Rating Manual, prepared for NZTA in 2016 places a higher risk rating the higher the accessway density, <https://www.pikb.co.nz/assets/Uploads/Documents/IRR-Manual-FINAL-Issued-13-07-2016.pdf>, accessed 5 June 2017.

Economic Viability

Minimum parking requirements attempt to reduce demand for public on-street parking by shifting responsibility for parking provision onto the private sector. However, in trying to solve one problem they may unintentionally create other problems. Minimum parking requirements attempt to meet the demand for 'free' parking generated by individual developments. However, parking is not free to provide: there are significant costs associated with the land used for parking as well as construction. These costs must be borne by developers and end users, which may reduce the quantity of development that occurs or raise the cost of housing and business space.

Requiring the provision of parking reduces the space available for other potentially more valuable activities. For example, the average parking space takes up approximately 30m² of land space, once allowance is made for vehicle access and manoeuvring.⁵

In urban areas such as Auckland, the cost of each surface parking space is typically \$14,000-\$46,000.⁶ The continued application of minimum parking requirements therefore greatly increases the costs of development, especially in places with high land values like the Queenstown and Wanaka Town Centres, thereby reducing the potential for economic activity and employment, and in the process can undermine opportunities for economic development.

Urban Amenity

Minimum parking requirements can contribute to a sprawling and fragmented urban form. By requiring that parking is provided on a site-by-site basis, minimum parking requirements create a large number of relatively small parking areas that serve one destination.⁷ This is less efficient than a situation where consolidated parking areas may be used to access multiple destinations in the surrounding area. The high numbers of vehicle access ways break up the street frontages and reduce safety and security.

From a transport perspective, a compact urban form is associated with reductions in driver mode share, which in turn can lead to significant impacts on uplifting the number of trips carried out by public transport and active transport.⁸ Compact urban environments also create shorter distances between destinations, enabling easier access by walking or cycling.

Dr Donald Shoup also discusses the relationship between parking rules and urban design outcomes. He argues that *"minimum parking requirements determine what can be built, what it looks like, and how much it costs. Minimum parking requirements have transformed many residential streets into garagescapes where the only obvious way to enter a building is with an*

⁵ Austroads Guide to Traffic Management Part 11, 2008 – described 30 m² as the absolute minimum space requirement

⁶ Nunns, P. 2017. "Are we leaving money on the table? The impacts of public and active transport on car ownership and parking costs." Presented at the 2017 IPENZ-Transportation Group Conference, where it was awarded best research paper.

⁷ Seibert, C. (2008). There is no such thing as a free parking space. *Policy*. Australia Centre for Independent Studies. 24: 7-13

⁸ New Zealand Transport Agency Research Report 513, Impact of urban form on transport and economic outcomes, January 2013.

*electronic garage-door opener... Planners initially designed parking requirements to serve buildings. Architects now design buildings to serve the parking requirements”.*⁹

Minimum parking requirements can have a significant impact on quality built form outcomes. This can be seen on the ground in many cities. For instance, in Auckland most high quality walkable centres (e.g. Ponsonby Road, Mt Eden Village, Kingsland) were constructed before parking minimums were applied (or redeveloped with dispensations to breach minimums). By contrast, many of the developments in more recent times (e.g. Manukau city centre, Lunn Avenue, Wairau Park) have a poorer quality urban form due to the fact that their layout has been significantly influenced by parking minimums.

4.1.3 Positive externalities

Reduced parking spillover

A commonly raised rationale for implementing minimum parking requirements for all activities is to avoid or mitigate the effects of parking spillover; whereby if each site provided sufficient on-site parking, it would be less likely that parked cars would spillover onto the street or onto the parking of neighbouring sites.

For example, if new land uses choose not to provide on-site parking to meet the needs of their customers/staff, and if QLDC chooses not to manage on-street parking, then the availability of parking spaces for other uses (e.g. people visiting neighbouring residences) may be reduced. This may lead to some localised congestion as people ‘cruise’ to find on-street parking, or poor amenity outcomes associated with illegal parking on grass verges or footpaths. The other scenario would be if land uses choose not to provide on-site parking to meet the needs of their customers, their neighbours may have to bear some additional costs to manage access to their own car parks. These costs can be measured in financial terms, as they relate to either (a) the costs to businesses to implement parking management measures to exclude spillover parking or (b) reduced retail revenue arising from any deterrent effect that parking management has on customers.

As a result, minimum parking requirements seek to avoid or mitigate parking spillover by requiring land uses to provide enough on-site parking.

Reduced congestion and better accessibility

Another common justification for minimum parking requirements in commercial areas is that the absence of such requirements may lead to land uses not providing any or enough on-site parking to meet the needs of their customers, and if QLDC and owners of existing off-street car parks are unable to efficiently manage parking, then increased congestion (from cruising to find parking) and increased difficulty in finding parking may in turn reduce the accessibility and economic viability of retail centres relative to out-of-centre retail locations. Therefore, requiring parking for activities on all sites may make it easier for people to access various activities by car

⁹ Shoup, D.C. (1997). The High Cost of Free Parking. Journal of Planning Education and Research 17, 1:3-20.

and minimise congestion from looking for parking on the street, assuming QLDC and private car park operators did not take measures to manage parking efficiently.

4.1.4 Summary

As this discussion indicates, negative externalities may arise as a result of measures that increase parking supply (such as retail MPRs), while there may be some benefits from implementing parking minimums. It is therefore important to understand in what locations would the costs of minimum parking requirements exceed the benefits, which may make the regulation to increase parking supply undesirable, due to the negative externalities that may arise in terms of transport effects, economic effects, and urban amenity effects. On the other hand, the benefits of parking minimums may exceed the costs in other locations, which could justify their implementation.

In the following Section 5, we make some assumptions on where the negative effects of minimum parking requirements are likely to be largest, based on the expected land values and anticipated levels of activity intensity across the District.

4.2 Maximums

Another common parking management technique is to apply maximum parking requirements to cap the amount of parking that new developments can provide. The aim of maximum parking requirement is to manage parking supply and the associated effects that this parking may have on the transport network, urban form outcomes, and modal shift outcomes towards public transport and active transport. As outlined above, parking maximums are already used in the Frankton Flats Special Zone (B) of the Operative District Plan.

4.2.1 Rationale for maximum parking requirements – a case for regulation?

The framework for justifying regulation described in sub-section 4.1.1 above can equally be applied to assess whether or not there is a case to adopt maximum parking requirements.

Parking maximums can impose economic costs if they prevent businesses from providing a private good – parking – that would have some value to them. It is therefore important to establish the value of parking in Queenstown Lakes District, i.e. the price that people are willing to pay for it, to work out the cost of regulating to reduce parking supply in the short and long-terms. We also recognise that parking demand varies considerably between businesses and hence it cannot be assumed that all businesses will be unaffected by the implementation of parking maximums.

Conversely, parking maximums may generate economic benefits through their indirect impact on transport mode choice and the efficient operation of the transport system. For instance, if constraints on parking supply lead some people to shift from driving to public transport or active modes, they may reduce on peak period traffic congestion. These benefits are likely to be highest in areas with peak traffic congestion problems, such as the Queenstown Town Centre.¹⁰

¹⁰ New Zealand Transport Agency, Queenstown Integrated Transport Programme Business Case Version 4, June 2017

To summarise, there is a potential case to regulate to reduce parking supply through parking maximums, and it is possible in principle for the benefits of doing so to outweigh the costs, but these need to be established more clearly for the Queenstown Lakes District's context.

4.2.2 Impacts on economic vitality

Based on our experience in hearings and Environment Court mediation processes for parking provisions in Auckland, a commonly raised concern regarding maximum parking requirements relate to the extent to which restricting parking supply in certain locations can impact on the economic vitality of a development within the area. Using parking maximums as a means to influence travel demand and congestion requires a good availability of alternative access to other transport modes, and in the absence of good alternatives, may impose negative externalities on businesses.

To avoid potential negative economic impacts, Auckland's Unitary Plan mandates that office activities, irrespective of location or zone, are subject to a maximum parking requirement. This rule aims to avoid office activities locating away from centres in order to be able to supply additional parking and thus encouraging office activities to be located in centres and therefore areas with good public transport, walking, and cycling accessibility.

In addition to offices throughout Auckland, medical facilities and educational activities in centres and mixed use zones are also subject to a maximum parking requirement.¹¹ These activities, in our view, also generate highly peaked travel demands concentrated in the typical morning and evening peaks, whose typical single occupancy private vehicle trips are the easiest to replace by public transport and active transport, as transport alternatives become more available during peak times.¹² Also, as outlined above, the provision of parking to meet peak travel and parking demand also leads to an inefficient and costly use of land.

However, activities other than offices, medical facilities, and education generate travel demands that can fluctuate through the day, such as retail activities. Accordingly, it may not be appropriate to limit the quantity of parking for other activities, especially if it constrains businesses from providing parking that would have some value to them and their customers. The Auckland Unitary Plan recognises this and hence does not set maximums for other activities outside of the City Centre.

4.2.3 Summary

As discussed, deciding whether or not to adopt maximum parking requirements depends on whether the benefits outweigh the costs, which needs to be better established for the District. From the Auckland experience, it has been shown that certain activities such as offices could be regulated by parking maximums with more benefit than cost, due to the ability to concentrate offices within a compact urban form and to replace peak vehicle trips to offices by alternative transport modes.

¹¹ This is a position agreed in Environment Court mediation between Auckland Council and appellants. This does not necessarily mean it will be adopted in the final Operative Auckland Unitary Plan

¹² Otago Regional Council Regional Public Transport Plan Otago 2014, Addendum Wakatipu Basin Public Transport May 2017 – Route 1 has an all-day frequency of 15 minutes, Routes 2 and 4 have a peak frequency of 30 minutes, reducing to 60 minutes in the off-peak.

Accordingly, activities in the Queenstown Lakes District with demonstrable peak travel demands that are located in areas with good availability of alternative transport choices could be subject to a similar approach as adopted in Auckland, such as areas within a reasonable walking distance of routes with 15 to 30 minute frequencies as part of upcoming changes to Queenstown's Bus Network.¹³ In this regard, maximum parking requirements may not presently be suitable in Wanaka, due to the absence of a public transport system there.

4.3 Shared Parking

An analysis of options for developing new shared parking facilities in Queenstown Town Centre as proposed in the Queenstown Town Centre Masterplan needs to begin with an assessment of the commercial viability of developing them. In other words, are expected parking revenues sufficient to pay for the costs of building, maintaining, and operating a parking facility?

QLDC's options are likely to differ depending upon whether this holds true:

- If new parking facilities are commercially viable, private parking providers have an incentive to supply new parking facilities to meet demand. In this case, QLDC may consider policy levers to (a) ease consenting for new parking facilities and/or (b) facilitate access to an appropriate development site.
- If new parking facilities are not commercially viable, a subsidy will be required to supply new parking facilities to meet demand. In this case, QLDC may consider alternative approaches to funding the shortfall in revenue, which may include (a) a subsidy from general rates, (b) targeted rates applied to sites that benefit from new parking facilities, or (c) development contributions levied on new buildings to require them to contribute to new parking supply.

4.3.1 Commercial viability

In 2017, in an IPENZ research paper¹⁴, Peter Nunns of MRCagney developed a methodology for comparing the costs and revenues from parking facilities, which can be adapted to the Queenstown Town Centre context. In general, the key inputs required for an analysis of commercial viability include:

- Parking supply costs:
 - Updated construction costs for multi-storey parking facilities, which can be sourced from QV Costbuilder;
 - Current land prices in central Queenstown, which can be obtained from QLDC from their latest ratings valuation;
 - Parking operation and maintenance costs: it was assumed to be \$1000/space/year in the IPENZ paper, but this can be revised for the Queenstown Town Centre context

¹³ *ibid.*

¹⁴ Nunns, P. (2017) *Are we leaving money on the table? Assessing the impacts of public and active transport investments on car ownership and parking costs*, IPENZ Transportation Group Conference, March 2017

- Parking revenues:
 - Hourly or daily parking tariffs in Queenstown Town Centre, sourced from QLDC or sources like Parkopedia;
 - Parking occupancy data sourced from annual QLDC surveys

Accordingly, before deciding on whether to use mechanisms available through the planning or local government process to fund shared parking facilities in the Queenstown Town Centre, assessing the commercial viability of such a scheme would be a useful first step.

4.3.2 Criteria for assessing options

Based on our previous experience with parking management, we propose the following three criteria for assessing options:

- Does this option provide QLDC and local residents/businesses with certainty about the timing and location of parking provision?
- Does this option ensure that people who benefit from the project pay in proportion to the benefits they receive?
- How large of a subsidy is needed from non-users?

4.3.3 Options for facilitating provision of shared parking in the Queenstown Town Centre

In the event that shared parking is commercially viable to provide, a number of options are available to QLDC to facilitate its provision. These comprise:

- **Do Nothing:** Maintain/rollover existing district plan rules and leave it to private parking providers to supply additional parking when they perceive benefits from doing so. As noted earlier, the Operative District Plan provides for non-accessory parking as a controlled activity. Rolling this rule over to the Proposed District Plan would provide private parking operators a great deal of regulatory certainty of obtaining a resource consent for a privately operated public car park;
- **Adjust consenting and design requirements:** Change district plan rules to make it easier to consent new non-accessory parking facilities and/or change design standards for new parking facilities. For example, although non-accessory parking is a controlled activity, if it is located on a rooftop it would be a restricted discretionary activity (Rule 14.2.4.1(iv)(f)). QLDC may wish to make a trade-off between the visual amenity of rooftop parking and the more efficient use of parking buildings to make it easier to obtain resource consent for rooftop parking, with the appropriate design controls.
- **Help parking providers with site selection:** Work with private parking providers to identify an appropriate site for new shared parking facilities. This would entail working with providers but may not entail high financial costs. This may be appropriate for the sites identified as potential locations for shared parking in the Queenstown Town Centre Masterplan, as they are Council-owned, which could be sold to private parking providers at market prices for the development of shared parking.

In the event that shared parking is not commercially viable to provide, then QLDC would have the following options to facilitate its provision, which comprise:

- **Do Nothing:** Maintain existing policies and wait for parking to be commercially viable, e.g. due to increasing parking prices due to high demand. This could be further facilitated by adjusting on-street parking prices upwards in response to excess demand, which would create a 'price signal' to indicate to providers that they should provide more parking.
- **Arrange a subsidy for new shared parking facilities:** This would entail QLDC subsidising private or public provision of new shared parking facilities. There are four ways that the subsidy could be funded:
 - General rates;
 - A targeted rate on Town Centre businesses;
 - Development contributions levied on new Town Centre developments;
 - Offering Council-owned land identified for potential shared parking in the Queenstown Town Centre Masterplan to private parking operators for development, at below market prices.

We do not consider financial contributions under the RMA as an option, as the Resource Legislation Amendment Act 2017 phases these out by 2022.¹⁵

4.4 Summary

One of the aims of this review is to ensure that future changes to parking policy are well aligned with QLDC's strategic visions, one of which is to reduce reliance on cars, move towards a multi-modal transport network, while improving the overall economic competitiveness of the District.

As shown in this section, parking policies have implications for transport system performance and economic competitiveness at a number of levels. They affect the attractiveness of cities as places to live, work, and invest. Excessive parking provision can use up valuable floor space and land area, and increase traffic congestion, which flows through into higher costs of goods (including accommodation), services, and reduced amenity.

Appropriate parking policies can improve overall economic competitiveness. In the absence of minimum parking requirement, space can be freed up space for housing development and business space provision, enabling the District Plan to provide for and enable expected future population, economic, and tourism growth.

The following section discusses the ways in which the broad principles and strategies discussed here can be applied in the Queenstown Lakes District's context through a general direction in the Proposed District Plan's Transport Chapter's provisions and wider local government funding mechanisms.

¹⁵ <http://www.mfe.govt.nz/sites/default/files/media/overview-changes-resource-legislation-amendment-act.pdf>

5. Strategic Advice

5.1 Parking Requirements

The following strategic advice on the setting of parking requirements, if any, is premised on the assumption of there being a hierarchy of zones within the Queenstown Lakes District, ordered by the density of activity and land use anticipated in each zone and assumed land values. Parking requirements are subsequently set on the basis of activities or groups of activities falling within the zones within each hierarchy level.

The proposed hierarchy is:

	Zones
Group 1	Queenstown Town Centre; Wanaka Town Centre; Arrowtown Town Centre; High Density Residential; Medium Density Residential; Arrowtown Residential Historic Management Zone; Local Shopping Centres; Business Mixed Use Zone
Group 2	Queenstown Airport Mixed Use Zone; Low Density Residential; Large Lot Residential; Rural Zones; Special Zones

5.2 Group 1

Zones belonging to Group 1 are assumed to be typified by areas currently experiencing or anticipated to experience one or more of the following phenomena:

- High density of activities such as residential or commercial land uses;
- High pedestrian traffic;
- High amenity retail frontages;
- Relatively high land values;
- Smaller sites;
- Areas of anticipated change from sparse to higher density development (e.g. Business Mixed Use)

5.2.1 Group 1 – Minimum parking requirements

Based on our overview of parking regulation in Section 4.1 of this Technical Note, activities within zones belonging to the proposed Group 1 would generally not be suitable to be subject to minimum parking requirements, as the economic costs and negative externalities from their implementation are likely to outweigh any benefits.

This is because in areas with relatively high land values, the requirement to provide a set amount of parking for an activity irrespective of actual demand will increase development costs and/or take up valuable land that could be used for housing or business floorspace. Minimum parking requirements in these zones would reduce a site's maximum potential development

capacity by requiring land to be set aside for parking rather than, say, to build more residential units or commercial floor space.

Zones in Group 1 are also likely to be areas of high pedestrian activity. In some locations, particularly the Queenstown and Wanaka Town Centres, pedestrians may outnumber cars. As explained earlier, minimum parking requirements are generally inappropriate in areas of high pedestrian activity because they proliferate the presence of vehicle accesses and kerb cuts, increasing the risk of vehicle-pedestrian conflict.

From an urban amenity perspective, requiring parking for every site and the associated proliferation of vehicle accesses and kerb cuts in areas of dense commercial and residential activity will disrupt or break high amenity retail frontages in the Town Centres. This has the effect of degrading the pedestrian environment and urban streetscape, and spacing land uses far apart from each other and from the street frontage (where parking is provided in front of a building), contributing to a sense of urban dispersion and making it inconvenient to walk between sites.

For smaller sites, which tend to be more common in the high-density commercial and residential zones and the Arrowtown Residential Historic Management Zone in Group 1, the requirement to provide parking will take up a disproportionate proportion of a site compared to sites in other zones that have larger site sizes. Furthermore, the requirement to provide parking on small sites can result in compromises to other aspects of best practice transport safety. For example, widening the access to accommodate parking manoeuvring, requiring vehicles to reverse onto the street or across a footpath or compromising the parking design dimension standards, with associated adverse transport safety effects on both pedestrians and motorists.

There are also areas such as the Business Mixed Use zone that are currently characterised by a low density, dispersed and low amenity business/light industrial urban environment, with an absence of a defined streetscape or quality pedestrian environment, but which are anticipated by the Council to transform into higher density activity areas with an improved public realm (e.g. Gorge Road Business Mixed Use zone). The existing urban environment in such a zone has arguably already been defined by current minimum parking environments, where there is ample parking for each site, often in front of the building, creating a severance between the street frontage and the building, and separation between sites.

Notwithstanding the existing conditions, the Business Mixed Use zone is anticipated to contain a wider range of activities in the future, including higher density accommodation, which would be incompatible with the existing high minimum parking requirements because either the minimum parking requirements would make high density development infeasible, or compliance with the minimum parking requirements would exacerbate the low amenity environment described above. Accordingly, there is merit in relaxing minimum parking requirements for this zone to encourage a greater density of development and to improve the zone's overall urban amenity.

In terms of the wider integrated transport network and the desire to increase the number of trips via public and active transport, the zones in Group 1 are currently or planned to be comparatively accessible by the new public transport network and walking and cycling. Requiring parking within these zones therefore serve to subsidise free off-street parking, and may undermine the attractiveness and efforts to promote public and active transport.

Overall, in view of the above, we recommend removing, or at least significantly reducing, minimum parking requirements for activities in the zones listed in Group 1. We see this recommendation as not necessarily a binary option (i.e. removing or relaxing minimum parking requirements). Rather, several intermediate also exist which provide greater nuance to the zones listed under Group 1. These comprise:

- MPR reduction factors for areas near main PT routes, major centres, or walking/cycling routes;
- Removal or significant reductions of MPRs for apartments, but not other residential dwellings. This makes sense as MPRs are going to be most costly and challenging to comply with for apartments due to the need to provide basement or structured parking;
- Removal of MPRs for small sites in centres. This reflects the fact that smaller sites will be more difficult to develop/redevelop with prescribed rates of parking; and
- Removal of MPRs for all land uses in centres except retail - keeping in mind that the retailers may be the ones who complain the most and have the most resources to oppose (in hearings and/or subsequently in the courts).

5.2.2 Group 1 – Maximum parking requirements

In relation to maximum parking requirements, and as explained in our overview in Section 4.2 of this Technical Note, we are of the view that they are most appropriate for activities that generate highly peaked private vehicle travel demands. In this way, maximum parking requirements will limit parking supply based on peak vehicle travel demand, which will support the shift towards trips generated by such activities being replaced by public and active transport, as transport alternatives like buses are most available during peak times.

Maximum parking requirements on activities with high peak private vehicle travel demands such as offices, irrespective of zone, may also encourage their location in centres and therefore areas with good public transport, walking, and cycling accessibility.

To this end, we would support maximum parking requirements for offices in Group 1 Zones (as well as all other zones), as well as for the following activities in the Group 1 zones, which are also more likely to have highly peaked private vehicle travel demands in the Queenstown Lakes District that would be able to be replaced by public and active transport:

- Educational Facility; and
- Health Care Facility;

We do not support maximum parking requirements for any other activity in the Group 1 Zones (as well as the other zones), as their travel demands often fluctuate throughout the day. Other activities may derive benefit from choosing to supply a quantity of parking they consider suitable to cater for their needs, without necessarily imposing significant peak-time effects on the transport system.

5.3 Group 2

The remaining zones not in Group 1 are proposed to be categorised as Group 2. These zones are generally typified by larger site sizes, lower pedestrian activity, lower density of activity, and in the case of zones like the Business Mixed Use Zone and Rural Zones, typically have lower

amenity and streetscape values. These zones are also likely to have relatively lower land values on a per square metre basis compared to land within the Group 1 zones.

5.3.1 Group 2 – Minimum parking requirements

The application of minimum parking requirements in the Group 2 zones could in principle be justified in the sense that the economic costs and negative externalities from regulation would not outweigh the benefits. This is most likely to be the case as in areas with lower land values, as the requirement to provide a set amount of parking would incur lower opportunity costs (i.e. the cost of providing parking compared to doing something else with the land), as well as lower land costs.

A second consideration is that Group 2 zones tend to have poorer access to alternative transport modes, so developers are assumed to derive more benefits from providing parking to meet or exceed the minimum required.

Group 2 zones, being areas of relatively lower residential and commercial density, are also unlikely to encounter the same levels of pedestrian activity compared to the Group 1 zones. By extension, these areas are also likely to be more reliant on vehicular access due to their location away from reliable public and active transport infrastructure and services, and lower activity density, so businesses would likely provide parking on-site anyway, and a regulatory requirement to provide parking would therefore not be burdensome. With lower levels of pedestrian activity in the Group 2 zones, there is a lower risk of vehicle-pedestrian conflict associated with the provision of car parking for each site and associated vehicle accesses.

As regards urban amenity in the Group 2 residential zones (e.g. Low Density Residential, Large Lot Residential, residential areas in the Special Zones), existing dwellings within these low density residential environments are generally characterised by one detached dwelling per site, with ample parking provided on a relatively large site (e.g. in a garage), and separated from neighbouring sites through generous yard setbacks. As such, the provision of ample parking forms part of the low density urban environment, and hence the requirement to provide a minimum amount of parking making little difference to local urban amenity values

Overall, in view of the above, we would not object to the application of minimum parking requirements for activities in the zones listed in Group 2.

5.3.2 Group 2 – maximum parking requirements

With respect to maximum parking requirements for zones in Group 2, we support a similar approach as explained in sub-section 5.2.2 of this Technical Note; that they are only appropriate for offices in all zones throughout the District.

For all other activities, including the Educational Facility and Health Care Facility activities for which we recommended maximum parking requirements in the Group 1 zones, we do not recommend maximum parking requirements. The primary reason is that Group 2 zones are less likely to have sufficient reliable access to shops, services, and other activities via alternative means such as public transport and walking and cycling to justify limiting the amount of parking a developer may choose to provide. Accordingly, we are of the view that allowing the developer to provide as much parking as they need in locations which are more dependent on vehicular

access would generate more benefits than costs for the developer, people accessing the sites, and the District at-large.

5.4 Funding shared parking in the Queenstown Town Centre

Our overview of assessing the commercial viability of shared parking facilities in Section 4.3 provided an introduction to how commercial viability could be assessed, as well as an outline of the policy levers available to QLDC to facilitate the construction of shared parking, including District Plan rules and funding mechanisms.

At this stage, we have not assessed the commercial viability of providing shared parking, and hence we do not make any recommendations on whether Council funding is required in order to provide shared parking.

This Section therefore focuses on assessing the potential funding mechanisms that QLDC may wish to explore to fund and subsidise shared parking against the criteria we proposed above. To reiterate, these mechanisms comprise:

- General rates
- A targeted rate on Town Centre businesses
- Development contributions levied on new Town Centre developments
- Offering Council-owned land to private parking operators for shared parking development at below market prices.

We assume that all four of these mechanisms would raise a similar amount of money – hence differences in their performance would be driven by (a) the degree to which they align costs and benefits and (b) the degree to which they provide certainty about parking supply outcomes.

5.4.1 Assessment against alignment of costs and benefits

The following table summarises some preliminary notes for an assessment against the first two proposed criteria in sub-section 4.3.2. Options are scored on a H/M/L scale, with notes explaining why scoring was given.

Table 5.1: Scoring against 'Certainty' criterion

Option	Scoring	Rationale
Parking is commercially viable		
Do Nothing	L	QLDC would have little influence over parking location and timing, except insofar as consenting process enabled it to have a view
Adjust consenting and design requirements	L/M	Adjusted criteria and design requirements may give QLDC some additional influence over parking location
Help parking providers find a site	M	Working with private providers would enable QLDC to influence decisions, especially if shared parking was provided on identified council-owned land

Option	Scoring	Rationale
Parking is not commercially viable		
Do Nothing	L	QLDC would have little influence over parking location and timing, except insofar as consenting process enabled it to have a view
General rate subsidy	M/H	Providing direct funding for parking would enable QLDC to influence parking location and timing. It would still be necessary to consider other commercial factors, e.g. availability of suitable sites, either in private ownership or council ownership.
Targeted rate on Queenstown Town Centre businesses	M/H	
Development contributions for new Queenstown Town Centre developments	M/H	
Offering Council-owned land at below market prices	M/H	

Table 5.2: Scoring against 'Alignment of benefits and costs' criterion

Option	Scoring	Rationale
Parking is commercially viable		
Do Nothing	H	Parking users are the people who benefit most directly from parking provision. A commercial funding model would best align benefits and costs.
Adjust consenting and design requirements	H	
Help parking providers find a site	H	
Parking is not commercially viable		
Do Nothing	H	Parking users are the people who benefit most directly from parking provision. A commercial funding model would best align benefits and costs.
General rate subsidy	L	A general rates subsidy would require all ratepayers to contribute, even if they did not use or directly benefit from the availability of parking facilities. If shared Queenstown Town Centre parking facilities have significant positive impacts on traffic congestion that affects the wider road network, then a rates subsidy may be justifiable. However, this is unlikely as providing subsidised (i.e. low-priced)

Option	Scoring	Rationale
		parking is likely to stimulate additional driving and hence congest the wider road network.
Targeted rate on Queenstown Town Centre businesses	M	Provision of subsidised shared parking is most likely to benefit Queenstown Town Centre businesses who can access additional customers. Hence a targeted rate on these businesses will be moderately efficient at aligning costs and benefits.
Development contributions for new Queenstown Town Centre developments	L/M	As noted above, the benefits of subsidised shared parking are likely to accrue to both new and existing Queenstown Town Centre businesses. Hence this option will be less efficient at aligning costs and benefits than a targeted rate. However, it may be the case that increases in parking demand are primarily due to new Queenstown Town Centre developments, rather than existing businesses that are increasing turnover. In this case some efficiency may be gained back.
Offering Council-owned land at below market prices	L	This option may not result in any direct financial costs to Council, unless it had alternative plans to sell sites for development. However, it would require QLDC to sell an asset at below its market value, which is an 'opportunity cost' that would be spread throughout the district rather than focused in the area that benefits the most. As a result, this is not likely to closely align costs and benefits.

5.4.2 Shared parking conclusions

First and foremost, QLDC should first understand the commercial viability of shared parking facilities in the Queenstown Town Centre. In sub-section 4.3.1, we outlined a generic set of inputs required for an assessment of commercial viability, and we would be able to assist QLDC with this assessment upon which a decision on shared parking approaches can be made.

If shared parking is commercially viable, it should engage with private providers to understand why more is not being built, and then respond to those particular concerns. RMA mechanisms are not likely to be relevant for delivering shared parking, given the existing enabling policy framework for non-accessory parking and the phasing out of RMA financial contributions.

If it is not commercially viable, QLDC should consult on a targeted rate on city centre businesses to fund the subsidy, as this is most likely to align benefits and costs (the final criterion) based on our preliminary assessment as per Table 5.2, among the available subsidy funding options. However, this recommendation may change subject to the detailed outcomes of a commercial viability assessment.

5.5 Summary

In Section 5, we have provided an explanation on the Proposed District Plan Zones and activities whose off-street parking supply is not appropriate for regulation via minimum parking requirements, and the zones and activities for which minimum parking requirements may be justified.

We recommend dividing the Proposed District Plan Zones into two groups, with Group 1 zones typified by areas of high land value, high pedestrian activity and amenity, high density of activity, smaller sites, and important retain frontages, and the remaining zones falling within Group 2. In general, we do not support minimum parking requirements for activities in the Group 1 zones. However, based on our experience, there may be a desire among political decision makers or the community to retain minimum parking requirements. In this case, we would also support the relaxation of minimum parking requirements for activities in the Group 1 zones, such that the total costs of minimum parking requirements for developers and the District can be minimised, and we also believe they can be justified for the Group 2 zones.

In relation to maximum parking requirements, we have proposed restricting their application to a select number of activities whose peak vehicle travel demands are easily replaceable by alternative modes, and these include Offices for all zones, and Educational and Health Care facilities in the zones we have categorised under Group 1. We do not support the widespread application of parking maximums, as not all locations have reliable access to alternative transport modes, and not all activities have travel demands that can be easily replaced by other modes.

Finally, we outlined approaches to funding shared parking as it relates to the local context, including assessment criteria to determine the alignment of benefits and costs, and the certainty over shared off-street parking supply outcomes. However, we stress that it is important to determine commercial viability first, to see whether private sector solutions are available.

6. Next Steps and Conclusion

For the Group 2 zones for which we believe minimum parking requirements could be justified, for the Group 1 zones where minimum parking requirements could be relaxed, and the activities for which maximum parking requirements are considered appropriate, there are presently no specific parking rates assigned to specific activities. The next steps would be therefore to transfer the advice contained herein into actual parking rates that form part of Proposed District Plan rules/standards in the Transport Chapter.

Thereafter, a Section 32 analysis and report will be required to be undertaken to assess the benefits and costs of the proposed off-street parking regulation and deregulation, including an assessment of alternatives. While we understand Vicki Jones of Vision Planning is taking responsibility for this report, we stress the importance of having a comprehensive economic assessment underpinning the Section 32 report, which will include an analysis of the economic benefits and costs of proposed parking provisions. MRCagney's economic assessments of parking provisions for Section 32 reports have been relied upon most recently for the Auckland Unitary Plan and Christchurch Replacement District Plan hearings, as well as the upcoming Environment Court hearing on the Unitary Plan parking provisions. An economic assessment provides a solid evidence-based foundation on which QLDC can defend its position on parking in the future Proposed District Plan's Stage 2 hearings process.

Also mentioned in this Technical Note is the recommendation to carry out a commercial viability assessment of shared parking in the Queenstown Town Centre. While we acknowledge the proposal for shared parking is subject to ongoing consultation as part of the Queenstown Town Centre Masterplan process, it would appear financially prudent to explore whether this proposal

stacks up financially on its own, whether the private sector could deliver it, and to what extent and how it can be funded by QLDC and its ratepayers to make it viable.

Appendix A

Table 6.1: Minimum parking requirements for a selected number of activities and locations

Activity	Parking required for residents/visitors	Parking required for staff/guests
Residential units in the High Density Residential (HDR) zone and Queenstown Town Centre Lakeview sub-zone	1 to 1.25 per unit	0.25 per unit (where used as visitor accommodation)
Residential Units in all other zones and Wanaka HDR Sub-zones B, C	2 per unit	None
Residential Flat	1 per flat	
Visitor accommodation (unit type construction, e.g. units with a kitchen) in most of Wanaka and Queenstown's Low Density Residential (LDR) and HDR Zones	1 to 2 per unit	0.25 per unit or 1 per 10 units in Queenstown depending on location
Visitor accommodation (guest room type, e.g. hotels)	1 per 3 guest rooms up to 60 guest rooms; thereafter 1 per 5 guest rooms. In addition 1 coach park per 50 guest rooms	1 per 20 beds
Visitor Accommodation (Backpacker Hostels)	1 per 5 guest beds. In addition 1 coach park per 50 guest rooms	1 per 20 beds
Commercial Activities	1 per 25 m ² GFA (except for the Queenstown Town Centre Lakeview sub-zone where there is no minimum parking requirement)	
Industrial Activity		1 per 25m ² area used for manufacturing, fabricating, processing, or packing goods plus 1 per 100m ² storage space
Industrial Activity in Frankton		3 per 100m ² GFA Workshop Area and for unit storage businesses 1 per 10 storage units
Health Care Services	2 per professional staff	1 per professional staff plus 1 per 2 other full time staff, or 1 per consulting room (whichever is greater)

Activity	Parking required for residents/visitors	Parking required for staff/guests
Offices	1 per 50 m ² GFA	
Restaurants (except for in the Queenstown Town Centre Lakeview sub-zone)	1 per 25 m ² public floor area (PFA)	1 per 100m ² PFA (2 minimum)
Taverns or Bars (except for in the Queenstown Town Centre Lakeview sub-zone)	2 per 25m ² public floor area	1 per 100m ² PFA (2 minimum)
Educational	1 per 10 students over 15 years of age.	1 per 2 staff.
Daycare facilities		1 per 10 children.
Service Stations	1 per 25m ² of GFA used for retail sales, plus 2 per air hose, plus 3 queuing spaces per car wash	3 per station

Both minimum and maximum parking requirements apply in the Frankton Flats Special Zone (B), which are outlined in Table 6.2 below. The separate requirements for Activity Area E2 within this special zone are shown in Table 6.3, which are based on the floor area of buildings, regardless of activity type.

Table 6.2: Minimum and maximum parking requirements in the Frankton Flats Special Zone (B)

Activity	Minimum parking requirement	Maximum parking requirement
Industrial and Service Activities	2.5 per 100 m ² of gross floor area used for maintaining, manufacturing, fabricating, processing, transporting or packing goods, plus 1 per 100 m ² of storage.	3.5 per 100 m ² of gross floor area used for maintaining, repairing, manufacturing, fabricating, processing, transporting or packing goods, plus 1 per 100 m ² of storage space.
Commercial Activities	1.5 per 100 m ² GFA	2.25 per 100 m ² GFA
Residential	1 per residential unit	2 per residential unit
Retail	2 per 100 m ² GFA	5 per 100 m ² GFA
Visitor Accommodation	For motels: 1 per unit For hotels: 1 per 4 rooms up to 60 rooms thereafter 1 per 5 rooms plus 1 coach park per 50 guest rooms. For all other unit type visitor	For motels: 1.5 per unit For hotels: 1.5 per 3 rooms up to 60 rooms thereafter 1.5 per 5 rooms plus 1 coach park per 50 guest rooms. For all other unit type visitor

Activity	Minimum parking requirement	Maximum parking requirement
	accommodation: 1 per unit	accommodation 1.5 per unit.
Healthcare Services	1.5 per FTE professional staff member, 1 per FTE other staff member	2.5 per FTE professional staff, 1.5 per FTE other staff member
Restaurants	2.5 per 100 m ² PFA (excluding toilets) plus 1 per 100m ² PFA for staff with a minimum of two.	5 per 100 m ² PFA (excluding toilets) plus 1.5 per 100m ² PFA for staff with a minimum of two

Table 6.3: Minimum and maximum parking requirements for Activity Area E2 within the Frankton Flats Special Zone (B)

Activity	Minimum parking requirement	Maximum parking requirement
Ground Floor units	2 spaces per 100m ² of GFA	4 spaces per 100m ² of GFA
Upper floor units, including mezzanines	1.5 spaces per 100m ² of GFA	3 spaces per 100m ² of GFA

Technical Note

Subject: Developer Provision of Public Transport and Active Modes Infrastructure

Project: Queenstown Lakes District Council Transport Chapter Advice

Our file: NZ2217

Prepared by: Stuart Crosswell

Status: Final Issue

Date: 18 October 2017

1. Developer provision of public transport and active modes infrastructure

Queenstown Lakes District Council (QLDC) would like to explore the opportunity the Proposed District Plan (PDP) provides for requiring developers in the district to construct public and active transport infrastructure (e.g. shelters, walkways, cycleways) as part of their developments.

Options for achieving this include the application of district plan rules to ensure the Council has discretion to require that road corridors include ample space for public transport and alternative modes, and options for Council to require actual shelters, pedestrian links, etc. to be provided at the developer's expense.

There are several mechanisms that contribute to the provision of transport infrastructure in the district, not limited to the district plan. It is useful to consider the role of these mechanisms and how they related to the district plan, to gain a good understanding of how effective district plan provisions are likely to be. These different mechanisms are discussed under the separate headings below.

1.1 Development Contributions / Financial Contributions

Section 102 of the Local Government Act 2002 (LGA 2002) requires local authorities to have a policy on financial and/or development contributions. This must state (among other things) how the capital expenditure from the increased demand on infrastructure and community facilities resulting from growth is to be funded by development contributions, financial contributions, or other sources of funding.

Financial Contributions

Financial contribution provisions in RMA plans (e.g. the district plan) are required to avoid, remedy or mitigate any potential adverse environmental effects generated by activities. They are also applied to provide for community facilities, such as reserves, and to provide for the increased demand placed on infrastructure. Therefore, financial contribution provisions in a district plan could theoretically require developers to pay a reasonable contribution to the development of public transport and active modes infrastructure.

However, we understand that the Council is moving away from the use of financial contributions, and the QLDC 2017-2018 contributions policy confirms this. This approach reflects a higher level move away from financial contributions that is occurring at a national level, whereby the

ability of Councils to levy financial contributions under the RMA is being removed through the Resource Legislation Amendment Act 2017, effectivity coming into force by 2022. We therefore do not recommend using financial contributions under the RMA to fund provision of public transport and active mode infrastructure.

Development Contributions

Development contributions (DCs) are provided for under the Local Government Act 2002 (LGA 2002), and enable capital expenditure from the increased demand on infrastructure and community facilities resulting from growth, to be levied from the developer.

Effectively, levying development contributions enables the Council to recover the cost of growth related expenditure on infrastructure beyond the boundary of the development site.

In the context of public transport and alternative modes related infrastructure, the policy effectively assumes a level of capital investment required to upgrade the existing public transport and active modes infrastructure (over the next 10 years), linked to a programme of works from a long-term plan. It then estimates the proportion of this investment attributable to growth, and expresses this as a dollar value per equivalent development unit (e.g. a residential allotment).

In the case of the current QLDC DCs policy, we note that the proportion of cycle facility investment attributable to growth is 15%, and the proportion of passenger transport infrastructure investment attributable to growth is 10%, which means that over the next 10 years, 15% of cycle facility investment and 10% of public transport investment on public infrastructure is expected to be funded by development contributions. The balance of the investment will be from other sources such as general rates or central government or regional council. We have not reviewed the detailed reasoning for the Council settling on these proportions, and assume that it represents an appropriate distribution of benefits between new development and existing development.

The scope for charging developers for infrastructure via DCs is limited to the growth effects component of the infrastructure, and therefore it is important that the Council has robust forward planning processes in place, that align with the regional policy statement and district plan objectives, so that the optimal balance of projects is identified within a long-term plan. Ultimately this will determine the overall investment in public transport and alternative modes infrastructure. In this regard, we highlight the need for the Council to plan comprehensively for the public transport and alternative modes network, via methods such as a public transport network plan (Otago Regional Council) and a comprehensive cycle network plan. These plans should identify the target levels of service within different parts of the network (e.g. via a design guide) and required infrastructure investments to achieve these targets.

1.2 District Plan Aspects

There are generally two types of consent application relevant to developer provision of public transport and active modes infrastructure; land use consent or subdivision consent. Therefore, the parts of the PDP that regulate these two types of consent need to be considered in terms of how well they cover developer provision of infrastructure.

Any requirement for developers to pay for transport facilities needs to occur in the context of the effects on the transport network, including the future envisaged transport network, resulting from

the developer's proposed use and development; i.e. there needs to be a nexus between any condition placed on the land developer and an effect resulting from the development. Conditions cannot be applied to address effects that arise from other developments or activities in the district.

Subdivision

We note that the 'Subdivision' chapter of the PDP has already been drafted and notified, and there is limited ability to alter the provisions of the chapter at this stage. However, the subdivision chapter does include provisions that refer to design standards for infrastructure and services, and therefore we will evaluate the potential for best practice design of PT and alternative modes to be drawn into the design processes via these references.

We have reviewed the reply version of the subdivision chapter of the PDP, and observed that the following related provisions enable the Council to require the developer to provide well designed, integrated, safe, convenient, efficient, and connected public transport and walking and cycling infrastructure: Objective 27.2.2, Policy 27.2.2.4, Policy 27.2.2.5, Objective 27.2.5, Policy 27.2.5.1, Policy 27.2.5.2, Policy 27.2.5.3, Policy 27.2.5.5, Rule 27.7, Assessment Matters 27.5.6, 27.7.1-4.

The policies specifically refer to ensuring appropriate design by having regard to, amongst other things:

- *The standard of construction and formation of roads, private access ways, vehicle crossings, service lanes, walkways, cycle ways and trails; and*
- *The provision of public transport routes and improved linkages to public transport routes and bus shelters.*

There is also a specific objective 27.2.6 'Cost of services to be met by subdividers', and associated policy that require subdividers and developers to meet the costs of the provision of new services or the extension or upgrading of existing services that are attributable to the effects of the subdivision or development.

We note that the first section of this chapter outlines the 'purpose' of the subdivision provisions, and states that:

*"Good subdivision creates neighbourhoods and places that people want to live or work within, and should also result in more environmentally responsive development that **reduces car use, encourages walking and cycling**, and maximises access to sunlight.*

*Good subdivision design will be encouraged by the use of the **QLDC Subdivision Design Guidelines 2015**. The Subdivision Design Guidelines 2015 includes subdivision and urban design principles and outcomes that give effect to the objectives and policies of the Subdivision and Strategic Directions Chapters, in both designing and assessing subdivision proposals. Proposals at odds with these documents are not likely to be consistent with the policies of the Subdivision and Strategic Directions chapters, and therefore, may not achieve the purpose of the RMA. The purpose of the **QLDC Land Development and Subdivision Code of Practice** is to provide a best practice guideline for subdivision and development infrastructure in the District." [emphasis added]*

Given the strength of the objectives, policies and rules in the subdivision and development section of the PDP, we are confident that the Council is able to require developers to pay for or directly provide public transport and walking and cycling infrastructure where the need is directly attributable to the development, via resource consent conditions, and development contributions under the LGA 2002.

Land Use

We have reviewed the PDP 'Urban Environment' chapters, which regulate land use activities within the various urban zones of the district. These regulations are focused on development on individual lots where a public road network has already been established through previous subdivision activity. Accordingly, the objectives, policies, and rules are focused on avoiding any potential adverse effects outside the development site, rather than developing public spaces or future public spaces and services such as public transport.

Beyond the payment of development contributions where additional equivalent development units are created, smaller scale land use activities would not be required to provide for any public transport infrastructure or any walking and cycling infrastructure, beyond the boundary of the development site.

In the case of larger scale developments, we have addressed these in the associated technical memo '*High Trip Generating Activities*'. If provisions along the lines of what we have recommended in this associated technical memo are included in the PDP, they include provision for the Council to require the developer to pay for / construct walking and cycling and public transport infrastructure where the need is directly attributable to the development.

Land Development and Subdivision Code of Practice (2015)

Section 3 of the Queenstown Lakes District Council Land Development and Subdivision Code of Practice 2015 (the Code of Practice) addresses requirements for the design and construction of roads for land development and subdivision.

The objective of the section is outlined as being:

"... to provide roads that are safe for all road users and designed to the context of their environment..."

Section 3.2 provides context guidance and information, and within this section Table 3.1 describes the relationship between land use, area type, and transport context.

Section 3.3 addresses 'design' and includes Table 3.2, which outlines the design standards for roads in terms of the '*Place Context*', '*Design Environment*' and '*Link Context*', outlining the target speeds, minimum road widths and maximum grade for the different contexts articulated.

Pedestrians are reasonably well accommodated by the Code of Practice. The provision outlined in the '*Link Context*' columns in Table 3.2 are generally adequate, although best practice standards are not applied universally. For example, in the case of smaller scale urban and suburban developments, footpaths are only required on one side of the street in some cases.

There is guidance as to how cyclists are to be accommodated in different road contexts within the '*Link Context*' part of Table 3.2. The following options for cycling provision are identified:

- *Shared (in movement lane); or*

- *On sealed shoulder where it is a local authority defined cycle route; or*
- *Separate provision where it is a local authority defined cycle route.*

Importantly, we note that the only guidance that identifies cycling specific infrastructure (bullet point 3) requires a ‘trigger’ of the road being a local authority defined cycle route, which implies that there needs to be an adopted cycle network plan in place for the guidance to effectively influence what is eventually built on the ground.

Table 3.2 is complemented by a set of road cross sections that show examples of design solutions for mid-block sections of road. However, there are no examples of intersection design or road network design that would contribute to the road achieving the target speeds in a way that provides a safe and amenable walking and cycling environment.

While Section 3.3 covers a broad range of contexts, there is no guidance on cycling or public transport infrastructure within the solutions identified via the cross sections. References to cycling in Table 3.2 either do not require any specific infrastructure to be provided, or require a trigger to be activated. Because there is limited guidance in this section on public transport and cycle infrastructure, and this section is presented as design solutions to meet the Council requirements, there is a risk that these are neglected in the design and approval process, or a measure of limited effect is included in the design.

The implication of this is that although there is / will be sufficient requirements included in the provisions of the PDP for alternative modes infrastructure, we think it is unlikely that the transport network environments envisaged by the regional and district objectives would be included in the design and development plan approval process if the current Code of Practice is applied, and there is no detailed public transport network plan or comprehensive cycle network plan.

We note that if the installation of public transport infrastructure or walking and cycling infrastructure were triggered for a given development or improvement works, the Code of Practice includes a list of reference design documents that provide technical guidance on the design of bus stops, cycle lanes, shared paths etc. under the heading of ‘Referenced Documents’. This list should be reviewed to ensure it includes the most up-to-date design guidance, and we have suggested in our technical memo on ‘*Providing for Public Transport and Active Modes*’ Auckland’s forthcoming Urban Street and Road Design Guide and recently published Local Paths Design Guide as other reference documents.

In terms of the quantum of cost the developer would be responsible for, Section 3.3 of the Code of Practice includes the following text:

“Where the new roads being installed are required by Council to service adjacent future development as part of the future Council network then those roads will be designed and constructed on the basis of full development to the extent defined in the current district plan.

The cost of increased road construction to service adjacent future development will be apportioned between the applicant and the Council and agreed in writing with the Council’s Asset Performance Team prior to construction.

We expect that this principle would apply to public transport and alternative mode infrastructure within the road, which is consistent with the wording of the subdivision chapter objectives and policies, that require the costs of services 'attributable to the development' be paid by the developer.

QLDC Subdivision Design Guidelines 2015

The QLDC Subdivision Design Guidelines 2015 (the Design Guide) includes useful principles to consider when designing the layout of a subdivision and road network. However, in our view the Design Guide lacks the degree of detail that would assist a designer to apply a design approach to a street network to acknowledge the context of the street in terms of the type of cycle, walking and PT infrastructure.

For example, detail on what context to apply traffic calming methods to ensure a slow speed environment for walking and cycling, what context to separate cycle carriageway from the motorised vehicle carriageway, or what context to use the length of blocks to slow motor vehicle traffic and create a more amenable walking and cycling environment.

DRAFT revised QLDC Land Development and Subdivision Code of Practice (2017)

We have reviewed a draft revision of the Code of Practice, and note that there are no significant changes to the sections we have discussed above in relation to the 2015 version of the document.

However, we noted that there is new text added to the section 3.3.6 '*Parking, passing, and loading*', which seems to require a minimum number of on-street car parks to be provided in a development, to support the adjacent land uses. In our view, this requirement has the potential to stymie the installation of alternative modes infrastructure such as bus lanes and dedicated cycle lanes in some circumstances. For example, if the alternative mode infrastructure would occupy road space that might otherwise be used for on-street parking, the Draft Code of Practice requirements direct that parking be provided in the first instance, regardless of whether or not the parking is a lower value use of the road space.

1.3 Works within Existing Public Roads (Council Works)

There may be some upgrades of existing roads, including public transport infrastructure such as bus stops and shelters, via the HTGA provisions of the transport chapter. However, most new public transport and cycling and walking infrastructure in the existing public road network will be provided by the Council, or Otago Regional Council, or NZTA. As the majority of the public road network within the district has already been established, most of the potential for achieving public transport and walking and cycling benefits depends on how the Council manages their roads.

We assume that when the Council decides to maintain or renew an existing road, the design of the road is guided by the Code of Practice. Any shortcomings in the Code of Practice in terms of its ability to achieve the objectives and policies of the PDP will be reflected in the infrastructure that is eventually built.

To assist in justifying the provisions in the PDP that require developers to fund and provide public transport and walking and cycling infrastructure, the Council should therefore ensure there are robust strategic documents in place to support the provision of infrastructure in a

particular location and context. It should also ensure that its own works projects make an appropriate contribution to achieving the stated objectives in the PDP. This will entail adopting a public transport network plan and comprehensive cycle network plan and applying best practice design for the associated network infrastructure.

1.4 Conclusions / Recommendations

In our view, the subdivision and development chapter of the PDP is robust with respect to developer provision of PT and alternative modes infrastructure. Furthermore, with the introduction of the HTGA provisions in the transport chapter the Council will have the ability to require developers of large scale activities to provide or contribute funds towards PT and alternative modes infrastructure.

However, to achieve the objectives and policies of the PDP related to public transport and walking and cycling in terms of built outcomes for the transport network, the interpretation and implementation of the provisions would benefit from the following:

- More direction in the design guidance area, and
- More explicit triggers signalling the need for developers to include and appropriately design public transport and alternative modes infrastructure in their subdivision and development designs, e.g. through the public transport network plan and walking and cycling network plan referenced below.

Regarding design guidance, we note that the *QLDC Subdivision Design Guidelines 2015* (the Design Guide) includes useful principles to consider when designing the layout of a subdivision and road network. However, it lacks the degree of detail that would assist a designer to apply a design approach to a street network to acknowledge the context of the street in terms of the type of cycle, walking and PT infrastructure provided.

Furthermore, the Code of Practice provides examples for a wide variety of contexts, but it lacks any guidance on public transport or cycling infrastructure, and lacks guidance on the types of measures that would assist in achieving the target speeds outlined in the Code of Practice.

For example, infrastructure to support walking and cycling on a local residential street may consist of street and intersection geometry treatments and traffic calming measures, rather than any specific cycle infrastructure. On collector streets designs may focus on specific cycle infrastructure like separated cycle lanes and intersection treatments. This level of guidance is not shown in the Code of Practice or the Design Guide.

Therefore, we recommend that the Council include reference in the Code of Practice and the Design Guide to the following documents:

- (1) A design guide that provides design solutions for the different types of walking and cycling routes. (e.g. Auckland Urban Street and Road Design Guide (Auckland Transport, 2017))
- (2) A design guide that provides design solutions for public transport infrastructure like bus stops and bus priority measures etc. (e.g. Transit Street Design Guide (NACTO, 2016); Bus Stop Infrastructure Design Guidelines (ARTA, 2009))

Regarding 'triggers' that signal the need for inclusion and design of PT and alternative modes infrastructure, we recommend that the Council develop and/or maintain a comprehensive:

- (1) Public transport network plan with bus stop locations shown (Otago Regional Council),
and
- (2) Walking and cycling network plan, including identification of a hierarchy of different types walking and cycling routes within the network.

These strategic documents could be used to trigger a design response from a developer to create an identified type of street environment, or trigger the installation of a bus stop and shelter if that location was identified in the public transport network plan. They would also provide backing for any requests from Council processing officers to include a design typology within the development to ensure an identified type of street environment is built by the developer, and in turn would contribute to the justification of the provisions, i.e. by demonstrating a need for the infrastructure attributable to the development, and improving the implementation of the rules in the district plan.

Technical Memo

Subject: High Trip Generating Activities Provisions

Project: Queenstown Lakes District Council Transport Chapter Advice

Our file: NZ2217

Prepared by: T2 Transport Engineers & MRCagney

Status: Final Issue

Date: 18 October 2017

1. Background

1.1 Background to this Technical Note

Queenstown Lakes District Council (QLDC) has engaged MRCagney to recommend an approach to regulating transport activities, including high trip generating activities, through the Transport Chapter for their Proposed District Plan, and to provide justification for the approach. The overarching proposed objectives and policies in Chapters 3 and 4 of the Proposed District Plan (as furnished by QLDC) seek to achieve an integrated transport network that is less reliant on private car use and more multi-modal.

MRCagney has partnered with David Mitchell of T2 Transport Engineers to provide this policy advice.

The aim of this technical memo is to provide evidence-based strategic advice on regulating high trip generating activities in the district.

The scope of this technical memo includes advice on district plan provisions to ensure that, in relation to 'large scale' developments, all transport options and solutions are considered at resource consent stage.

This technical memo contains recommendations on a definition of high traffic generating activities and triggers for requiring varying levels of ITA's, along with justification for these recommendations, that can inform and guide the upcoming review of the parking sections of the District Plan. It does not include the detailed drafting of specific provisions (e.g. rules), and the preparation of the section 32 report required to support the proposed provisions, as these are the responsibility of Vicki Jones of Vision Planning.

The need for this technical note has also been influenced by a convergence of circumstances, specifically:

- The ongoing review and development of QLDC's Proposed District Plan; and
 - The ongoing development and public consultation of the Queenstown Town Centre Master Plan, which brings together the strategies and projects recommended in the following strategic plans and documents:
 - Queenstown Town Centre Transport Strategy;
-

- Queenstown Integrated Transport Programme Business Case; and
- Wakatipu Basin Public Transport Detailed Business Case;

Now is therefore an opportune time to consider how the transport provisions in the Proposed District Plan might be drafted to better align with the QLDC's strategic objectives for the district.

2. Policy Context

As discussed, in recent years, QLDC, in collaboration with partner agencies such as the New Zealand Transport Agency (NZTA) and the Otago Regional Council (ORC), have developed several strategic policy documents that consider the future of transport improvements and planning for the Queenstown Lakes District, including their implications on matters such as traffic congestion, town centre design, urban form, public transport, and active transport.

A detailed review of the relevant strategic plans and policy documents related to transport in the Queenstown Lakes District was already undertaken in the *Parking Advice* Technical Note, in Section 2. While much of the review in the *Parking Advice* Technical Note pertains to parking management matters, the identified background issues related to growth and associated transport concerns are particularly relevant to the management of high trip generating activities in the District.

2.1 Summary of Commonly Identified Issues (in Strategic Documents)

Based on our review of the relevant strategic planning documents, it is clear there is a common recognition of the transport and land use issues in the Queenstown Lakes District, as well as general alignment on potential measures to address these challenges.

In general, in the absence of appropriate intervention, the population, economic, and tourism growth experienced and projected in Queenstown and Wanaka will pose significant transport challenges in the face of high mode share by private vehicles, high demand for on-street parking, current parking management practices, and the lack of reliability of alternative transport modes.

These strategic documents are generally aligned in their proposed approaches to tackle these challenges, and in relation to background parking management strategy, these comprise:

- Improved parking management through location appropriate pricing and time restrictions in both Queenstown and Wanaka;
- The prioritisation of short-stay parking over long-stay commuter parking;
- Consolidation of parking resources in the heart of the Queenstown Town Centre, leaving more space for pedestrians and town centre activity;
- The provision of park and ride facilities at selected peripheral locations to encourage the use of public transport into the Town Centre;

In relation to public transport and active modes provision, the strategic documents are also aligned on the challenges facing the District, as well as planned improvements that will address these challenges. These challenges and opportunities are addressed in Section 1.1 of the *Providing for Public Transport and Active Modes* Technical Note.

The management of high trip generating activities (HTGAs) within the Transport Chapter of the Proposed District Plan therefore presents an opportunity to take an integrated view to the management of transport effects across the District, by identifying HTGAs, and appropriately managing their adverse effects, while taking into account planned improvements to public and active transport and other planned aspects such as revised parking management and pricing.

3. Statutory Planning Document Review

A review of the current statutory approach to regulating HTGAs was undertaken to gain an understanding of how travel demand was managed in the District. To this end, we reviewed the Transport Section of the Operative Queenstown Lakes District Plan.

The Operative District Plan recognises the need to manage traffic in a number of its objectives and policies and translates these into rules such as those associated with travel demand management and parking requirements for the Frankton Flats Special Zone and the Three Parks Zone (Page 12-204 of the ODP). However, outside of these zones, typical HTGA provisions do not exist, which suggests any adoption of HTGA provisions in the Proposed District Plan's Transport Chapter would represent a fresh approach to managing travel demand districtwide.

4. Strategic Advice

There are two main aspects when considering HTGAs: the definition of an HTGA, and the appropriate methods of assessing the potential effects of the HTGA.

4.1 Defining a HTGA

Defining an appropriate threshold for a HTGA is important in identifying both activities that should generally be considered as requiring a more detailed consideration of the effects of potential trip generation and options for mitigating them, and setting appropriate assessment objectives, policies and criteria for the assessment. HTGAs have the potential to impact on traffic safety and operation, but due to their high activity they also offer a focus point to encourage modal change and increased public transport (PT) usage with additional convenient facilities.

As part of considering potential activities, we have reviewed other District Plans and documents. A summary of these is given below;

Dunedin City Council

High Trip Generating Activities

The group of activities which includes:

- *Service stations, including additions or alterations that create additional fuel pumps;*
- *Restaurant - drive through, including additions or alterations that create additional drive through windows;*
- *Early childhood education - large scale*
- *Schools*

- Quarrying (defined as part of mining);
- New or additions to parking areas, which create 50 or more parking spaces; and
- Any other activities that generate 250 or more vehicle movements per day.

This list provides a mix of what might be termed HTGAs and high driveway trip activities. Service stations, for example, generate little additional traffic on a network and would not in themselves be an HGTA. They do however generate high numbers of driveway trips as they draw vehicles from, and discharge to, the road network. Similarly, quarrying may not generate considerable numbers of vehicles, but as an activity, safety and operation of the large vehicles on the road network and consideration of potential effects on the physical roading network are important aspects when considering this activity.

Christchurch City Council

High Trip Generating Activities

This is a particularly important rule, which is fundamental to the planned effectiveness of roads within the roading hierarchy. High traffic generators (more than 250 vehicle movements per day or requiring the provision of 25 or more parking spaces) can have a major impact on arterial and inner city roads with the development of large retail and vehicle oriented land uses. The vehicle generation and potential associated adverse effects on the road network and surrounding land uses can be major if the siting is inappropriate or the access is not well located or designed. Therefore the roads in the city with the most important traffic functions (arterial roads) need to have the highest degree of protection. By requiring high traffic generators on these roads to be discretionary activities (or controlled within the Central City zone), each development can be considered in terms of its particular character, location, and levels of traffic effects and ways to mitigate these effects where possible, through the use of appropriate traffic management and design conditions. Most zones restrict the limit of discretion to matters associated with access. However, retail activities in the BRP, B3, B3B and B4 zones have retained a broader level of discretion, regarding any traffic effects. This acknowledges the dispersed location of these zones and the ability to undertake retail activity, which can generate potentially significant effects on the road network and surrounding land uses

In a similar vein as the DCC criteria, trip generating and driveway volumes are combined into a single definition, when they are clearly different from a traffic engineering perspective.

North Shore City Council (Pre-Auckland Council)

12.5.2.1 Access Requirements for High Vehicle Generating Activities

For the purpose of these criteria a high vehicle generating activity shall be any activity that generates more than 200 vehicle manoeuvres per day. Any high vehicle generating activity shall be assessed against the following criteria:

a) The extent to which the minimum separation distance of crossings from intersections complies with the following:

i) For a crossing providing for left turns only:

- 25 metres on any arterial frontage

- 15 metres on any collector or local road frontage.

ii) For a driveway providing for any right turns:

- 30 metres on any arterial frontage
- 25 metres on any collector or local road frontage.

The former NSCC again considered activities on vehicle movements alone.

All of the above activities do not distinguish between those activities that actually generate significant increases in traffic on the network and those that have significant volumes, or specific safety and operational issues, at their driveways or immediately surrounding environment. This consideration is important as from a District Plan perspective, Council needs to be able to consider not only the scale of the activity, but also the scope of its effects.

Integrated Transport Assessment (ITA) Guidelines (Auckland Transport January 2015)

This guideline updates and builds on the work of the previous Integrated Transport Assessment (ITA) Guidelines that were prepared in 2007 by the Auckland Regional Transport Authority (ARTA). This document acknowledges the broader scope and functions of Auckland Transport (AT) as a statutory entity pursuant to the Local Government (Auckland Council) Act 2009, which includes management and control of the local transport system in Auckland rather than purely a public transport focus. This guideline also includes an update to reflect the key roles that the New Zealand Transport Agency (NZTA) and KiwiRail play in the Auckland transport system.

Auckland Unitary Plan (Operative in Part) (AUP(OIP))

The AUP(OIP) gives guidance on when additional investigation is required for an activity. These are not specifically termed HTGAs.

E27.6.1 Trip Generation

(b) 100 v/hr (any hour) for activities not specified in Table E27.6.1.1 requiring a controlled or restricted discretionary land use activity consent in the applicable zone where there are no requirements for an assessment of transport or trip generation effects. This standard does not apply to development activities provided for as permitted in the applicable zone;

and

Table E27.6.1.1 New development thresholds

Activity		New development	
(T1)	Residential	Dwellings	100 dwellings
(T2)		Integrated residential development	500 units
(T3)		Visitor accommodation	100 units
(T4)	Education facilities	Primary	167 students
(T5)		Secondary	333 students
(T6)		Tertiary	500 students

(T7)	Office		5,000 m ² GFA
(T8)	Retail	Drive through	333 m ² GFA
(T9)	Industrial activities	Warehousing and storage	20,000 m ² GFA
(T10)		Other industrial activities	10,000 m ² GFA

The activity thresholds set in the AUP(OIP) sets guidelines relating to trip generation of activities alone and not more localised effects.

Queenstown scenario

One of the unique issues with Queenstown and surrounding areas is the effect of tourist activity on traffic generation and developments. It has been identified that staff trips are largely made by vehicle or bicycle, reflecting the lack of commuter public transport. The sizeable impact of tourist activity introduces other elements when considering HTGAs such as:

- The time when generation occurs and impacts on peak commuter periods;
- High turnover parking demands;
- Seasonal effects and the ability to address these without requiring significant infrastructure projects (and the associated environmental effects of these).

The current QLDC DP recognises the need to control traffic in a number of its objectives and policies and translates these into rules such as those associated with travel demand management and parking requirements for the Frankton Flats Special Zone and those requiring an ITA for HTGA’s in the Three Parks Zone in Wanaka.

4.2 Assessment Criteria

Identifying and evaluating a HTGA should allow Council to consider some additional criteria for activities. It is proposed to achieve this through identifying thresholds for HTGAs and requiring further assessment as a Restricted Discretionary (RD) Activity. Broadly, the key areas for consideration include activities:

- with a higher risk to the safety of the network,
- with a greater potential effect on the operation and capacity of the roading network,
- with greater opportunity to encourage modal shift away from cars, and
- with a greater opportunity to focus and increase public transport choices.

Activities which generate additional trips at their boundaries, such as service stations, should be dealt with by normal DP rules related to access, safety and integration within the road network.

It may also be that some of the Discretionary matters are addressed through other changes that will be made in the QLDC DP review. These should be checked to ensure are no inconsistencies between the respective sections of the plan.

5. Next Steps and Conclusion

Defining activities and setting reasonable thresholds should be the first stage in determining appropriate levels of HTGAs. These will be broadly set by considering the ability of an activity to generate a certain level of additional traffic to a network beyond its immediate site boundaries, recognising that different activities will draw different levels of traffic from existing road volumes. The location and type of activity is also an important consideration to identify those where model shift and public transport can have a significant effect of encouraging changes in travel patterns throughout the QLDC area.

Based on our review, it is considered the following activities and thresholds should be considered for defining the requirement for a RD assessment to be undertaken. This would apply to all zones and separate parking areas identified in the DP. The specific activity thresholds are broadly based on similar industry standard trip generation rates that would generate trips by the development quantity similar to those listed for all other activities.

These thresholds are lower than those in the Auckland context, which has a substantially more developed public transport and cycling network. To use these thresholds would not provide QLDC with enough ability to influence and enhance the transport network around significant development areas. The peak hour and parking thresholds are broadly similar to Christchurch and Dunedin contexts, and the daily threshold relates to the trip generation industry 'rule of thumb' that daily rates are in the order of 9-10 times the peak hour rate, although it is acknowledged that this varies by activity.

Adopting rates lower than these would identify more activities that would need to be considered through a RD assessment. This does not necessarily mean more improved or integrated infrastructure as lesser scale developments have lower impacts (and more unlikely to have impacts directly attributable to these respectively lower threshold levels) and less ability to economically provide wider network improvement.

Similarly, a higher threshold, more in line with the Auckland context would likely not identify activities that could have a significant impact on the transport network in a Queenstown sense due to the current reliance on cars and the impact of high generating tourist activities. The Auckland context and network is a more diverse and resilient one, and it is considered that Queenstown needs to have the ability to consider effects consistent with the traffic volumes and capacities within the current network. It may be in time that these can change.

Note that the following thresholds assume general minimum parking requirements (MPR) in the district plan are; retail rates around 1 per 20 m² and office rates around 1 per 40 m². If general MPRs differ from these levels, the thresholds should be reviewed.

Activity	Development type	Threshold
Residential	Dwellings	50 dwellings
	Visitor Accommodation (unit type construction)	100 units
	Visitor Accommodation (guest room type construction)	150 rooms
Commercial Activities		2000m ²

Office		2000m ²
Retail		1000m ²
Industrial		5000m ²
All other activities		50 or more carparking spaces required under the Transport rules)
All other activities		Traffic generation of greater than 400 additional vehicle trips per day or 50 additional trips during the commuter peak hour.

The proposed matters for discretion as part of the RD assessment should be worded so as to cover;

1. Adequacy of secure and visitor bicycle parking, if this is not already included in the general Transport rules for these activities.
 - a. Assess the adequacy of the proposal if required cycle parking is not provided.
2. Adequacy of end of trip facilities (showers, changing rooms and lockers) for offices and hospitals at an appropriate rate.
 - a. Assess the adequacy of the proposal if required trip end facilities are not provided.
3. Parking – any activity that proposes non-accessory parking as part of the development.
 - a. Assess effects on the transport network
 - b. Assess if there is existing on-street or off-site accessory parking that could be used in preference to the proposed parking
 - c. Assess effects on pedestrian and cycle facilities adjacent to the site.
4. Any activity which exceeds the thresholds given above
 - a. Assess effects on the transport network
 - b. Consider if the site or frontage design could accommodate any proposed public transport infrastructure proposed by Council
 - c. Includes upgrades to and new pedestrian and cycle infrastructure and public transport infrastructure in line with Council standards and adopted infrastructure network development plans.
 - d. Consider and provide a Travel Demand Management Plan (TDMP), including implementation and ongoing monitoring procedures, to minimise reliance on vehicle trips to the site. TDM measures may already be included in the design with walking, cycling and available public transport provisions.

The RD assessment may include identification of infrastructure improvement outside of the site boundary, but required to encourage modal shift and diversity. These may be required by direct construction activities, or by collecting funds towards a wider project that would achieve the public transport or modal shift aim of a specific development.

It is assumed that activities which do not comply with the general transport rules (i.e. do not provide sufficient parking or loading spaces, site access, manoeuvrings, parking space sizes, etc) would have separate assessment criteria and would require similar evaluation on network operational and safety effects.

Technical Note

Subject: National and Regional Policy Context

Project: Queenstown Lakes District Council Transport Chapter Advice

Our file: NZ2217

Prepared by: Stuart Crosswell

Status: Final Issue

Date: 18 October 2017

1. Background

Queenstown Lakes District Council (QLDC) has engaged MRCagney to provide advice on the following activities, which are described as 'integrated transport provisions':

- Accessory and non-accessory car parking;
- High trip generating activities;
- The provision of infrastructure to support public transport, cycling and walking, and water based transport; and
- Funding mechanisms for the provision of non-accessory shared parking facilities to support access to the Queenstown, Wanaka, and, Arrowtown Town Centres.

The rationale behind the advice needs to consider the objectives and policies of the Proposed District Plan (PDP), which have been through the submissions process.

The need for this work has been influenced by a convergence of circumstances, specifically:

- The ongoing review and development of QLDCs Proposed District Plan; and
- The ongoing development and public consultation of the Queenstown Town Centre Master Plan, which brings together the strategies and projects recommended in the following strategic plans and documents:
 - Queenstown Town Centre Transport Strategy;
 - Queenstown Integrated Transport Programme Business Case; and
 - Wakatipu Basin Public Transport Detailed Business Case;

Now is therefore an opportune time to consider how the provisions in the Proposed District Plan might be drafted to best align with the QLDC's strategic objectives for the district.

The Resource Management Act 1991 (RMA) requires that district plans prepared by territorial authorities give effect to any regional policy statement or national policy statements (refer section 75(3) of the RMA). One of the reasons for this technical memo is to comment on the provisions from the national and regional policy context that need to be given effect to in terms

of provisions that are included in the PDP. The technical memo also identifies several other supporting national or regional level policies that are relevant to integrated transport planning.

Therefore, the following documents are covered by this memo:

- Government Policy Statement on Land Transport, 2015/16-2024/25;
- Draft Government Policy Statement on Land Transport, February 2017;
- Otago Southland Regional Land Transport Plans 2015-2021 - June 15;
- Regional Public Transport Plan: Otago 2014, including Addendum: Wakatipu Basin – May 2017;
- Benefits of investing in cycling in New Zealand communities, NZTA - March 2016

It is also useful to consider the scope of integrated transport planning as it relates to the subject activities, as this clarifies what provisions are appropriate to include in the PDP, and what aspects of integrated planning are better addressed through other methods, e.g. Council strategies and guidance documents. Therefore, this aspect is also covered in this memo.

It is intended that this technical memo is to be read together with the following partner memos:

- *Standards for cycle parking and end of trip facilities*
- *Parking Advice;*
- *Providing for Public Transport and Active Modes;*
- *Developer provision of public transport and active modes infrastructure; and*
- *High trip generating activities provisions*

2. Integrated Transport Planning and Development

As well as the integration of land use and transport that can be achieved through district plan provisions, it is important to recognise the limitations of the district plan in the comprehensive provision of effective, efficient, integrated transport networks within a district. Both horizontal and vertical integration needs to be considered.

For example, and in terms of horizontal integration, the district plan to a large extent regulates discrete developments on private land within the district, albeit that infrastructure assets may be vested in the Council following a development. But most of the transport network components in a district are public assets and managed through the Council's long term plans and asset management programmes. Therefore, comprehensive network plans, strategies, codes of practice etc. are needed to coordinate the provision of infrastructure through the district plan processes, and the provision and upgrading of infrastructure through other Council activities.

In terms of vertical integration, if the objectives of the district plan are to be achieved, there is a need for an effective mechanism to ensure the policies and rules of the district plan are meaningfully articulated into designs that contribute to creating the environments envisaged. Likewise, there is a need to ensure Council-initiated works on public assets achieve the same.

In terms of integrated transport planning and the development of transport infrastructure, the following types of non-district plan documents are relevant, for example:

- Land Development and Subdivision Code of Practice;
- Subdivision Design Guide;
- Walking and Cycling Network Plan;
- Public Transport Network Plan;
- An effective Street Design Guide (potentially nested within the Land Development and Subdivision Code of Practice)

3. National Policy Context

The New Zealand Urban Design Protocol, of which QLDC is a signatory, highlights the importance of prioritising walking and cycling and public transport provision in urban design, in section 2 '*Attributes of Successful Towns and Cities*' and section 3 '*Key Urban Design Qualities - the Seven Cs*'.

The New Zealand Transport Agency has produced a document titled '*Benefits of investing in cycling in New Zealand communities*', which provides information about the key benefits of investing in cycling, for councils, communities and individuals. These are summarised as:

- more liveable towns and cities;
- improved conditions for travelling within towns and cities;
- stronger local economies;
- reduced costs for councils;
- less impact on the environment, and
- healthier and more productive people.

The Government Policy Statement on Land Transport 2015/16 - 2024/25 (Revised February 2017) (the GPS) describes its purpose as outlining the Government's strategy to guide land transport investment over the next 10 years, and provides guidance to decision - makers about where the Government will focus resources. Under the strategic direction section of the GPS, the objectives '*A land transport system that addresses current and future demand for access to economic and social opportunities*' and '*A land transport system that provides appropriate transport choices*', demonstrate the acknowledgment at a national level that:

- public transport contributes to economic growth and productivity by providing additional capacity on corridors serving our main business and education centres at peak periods;
- While the primary role of public transport investment is to increase throughput where the network is experiencing severe congestion, public transport has an additional role in providing an alternative to private transport in urban areas where there is a sufficient concentration of users to support cost effective public transport;

- Cycling provides an alternative for short journeys and for single purpose trips like commuting to work or school;
- There are opportunities for cycling to take a greater role in providing transport system capacity in our urban areas; and
- While there are health benefits associated with cycling where it increases the total amount of physical activity, safety continues to be a concern, and represents a barrier to cycling fulfilling its transport potential.

The Draft Government Policy Statement on Land Transport 2018/19 – 2027/28 (Draft GPS) outlines in the introductory '*Land transport context*' section that:

- In relation to public transport use, there is strong growth in the number of people using public transport in Auckland and in Wellington. Outside these two cities, growth is lower;
- In relation to cycling, there has been increased participation in cycling in urban areas especially where new cycle networks have been developed. This growth is expected to continue as dedicated infrastructure is put in place that separates those who walk or cycle from vehicles; and
- In relation to general alternative modes trends, decreasing numbers of young people getting their driver licences.

The Draft GPS also identifies that:

- The capacity of the transport network can be increased through supporting greater uptake of public transport, walking and cycling (Strategic Priority '*Economic growth and productivity*'); and
- Walking and cycling support a more efficient and cost-effective transport system, provide transport choice (especially for shorter trips), and provide substantial health benefits; and
- The key barrier to getting more people cycling is the perception that cycling is risky. GPS 2018 supports investment to reduce safety concerns for cyclists. Investing in good quality, fit for purpose cycling facilities improves the safety of people on bikes and improves the perception of cycle safety.

In summary, at a national policy level there is recognition of the benefits of and support for better provision of public transport and walking and cycling within the transport network.

4. Regional Policy Statement

4.1 Regional Policy Statement (1998)

The operative Regional Policy Statement (RPS) provides very limited guidance on public transport, walking and cycling, and management of car parking. There is a policy in section 9.5.3 that aims to "*promote and encourage the sustainable management of Otago's transport network through: (a) Promoting the use of fuel efficient modes of transport; and (b) Encouraging a reduction in the use of fuels which produce emissions harmful to the environment; and (c) Promoting a safer transport system*". There is also a policy in section 12.5.3 that aims to

“promote improved energy efficiency within Otago through encouraging energy efficient transport modes in Otago”.

However, the RPS is almost 20 years old and is currently under review, so appears to not fully articulate the current policy direction of the ORC.

4.2 Appeals version of the Proposed Otago Regional Policy Statement

In our view, the appeals version of the Proposed Otago Regional Policy Statement (PRPS) represents the most up-to-date articulation of the ORC’s policy direction.

Objective 4.4 deals with the sustainability of energy supplies to Otago’s communities, and has an associated policy 4.4.6 to:

“Enable energy efficient and sustainable transport for Otago’s communities, by all of the following:

...

- b) Ensuring that transport infrastructure in urban areas has good connectivity, both within new urban areas and between new and existing urban areas, by all of the following:*
 - i. Placing a high priority on walking, cycling, and public transport, where appropriate;*
 - ii. Maximising pedestrian and cycling networks connectivity, and integration with public transport;*
 - iii. Having high design standards for pedestrian and cyclist safety and amenity;”*

Policy 4.5.1 ‘Managing for urban growth and development’ is also relevant to public transport, and walking and cycling. Clause ‘g’ of this policy states:

- g) Giving effect to the principles of good urban design in Schedule 5;*

In turn, the principles of good urban design lay out that ‘A safe and enjoyable environment’ is one that, amongst other things:

- Creates transport networks that are safer;*
- Creates safe, attractive and secure pathways and links between town centres and landmarks and neighbourhoods;*
- Provides a comfortable and safe urban environment; and*
- Considers the impact of design on people’s health*

The principles of good urban design also lay out that design ‘supports a healthy community, and offers many choices and opportunities’, and to do this:

- Promotes transport networks that are safe, legible, attractive and well connected;*
- Provides for public transport, roading, cycling and walking networks that are integrated with each other and the land uses they serve;*
- Places a high priority on walking, cycling and public transport;*

- *Provides environments that encourage people to become more physically active; and*
- *Maximises pedestrian connectivity.*

5. Regional Land Transport Strategy

The Otago Regional Land Transport Plan 2015–2021 (combined with Southland’s Plan) sets out how the local authorities in the region and the NZ Transport Agency (NZTA) intend to achieve their vision of transport in the future through funding and providing transport services and infrastructure.

The plan sets out objectives aimed at ensuring the region has a transport system that:

- Delivers appropriate levels of service through ensuring the form and function of transport infrastructure is understood, and the transport system is resilient and reliable.
- Minimises congestion through traffic management, travel demand management, influencing mode choice, or alternatively, use congestion to prompt a change in travel behaviour.
- Decision-making leads to infrastructure and services that are appropriate to function and demand, by provide infrastructure and services for roading, active transport and public transport that are affordable and appropriate to function, and:
 - Advocating for economic evaluation methodology that better recognises the benefits of walking, cycling, public transport; and
 - Advocating for public funding to be available for transport related changes with clearly substantive wider benefit, e.g. walking and cycling.
- Supports a choice of safe modes, and the integration between these modes, by providing for the safe operation of all transport modes, recognising walking as an essential part of all journeys, and recognising cycling is an essential and realistic transport option in many parts of Otago, with adequate facilities provided to achieve safe, connected, convenient, and reliable journeys. By:
 - New road construction and major improvements including provision for safe walking and cycling in high pedestrian and cycle use areas;
 - Transferring some existing road space over to walking and cycling where this is needed to ensure safe travel, and build separated cycleways/walkways for commuters;
 - Expanding and improving the cycling network, and connecting existing cycling routes to keep cyclist’s safe, and to encourage new cyclists;
 - Ensuring all urban buses are able to carry bikes, and urban town centres have bike racks;
 - Prompting a change in travel behaviour towards increased walking and cycling, and public transport use in urban areas, by adapting the supply and pricing of car parking over time;

- Supporting and promoting a growth in cycle and pedestrian trips; and
- Providing a fully accessible public transport service, reducing car dependency in urban areas.

Refer to Objectives 2.1, 2.2, 2.3, 4.1, 4.2, 4.3, and Policies 2.11, 2.19, 2.22, 2.23, 4.1, 4.2, 4.3, 4.10 through 4.18 inclusive, and Policy 4.26 for further detail about these relevant objectives and policies.

6. Regional Public Transport Strategy

The Regional Public Transport Plan: Otago 2014 and its addendum Wakatipu Basin 2017 (RPTP) outline the current public transport situation in the region, and the strategic direction and objectives for public transport in the region, and the programme of projects to achieve the objectives. The RPTP outlines that it presents a fundamental shift in the approach to public transport services in the region, anticipating more certainty over routes, reduced travel times, more regular frequencies, the application of national standards for buses, and simplification of the fare structure.

The RPTP focuses mainly on the Dunedin and Wakatipu Basin networks. Overall, the plan anticipates significant improvements to the public transport network and service, and a steady increase in the number of trips being made on public transport.

However, the plan also identifies that the current performance in terms of new subdivisions ensuring quality walking access to public transport, and district councils monitoring the standards in subdivisions and developments, is poor.

A relevant access and mobility principle included in the Plan is *'working with NZTA and QLDC to ensure other transport users such as cyclists, pedestrians and car users have integrated access to the public transport network so that it can form all or part of their journey'*.

Under Chapter 6 of the Plan, where the structure of the proposed public transport network is addressed, encouraging and supporting QLDC to reduce the availability of low cost parking, and bike-racks on all buses are identified as being key to the new network.

Other relevant elements are identified as being; working with QLDC and NZTA to ensure the installation of bus shelters and seating where appropriate, and other supporting infrastructure as necessary.

Appendix 5 of the RPTP includes a *'Wakatipu Basin Indicative Route Map'*, and it is stated that the map is indicative only and subject to detailed network design.

7. Summary and Comment

There is clear national and regional direction to better provide for public transport, cycling and walking, and other alternative modes of transport, both within the district plan and through other territorial authority activities. Significantly, the policy documents recognise the constraints to the use of alternative modes of travel, recognise the necessity to design and build transport networks to a standard that provides equitably for all road users, and recognises the relationship between cost and availability of car parking and its effect on private motor vehicle travel demand.

There is strong direction within the policy documents to ensure that:

- The quality and levels of service of public transport services within the district will substantially improve in the short term;
- The use of alternative public transport and other alternative modes is encouraged through regulation and management of car parking within the district; and
- Regulation of subdivision and development within the district results in better environments for cyclists, pedestrians and users of alternative modes.

Accordingly, the advice we have provided in the associated memos, listed in Section 1 above, aligns with the national and regional policy direction on these matters, and the recommendations are consistent with achieving the objectives stated by these policy documents.

Technical Note

Subject: Standards for Cycle Parking and End of Trip Facilities

Project: Queenstown Lakes District Council Transport Chapter Advice

Our file: NZ2217

Prepared by: Lukas Adam, reviewed by
Anthony Leung

Status: Final

Date: 17 October 2017

1. Introduction

Queenstown Lakes District Council (QLDC) aims to improve provision for public transport, walking and cycling through provisions in the Proposed District Plan (PDP) and other policy levers. One means of improving conditions for pedestrians and cyclists is the provision of cycle parking and end of trip facilities (such as showers, changing rooms and lockers) as an accessory to development. This technical note analyses the benefits and costs of cycle parking and end of trip facilities; reviews the regulatory practices of QLDC and other councils in New Zealand as well as internationally; outlines best practice principles for providing cycle parking and end of trip facilities; and recommends PDP provisions.

2. The benefits and costs of cycle parking and end of trip facilities

2.1 Cycle parking

2.1.1 Benefits of cycle parking

Providing dedicated cycle parking has been shown to encourage increased cycling uptake. This has been demonstrated by three recent studies, including a Christchurch study.

All three studies found that a lack of secure/well-located bike stands can deter people from cycling. However, availability of bike stands was considered less important than driver behaviour and the availability of safe cycle infrastructure (e.g. separated cycle lanes).

The Christchurch study¹ surveyed three groups of people about barriers to cycling: University of Canterbury staff and students, recreational cyclists, and a broader set of community members. Those surveyed were considerably more likely to cycle as their usual transport mode than the general population, meaning that these results may under-state the degree to which a lack of

¹ Kingham, S., Taylor, K. and Koorey, G. (2011) *Assessment of the type of cycling infrastructure required to attract new cyclists*. Wellington: NZTA.

facilities is a barrier to cycling among the general population. Between 5% and 11% of respondents stated that better-located bike stands would encourage them to cycle more. However, a larger share – 7% to 18% - stated that better security for cycles would encourage them to cycle more.

A more representative telephone survey in Auckland² found that a lack of secure places to leave bicycles was among the main perceived barriers to cycling among Aucklanders who were interested in cycling but who did not currently cycle. Of this group, 28% stated that a lack of secure places to leave bicycles was a barrier to cycling³.

Empirical evidence on cycling behaviour supports the findings from stated preference surveys. For example, a study of over 5,000 daily commuters in the Washington, DC metropolitan area found that people with access to cycle parking at workplaces were more likely to commute by bicycle, even after controlling for other factors such as demographics, income, and car ownership⁴.

2.1.2 Costs of cycle parking

Below we consider the degree to which cycle parking requirements may impose costs on individual developers. We note that these costs only arise in situations in which cycle parking requirements are “binding”. The figures reported here reflect “upper bound” estimates of costs for new developments. The actual costs may be considerably lower in some cases.

Two different types of costs of providing cycle parking potentially arise: the financial costs related to the requirement to install cycle parks at new developments; and the potential “opportunity costs” that may arise if cycle parks prevent businesses from providing carparks or other transport facilities on-site.

The financial costs of providing cycle parks are likely to be relatively modest. Based on data from Rawlinsons (2013)⁵ the costs to provide a single cycle stand may range from \$120 (if cycle parking is provided in a multi-berth rack-style stand) to \$250 (if cycle parking is provided in an individual stand).

Cycle parking may substitute, on the margin, for car parking. It has been hypothesised that any reduction in car parking will reduce revenues for their business as cyclists will spend less than drivers. There is little empirical evidence to support this hypothesis. As a result, it is not possible to conclude that cycle parking provision will reduce retail revenues or impose broader “opportunity costs”. A wide range of studies in New Zealand and overseas have found that average retail spending by people arriving by public transport, walking, or cycling is comparable

² Ipsos (2014) *Active Modes Research*. Auckland: Auckland Transport.

³ By comparison, 49% of this group stated that feeling unsafe on roads due to driver behaviour was a barrier to cycling, and 47% stated that a lack of separated cycle lanes was a barrier.

⁴ Buehler, R. (2012) Determinants of bicycle commuting in the Washington, DC region: The role of bicycle parking, cyclist showers, and free car parking at work. *Transportation Research Part D: Transport and Environment*, Vol. 17, Issue 7, pp.525-531.

⁵ Rawlinsons (2013) *Rawlinsons New Zealand Construction Handbook*.

to average expenditure by people arriving by car (based on studies in Portland, New York City, Dublin, Toronto, Auckland, Christchurch, and Wellington⁶).

Fleming et al (2013) studied expenditures by different transport users in nine shopping areas in Auckland, Christchurch and Wellington⁷. They found that per-trip spending by cyclists was slightly lower than per-trip spending by car drivers but comparable to per-trip spending by car passengers. However, pedestrians, cyclists and public transport users visit shopping areas more frequently than car drivers and passengers – meaning that total expenditure per person may be higher. Furthermore, Tourism NZ research has found that international tourists who walk/hike and cycle tend to spend more per visit to NZ (\$3600 and \$3800 respectively) than the average spend per person for all holiday visitors (\$2800)⁸.

2.2 End of trip facilities

2.2.1 Benefits of end of trip facilities

The research cited above also demonstrates that the provision of end of trip facilities encourages increased cycling uptake. However, as also noted above, driver behaviour and the availability of safe cycle infrastructure is generally considered more important than end of trip facilities.

In the Christchurch study¹, between 12% and 22% of respondents stated that more easily accessible showering/changing facilities would encourage them to cycle more⁹.

The Auckland telephone survey² referred to above found that a lack of showering/changing facilities was among the main perceived barriers to cycling among Aucklanders who were interested in cycling but who did not currently cycle (28% of respondents).

Empirical evidence on cycling behaviour again supports the findings from stated preference surveys. The Washington, DC study⁴ found that people who had end of trip facilities – showers, clothes lockers, and bike parking – at their workplaces were 4.86 times more likely to cycle to work, even after controlling for a range of other factors.

2.2.2 Costs of end of trip facilities

Below, we consider the degree to which end of trip facility requirements may impose costs on individual developers. We note that these costs only arise in situations in which the requirements are “binding” – i.e. if they require people to provide facilities that they would not have otherwise provided. Consequently, we note that the figures reported here are likely to

⁶ These studies are summarised at <http://www.citylab.com/cityfixer/2015/03/the-complete-business-case-for-converting-street-parking-into-bike-lanes/387595/>

⁷ Fleming, T, Turner, S. and Tarjomi, L. (2013) *Reallocation of road space*. Wellington: NZTA.

⁸ Queenstown Trails Trust (2015) *Queenstown Trails for the future: A strategic plan for the Queenstown Trails Trust*. Queenstown: Queenstown Trails Trust.

⁹ In addition, 14% of UC staff and students stated that more lockers would encourage them to cycle more. (Other groups were not surveyed on lockers.)

reflect “upper bound” estimates of costs for new developments. The actual costs may be considerably lower in some cases.

Two different types of costs of providing end of trip facilities potentially arise: the financial costs related to the requirement to install end of trip facilities at new developments; and potential “opportunity costs” that may arise if they “crowd out” commercial floorspace or other facilities.

The financial costs of providing end of trip facilities can be estimated using quantity surveyor data from Rawlinsons (2013)⁵. It suggests that the cost of providing an on-site shower may vary between \$2,050 and \$2,500, depending upon the design option chosen. Installing an acrylic shower enclosure may be a lower-cost option (with costs ranging from \$2,050 to \$2,360 depending upon the selected brand). However, combining showers with disabled/unisex toilets, while slightly more financially costly (\$2,500), is likely to be the preferred option at many workplaces due to the fact that it saves space.

We note that there is a possibility that end of trip facility requirements may consume space that would otherwise be used for other purposes, such as commercial floorspace. However, we also note that it is common practice to combine shower facilities with disabled toilets in offices and other buildings. As the Building Code already requires unisex disabled toilets to be provided at similar or higher rates to showers, it is likely that shower requirements can be accommodated without any significant loss of space.

3. The current regulatory practice of Queenstown Lakes District Council

The QLDC operative District Plan (ODP) employs minimum parking and end of trip facility requirements for the Three Parks Zone, which will accommodate major growth in Wanaka as set out in the Wanaka Structure Plan (2007) and Wanaka Transport Strategy (2007).

3.1.1 Cycle parking

The bicycle parking requirements are set out in *Section 14: Transport Rules* (see Table 1). They comprehensively cover activities likely to give rise to significant bicycle mode share, and specify the type of parking to be provided for each use according to the scale of the development.

The short-term bicycle parking requirement is based on the quantity of development. In contrast, long-term bicycle parking requirement is based on the number of on-site workers or students, which may present some implementation challenges. While the amount of floor space in a consent application can be easily measured, the number of on-site occupants is both more difficult to determine before development has occurred and liable to change over time.

Occupant-based requirements will, however, provide more flexibility to the developer. In the case of education facilities, the number of students is likely to be the most appropriate metric of the scale of development. In any case, provision of bicycle parking in the Three Parks Zone should be monitored as the development is consented and constructed and adjustments made to requirements in the PDP accordingly if timing allows.

Table 1: QLDC minimum bicycle parking space requirements - Three Parks Zone

Activity	Type 1: Customer/Visitor Short-Term Bicycle Parking	Type 2: Customer/Visitor Short to Medium-Term Bicycle Parking	Type 4: Private Long-Term Bicycle Parking
Commercial Activities, other than those which are more specifically defined elsewhere in this table.	2 bike spaces (i.e. 1 stand) for the first 125m ² of GFA used for retail and 1 space for every 125m ² of GFA used for retail, thereafter	Nil	1 bike space per 10 on-site workers
Offices	2 bike spaces (i.e. 1 stand) for the first 500 m ² GFA and 1 space for every 500m ² GFA, thereafter	Nil	1 bike space per 10 on-site workers
Industrial and service activities	Nil	Nil	1 bike space per 10 on-site workers
Restaurants, Cafes, Taverns and Bars	2 bike spaces (i.e. 1 stand) for the 125 m ² PFA and 1 space for every 125m ² GFA, thereafter	Nil	1 bike space per 10 on-site workers
Hospitals	1 bike space per 25 beds	Nil	1 bike space per 10 on-site workers
Daycare facilities	2 bike spaces per centre	Nil	1 bike space per 10 on-site workers
Places of assembly, community activities, and places of entertainment.	2 bike spaces per 500 m ² located directly outside the main entrance or ticket office	1 per 50m ² PFA or 50 seats, whichever is greater	1 bike space per 10 on-site workers
Educational facilities	2 bike spaces per office	Nil	1 bike space per 8 students and on-site workers
Sports fields	2 bike spaces per hectare of playing area	Nil	Nil

3.1.2 End of trip facilities

The end of trip facility requirements are set out in *Section 12: Special Zones (Three Parks) Rules*. They cover all non-residential and commercial buildings and provide a guide for the number, location and design of lockers and showers to be provided according to the number of employees on site.

The requirements are to provide the following:

- Lockers – individual lockers for 20% of all on-site workers
- Showers – ratios as specified in Table 2.

Table 2: QLDC minimum numbers of showers – Three Parks Zone

Number of on-site workers	Number of showers
1-9	Nil
10-39	1
40-100	2
>100	3 and add 1 per 100

4. The regulatory practices of other councils

4.1.1 Local Authorities in New Zealand

Table 3 contains a selection of local authorities in New Zealand with urban areas that are comparable to QLDC, stating those with minimum cycle parking requirements and end of trip facilities in their district plans and those with no minimum cycle parking regulation. All plans are operative unless specified in brackets.

Table 3: Minimum Cycle Parking and End of Trip Requirements - New Zealand Local Authorities

Territorial Authority	Yes/No	Minimum Cycle Space Requirements	End of Trip Facilities
Invercargill City (Appeals Version)	No		
Napier City	Yes	Condition 61.14B 1 bicycle stand per 5 car park spaces (applicable where on-site car parking is required).	Condition 61.14B Commercial or Industrial activities having more than 15 full time equivalent staff members shall provide one male and one female shower and changing facilities for staff to

Territorial Authority	Yes/No	Minimum Cycle Space Requirements	End of Trip Facilities
			encourage the use of alternative transport modes.
Nelson City	No	No minimum cycle space requirements or requirements for end of trip facilities, however reductions in required on-site parking considered, having regard to (Policy DO10.1.6A): “a) whether the reduction will support and facilitate the use of alternative modes of transport, b) the provision of on-site bicycle stands, and accompanying change and shower facilities proportional to the reduction in on-site parking,…”	
New Plymouth District	Yes	Part B, Appendix 23, Volume 2 One cycle space for every 10 vehicle parking spaces required.	Nil
Palmerston North City	No		
Porirua City	No		
Rotorua District (Proposed)	No		
Tauranga City	No	No requirements but District Plan has design guidelines and vehicle parking adjustment factors.	Nil
Thames Coromandel District	Yes	Section 39.2, Rule 6	
		Activity	Minimum bicycle parking requirement
		Retail store with a gross floor area greater than 500 m ² (excluding the Pedestrian Core Zone and Waterfront Zone)	c) 2 bicycle parks per site adjacent to the building entrance.
		Other commercial outside the Pedestrian Core Zone and the Waterfront Zone (excluding A:4, above)	c) 1 bicycle park per site adjacent to the building entrance.
		Education/training activity or facility (excluding the Pedestrian	b) 2 bicycle parks per site.

Territorial Authority	Yes/No	Minimum Cycle Space Requirements		End of Trip Facilities
		Core Zone and Waterfront Zone)		
		Health care service (excluding the Pedestrian Core Zone and Waterfront Zone)	c) 1 bicycle park per site adjacent to the building entrance.	
		Place of worship, hall, marae(excluding the Pedestrian Core Zone and Waterfront Zone)	c) 2 bicycle parks per site.	
		Commercial Area and Waterfront Zone Vehicle Park Credit	For a commercial or community activity in the Commercial Area or Waterfront Zone, any Council-maintained bicycle parks on the road directly fronting the site are subtracted from the bicycle park requirements above.	
Whangarei District	No			

Of the selected local authorities, three operative plans (Napier, New Plymouth and Thames Coromandel) include minimum cycle parking requirements. Nelson City and Tauranga City incentivise the provision of cycle parking through vehicle parking adjustment factors.

It is worth noting that in more recent second generation plans under the RMA in New Zealand’s main urban centres there is an apparent change in favour of including cycle parking standards, as evidenced by Hamilton, Christchurch and Auckland. In the case of Auckland and Christchurch this also extends to the inclusion of minimum requirements for additional end of trip facilities. Changes to the district plans of these two main centres followed high-profile district plan reviews, suggesting that there is a potential justification for these rules.

The QLDC Three Parks Zone requirements set a high standard for cycle parking and end of trip facility provision compared to the New Zealand councils reviewed, similar to the best practice nationally as set by Auckland, Hamilton and Christchurch’s city councils. Cycle parking

requirements are more comprehensive than the councils reviewed in that they cover more uses specifically and more nuanced in that requirements are set for each activity according to relevant units. With regard to end of trip facilities, Napier City is the only city reviewed to require the provision of end of trip facilities in the form of showers; in comparison, the Three Parks requirements start at a lower minimum number of on-site workers and also set out provision for larger places of employment. The requirement for lockers in the Three Parks Zone is unique among the policy reviewed.

4.1.2 Local Government Abroad

Table 4 contains a selection of international districts and towns from Australia, Canada and the USA, stating those with minimum cycle parking requirements and end of trip facilities in their plans and those with no minimum cycle parking regulation. Detail on the provisions of each district and city's regulations is provided in Appendix A. The districts and towns analysed were chosen based on the similarity of their population size, the prominence of the tourism industry in the respective local economies and/or the opportunities and constraints presented by their geographies. Portland, Oregon was included as an example of extensive requirements for cycle parking.

Table 4: Summary of Minimum Cycle Parking and End of Trip Requirements - International Districts and Towns

City/Local Authority	Minimum cycle space requirement (yes/no)	End of trip facilities (yes/no)
Byron Shire Council New South Wales, Australia	Yes	Yes
Cairns Regional Council Queensland, Australia	Yes	Yes
Town of Banff Alberta, Canada	No	No
City of Aspen Colorado, USA	No	No
Resort Municipality of Whistler British Columbia, Canada	No	No
City of Portland Oregon, USA	Yes	No

Overseas districts and towns comparable to QLD vary in their minimum requirements for cycle parking and end of trip facilities. Of those examples reviewed, the Australian local and state government planning policy documents more commonly included minimum requirements than North American cases.

Of the overseas examples reviewed, Byron Shire Council provides the most relevant precedent due to the similarity of its population size, the prominence of the tourism industry in the area's local economy and the growth pressures it faces.

Byron Shire Development Control Plan 2014 requires the provision of cycle parking for a range of different land uses. While this is a useful precedent in terms of levels of provision, the level of prescription and complexity of these requirements may be hard to implement in the regulatory

context of development in the QLD. With regard to end of trip facilities, in Byron Shire the developer is required to provide facilities are sufficient to accommodate the anticipated demand for cycling and cyclist numbers as demonstrated in transport analysis prepared as part of the development application. In the QLD, a similar provision could be included as a matter of discretion as part of a Restricted Discretionary assessment (see High Trip Generating Activities Provisions technical note).

Cairns Regional Council represents a larger population base than QLD, but presents an example of detailed cycle parking and end of trip facility requirements through Cairns Plan 2016 and the Queensland Development Code. As above, the detailed cycle parking requirements for Cairns would likely be difficult to implement in QLD. End of trip facilities are required for all major developments in Cairns Region, and performance standards and acceptable solutions are set out in the Queensland Development Code. This document sets out the most comprehensive requirements which are based on the level of use of a development in terms of employees or occupants. Notable exceptions mean that development occurring in particular circumstances can be exempt from the requirements listed, for example where *“it would be unreasonable to provide these facilities having regard to:... (c) the condition of the road and the nature and amount of traffic potentially affecting the safety of commuters”*. Exemptions on such grounds are likely to be counter-productive in some cases, as mutually reinforcing policies are required to induce increased cycling mode share where existing levels of utility cycling are low. Detailed requirements on the type and design of facilities is also included in the Queensland Development Code. The High Trip Generating Activities Provisions technical note provides further detail on provisions for large scale development in QLD.

Banff, Aspen and Whistler do not have minimum cycle parking or end of trip facilities requirements. In the case of Whistler, the municipality *“will consider reduced on-site parking requirements for developments that are designed and located to encourage pedestrian, bicycle and transit access.”* In addition, Whistler’s planning regulations state under ‘Form and Character of Development’ that *“Storage space for bicycles and other employee needs shall be incorporated in the design.”* Of the overseas examples analysed, these resort towns are most relevant to QLD in terms of their geography and climate, but are less relevant than the Australian examples reviewed with regard to their population size.

Portland was included in this review as an example of very well-developed standards, although the city is less comparable to QLD due to its different population size.

In comparison to the international examples reviewed, the QLDC Three Parks Zone requirements set a high standard for cycle parking and end of trip facility provision. Cycle parking requirements are similarly comprehensive to Byron Shire Council and Cairns Regional Council, although the Three Parks Zone requirements are simpler and therefore likely to be easier to use. With regard to end of trip facilities, the Three Parks requirements are more specific than the two councils which have relevant policy in place (Byron Shire Council and Cairns Regional Council).

4.2 Best Practice Principles

Cycle parking and end of trip facilities should be provided in accordance with the land use with which they are associated, as well as the surrounding street environment. Best practice principles include:

- The number of cycle parking spaces and the quality and quantity of provision of end of trip facilities should be based on the proposed occupancy and nature of the land use.
- Ensure alignment to the current and planned active modes infrastructure network – provide facilities where existing routes exist and where future routes are planned.
- Publicly provided cycle parking in the vicinity of a proposed development should be considered when reviewing requirements for private provision of cycle parking as part of the proposed development. The public provision should be suited to the same purpose as that which might be provided as part of the development. For example, any cycle parking requirement for a shop on a retail street should account for the number of publicly provided short-stay cycle parking spaces (such as Sheffield stands) in the public domain on the street in question.
- Facilities should be provided where there is existing demand and or/the potential to attract use. Facilities should be sufficient to meet existing peak demand, allow for spare capacity (ideally 20%) and should allocate adequate space for expansion to allow for increased future higher rates of active travel.
- Cycle parking provision should be fit for purpose - a mix of long stay and short stay parking should be provided to reflect the nature of use of the development.
- Focus on hubs where many journeys will converge at high trip generating activities, for example:
 - Town centres
 - Employment centres
 - Services and community facilities e.g. hospitals, libraries
 - Schools
 - Entertainment and leisure venues
 - Potential future public transport stops – park and ride stations and ferry wharfs
- Imposing unnecessary costs on the developer to provide facilities should be avoided if it can be demonstrated the facilities will ultimately remain unused or severely underused. Exceptions should be made for particular development scenarios to which walking and cycling is unlikely to be practical e.g. workplaces located in elevated positions or with inadequate access roads for active modes such as ski fields or other out of town tourism operations. The grounds for exception should be carefully considered, taking foreseeable future changes in the development's context into account, for example changes in the road environment and traffic conditions and changes in level of public transport service.
- Means of providing end of trip facilities economically should be accommodated while maintaining minimum quality standards. For example, the requirement for end of trip facilities can be aligned with Building Code requirements for disabled toilets. Showering and changing facilities can be integrated into disabled toilets at relatively little additional cost and with small design impacts.

4.3 Implications of emerging technologies and trends for QLD

It should be noted that electric bicycles (e-bikes) and emerging technologies including 'dock-less' bike share systems have the potential to influence requirements for cycle parking and end of trip facility provision, although it is too early to draw concrete conclusions as to what the impact in QLD might be.

National sales of e-bikes have increased rapidly in recent years and are estimated to be in the order of 20,000 for 2017¹⁰. A rising prominence of e-bikes could have a number of important implications for levels of cycling and the requirements for parking and end of trip facilities in QLD, including:

- Increased levels of cycling by increasingly diverse groups.
- Increased bicycle-based tourism. Nationally, participation in cycling has recently grown more than participation in any other outdoor activity in recent years. Queenstown is among the most popular cycling destinations, including for mountain biking¹¹.
- Changes in the needs of end of trip facilities – a person using an e-bike may be less likely to require shower facility due to the lower level of physical exertion required.
- Changes to standards for cycle parking and integration with public transport. A person using an e-bike may be less likely to be willing or able to lift their e-bike onto a second tier or vertical rack or onto a public transport vehicle.

Dock-less bike share systems use mobile technology to administer the sharing or short-term rental of bicycles which remain in the public domain at all times. These systems are typically privately owned and operated, but occupy space in the public domain. Bike share is widely seen as an important ingredient for establishing mainstream cycling in urban centres with existing low levels of cycling, and dock-less systems may present an opportunity for inducing increased cycling in QLD by residents and visitors alike. Challenges may also arise, for example, the bicycles may, in practice, be locked to publicly provided cycle parking occupying that space for longer periods while not in use.

5. Recommended District Plan Provisions

The following draft provisions reflect figures for many development types that are likely to generate significant numbers of trips. The figures take into account the policy basis for inducing increased cycling; the current practices of QLDC in the Three Parks Zone; the research reviewed on the benefits of providing cycle parking and end of trip facilities; and the various requirements in other New Zealand and international cities that have minimum cycling requirements.

¹⁰ Stuff (2017) *Sales of e-bikes to pass 20,000 a year*. Available at: www.stuff.co.nz/business/money/89409372/sales-of-ebikes-pass-20000-a-year. Accessed 25 July 2017.

¹¹ Queenstown Trails Trust (2015) *Queenstown Trails for the future: A strategic plan for the Queenstown Trails Trust*. Queenstown: Queenstown Trails Trust.

Table 5: Recommended Minimum Cycle Parking and End of Trip Requirements for the QLDC PDP

Activity	Customer/Visitor Short-Term Bicycle Parking (development floor areas rounded down)	Private Long-Term Bicycle Parking (for staff/students/residents) to be provided in a secure facility (development floor areas rounded down)	End of trip facilities
Office	2 bike spaces (i.e. 1 stand) for the first 500 m ² GFA and 1 space for every 500m ² GFA, thereafter.	1 space per 125 m ² GFA	1 long-term bicycle parking space required: no end of trip facilities required. 2-8 long-term bicycle parking spaces required: 1 locker per every space required. >8 long-term bicycle parking spaces required: 1 locker for every space required and 1 shower per every 10 spaces required*.
Industrial and Service Activities	Nil	1 space per 300 m ² GFA	
Hospital	1 bike space per 25 beds	1 per 10 beds	
Other Health Care Facilities	1 per 100 m ² GFA	1 space per 200 m ² GFA	
Restaurants, Cafes, Taverns and Bars	2 bike spaces (i.e. 1 stand) for the 125 m ² PFA and 1 space for every 125m ² GFA, thereafter	1 space per 500 m ² GFA	
Daycare facilities	2 bike spaces per centre	1 bike space per 10 on-site workers	
Education Facility – primary and secondary	1 visitor space per 50 students (capacity)	1 per 5 pupils Year 5 and above (capacity) for primary and secondary schools	1 long-term bicycle parking space required: no end of trip facilities required. >1 long-term bicycle parking spaces required: 1 locker per every space required.
Education Facility - tertiary	1 visitor space per 50 students (capacity)	1 student/staff space per 5 FTE students (capacity)	1 long-term bicycle parking space required: no end of trip facilities required. 2-20 long-term bicycle parking spaces required: 1 locker per every space required.

Activity	Customer/Visitor Short-Term Bicycle Parking (development floor areas rounded down)	Private Long-Term Bicycle Parking (for staff/students/residents) to be provided in a secure facility (development floor areas rounded down)	End of trip facilities
			>20 long-term bicycle parking spaces required: 1 locker for every space required and 1 shower per every 10 spaces required*.
Restaurant	1 space per 250m ² of GFA	1 space per 500 m ² GFA	Nil
Retail < 300 m ²	Nil	Nil	Nil
Retail ≥ 300 m ²	1 space per 300 m ² GFA	1 space per 200 m ² GFA	Nil
Recreational Activity	1 space per court/bowling alley lane Gymnasium: 1 space per 200m ² of GFA 3 spaces per field for field sports 3 spaces per netball court 1 space per tennis court 1 space per 15m ² of GFA for Club for clubhouse component	Nil	Nil
Places of assembly, community activities, and places of entertainment	2 bike spaces per 500 m ² located directly outside the main entrance or ticket office	1 space per 500 m ² GFA	Nil

**Note: One unisex shower where the shower and associated changing facilities are provided independently of gender separated toilets, or a minimum of two showers (one separate shower per gender) with associated gender separated toilet/changing facilities.*

Three points with regard to the recommended requirements are discussed below.

The number of bicycle parking spaces required is proportional to the scale of the development in terms of floor area, number of beds or students in most cases. In the case of daycare facilities, the number of children attending is likely to be more variable, and hence the number of bicycle parks is proportional to the number of workers. The requirement for provision of long-term spaces could be linked to the number of on-site workers if this proves successful in the Three Parks Zone.

Similarly, the proposed requirements for end of trip facilities are linked to the number of long-term bicycle parking spaces required, which in turn are linked to the scale of development. If the requirement for the provision of long-term spaces being linked to the number of on-site workers proves successful in the Three Parks Zone, then end of trip facility requirements aligned to those used for the Three Parks Zone (see Table 2) could be employed in the PDP.

The proposed requirement for provision of bicycle parking for retail activities is conservative, not requiring any provision for retail activities under a gross floor area of 500m². The more stringent requirement used in the Three Parks Zone as shown in Table 1 could be employed in the PDP if it is judged that this will not result in the generation of vastly excessive provision of bicycle parking spaces which imposes costs on the developer unnecessarily.

6. Conclusion and Recommendations

Based on the analysis above, we recommend that minimum cycle parking and end of trip facility requirements are included in the PDP as an extension of the Three Parks Zone requirements (both geographically and in scope). We have established the benefits and costs of providing cycle parking and end of trip facilities and that in both New Zealand and abroad it is not uncommon to regulate for their inclusion in development in statutory planning documents. All regulation requirements imposed on land development, redevelopment or changes in use impose additional costs, but if the benefits of these requirements exceed the costs, the regulation can be justified. The following reasons stand out which we consider justify regulation for the inclusion of minimum cycle parking and end of trip facility requirements in the PDP:

- Extended regulation would support and supplement QLDC's commitment to support the growth in cycling and its objectives to increase cycling's mode share, and notably support future cycle network improvements. Regulation is aligned to the policy basis in the Queenstown Integrated Transport Programme Business Case and Wakatipu Basin Public Transport Business Case, which recognise the need for a change in approach to respond to the growth pressures being faced by the region.
- The New Zealand and overseas research demonstrates that cycle parking and end of trip facility provision are important factors in influencing decisions on whether to cycle for transport.
- The benefits of providing cycle parking and end of trip facilities clearly outweigh the costs of provision to individual developers.
- Many other local authorities, in New Zealand and internationally, already regulate for minimum cycle parking and end of trip facility requirements and the occurrence of such regulatory intervention is increasing.
- Unlike parking spaces, developers do not usually provide cycle parking facilities or end of trip facilities as a matter of course, and therefore intervention in the market is justified.
- Cyclists cannot viably utilise car parking spaces, loading spaces or other spaces reserved for other transport modes, and regular cycling for transport without the access to end of trip facilities are unlikely to hold wide appeal.
- The implementation of minimum cycle parking and end of trip facility requirements can overcome some potential barriers to cycling such as steep topography and rainfall and in conjunction with improved infrastructure, make cycling safer and more accessible to QLD's population.
- End of trip facilities provide benefits for building occupants or users other than cyclists. Showers, changing rooms and lockers also encourage active lifestyles by facilitating other active modes such as walking, jogging or scooting, and provide flexibility for those who may wish to incorporate physical exercise into their daily life.

Additionally, we recommend that QLDC collect data regarding the utilisation of its existing public cycle parking facilities and repeat this on a regular basis (e.g. annually) to understand the demand for these, in a similar way to the Council's public parking spaces.

APPENDIX A Minimum Cycle Parking and End of Trip Requirements - International Districts and Towns

City/Local Authority	Yes/No	Minimum Cycle Space Requirement	End of Trip Facilities	
Byron Shire Council New South Wales, Australia	Yes	Section B4.2.12	Section B5.2.4 The number and extent of bicycle storage, parking and end of trip facilities provided must be capable of accommodating the anticipated demand for cycling and cyclist numbers demonstrated by the Transport Management and Access Assessment prepared for the development.	
		Activity		Minimum cycle parking requirement
		Amusement centre		8 per 100m ² of GFA
		Backpackers accommodation		1 per 5 beds
		Boarding house		1 space per bed
		Business premises		2 per 100m ² (or part thereof) up to a floor area of 200 m ² and 1 per 200 m ² thereafter
		Community facilities		1 per 100 m ² of GFA
		Educational establishment (primary, secondary and tertiary)		1 per 5 students (over year 4 for schools)
		Entertainment facility		1 Space per 10 car parks
		Food and Drink Premises		1 per 25m ² of GFA
Health consulting rooms	1 space per consulting room			

City/Local Authority	Yes/No	Minimum Cycle Space Requirement		End of Trip Facilities	
		Hotel or motel accommodation	2 Spaces for accommodation units only If public restaurant or function room included, add 1 per 25m ² of GFA		
		Market	1 space per 10 stalls		
		Medical centre	1 space per consulting room		
		Place of public worship	1 space per 100 seats		
		Pub	2 per 25 m ² of public areas in bars and 2 per 100 m ² of lounges and beer gardens		
		Recreation facility (indoor/outdoor)	1 per 4 employees and 1 per 200m ² of GFA		
Cairns Regional Council, Queensland, Australia	Yes	Cairns Plan 2016, Section 9.4.8		Queensland Development Code Mandatory Part 4.1 - Sustainable Buildings: End-of-trip facilities must be installed for all new major developments and major additions to major developments.	
		Activity	Minimum cycle parking requirement	Performance requirements	Acceptable solutions
		Club	1 space per 200m ² of GFA	P12: End of trip facilities are provided for employees or occupants, in the	A12: (1) Bicycle parking and storage facilities are:
		Community use	1 space per 200m ² of GFA		

City/Local Authority	Yes/No	Minimum Cycle Space Requirement		End of Trip Facilities	
		Educational establishment	Primary: 1 per 10 students over year 4. Secondary: 1 per 10 students. Tertiary: 1 per 50 students.	building or on-site within a reasonable walking distance, and include: (a) adequate bicycle parking and storage facilities; and (b) adequate provision for securing belongings; and (c) change rooms that include adequate showers, sanitary compartments, wash basins and mirrors. [exceptions apply]	easily accessible and provided in the building, or on-site within 100 metres of an entrance to the building, in accordance with: (i) five percent (5%) of the number of employees, based on workforce numbers; or (ii) specified occupant ratios; and [design standards apply to the provision of lockers, change rooms and showers]
Food and drink outlet	1 space per 250m ² of GFA				
Function facility	1 space per 500m ² of GFA				
Hardware and trade supplies	1 space per 500m ² of GFA				
Health care services	1 space per 250m ² of GFA				
Hospital	1 space per 500m ² of GFA				
Hotel	1 space per 250m ² of GFA				
Indoor sport and recreation	Diverse and numerous, example: Squash courts: 1 space per court.				
Multiple dwelling	1 space per dwelling unit which may be provided as internal storage areas for the multiple dwelling.				
Office	1 space per 250 m ²				
Outdoor sport and recreation	Very diverse and numerous, examples:				

City/Local Authority	Yes/ No	Minimum Cycle Space Requirement	End of Trip Facilities
		Football fields: 3 spaces per field. Lawn bowls: 5 space per green	
Town of Banff, Alberta, Canada	No		
City of Aspen, Colorado, USA	No		
Resort Municipality of Whistler, British Columbia, Canada	No	The Municipality will consider reduced on-site parking requirements for developments that are designed and located to encourage pedestrian, bicycle and transit access.	
		8.4.2 FORM AND CHARACTER OF DEVELOPMENT j) Storage space for bicycles and other employee needs shall be incorporated in the design.	
City of Portland, Oregon	Yes	Very diverse and numerous, examples: Multi-dwelling: 1.5 resident space per 1 unit in Central City; 1.1 resident space per 1 unit outside Central City; 2 visitor spaces or 1 visitor space per 20 units Office: 2 staff spaces or 1/10000 ft ² of net building area; 2 or 1/40000 ft ² of net building area All Retail and Service: 2 staff spaces, or 1 per 12,000 sq. ft. of net building area; 2 visitor spaces, or 1 per 5,000 sq. ft. of net building area Manufacturing and production: 2 staff spaces, or 1 per 15,000 sq. ft. of net building area; no visitor requirement	Nil

Technical Note

Subject: Providing for Public Transport and Active Modes

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1. Introduction

Queenstown Lakes District Council (QLDC) is aiming to improve provision for public transport, walking and cycling through provisions in the Proposed District Plan (PDP) and other policy levers. This technical note assesses the existing environment for public transport and active modes in Queenstown Lakes District (QLD); reviews existing levels of walking and cycling; outlines existing planning documents; recommends a process for developing the network of active modes infrastructure; and discusses some of the potential impacts of walking and cycling infrastructure provision.

2. Existing Environment

2.1 Public transport

There is currently a scheduled bus public transport system in Queenstown (including Arrowtown) planned by Otago Regional Council and operated by Ritchies Connectabus. Ritchies also operates a scheduled service between Queenstown, Cromwell and Wanaka, and scheduled services to Lake Hawea and Aspiring National Park for recreational cyclists, walkers and hikers. There is also a scheduled water taxi service operating in Lake Wakatipu around the Queenstown and Frankton area.

The existing public transport services are commercial services and fares are relatively high.

The Regional Public Transport Plan: Otago 2014 and its addendum Wakatipu Basin 2017 (RPTP) presents a fundamental shift in the approach to public transport services in the region, anticipating more certainty over routes, reduced travel times, more regular frequencies, the application of national standards for buses, and simplification of the fare structure. We understand that there is a subsidised fare structure proposed, which will reduce the cost of using the public transport services.

The RPTP focuses mainly on the Dunedin and Wakatipu Basin networks. Overall, the plan anticipates significant improvements to the public transport network and service, and a steady increase in the number of trips being made on public transport.

2.2 Active modes

The QLD has an established network of active transport mode facilities, comprising street corridor infrastructure within towns and walking and cycling trails within and surrounding the towns.

2.2.1 The urban walking and cycling environment

The walking and cycling environment in QLD benefits from the high scenic quality of its landscape and the wealth of recreational facilities on offer. The requirements of people using active modes for transport are, however, different from those who seek a leisure experience. One important factor aside from the physical network of infrastructure is the use of road and street corridors by general traffic, as measured by traffic volumes and speeds.

The State Highway Routes and main streets into and through the District's centres are compromised as walking and cycling corridors due to their high traffic volumes, especially in and around the Queenstown town centre. The presence of high counts of traffic impacts the real and perceived safety of people walking and cycling and negatively impacts their sensory experience, discouraging the uptake of active modes. This has an adverse effect, particularly where little route choice exists or traffic is concentrated along corridors which pass through activity centres where they coincide with the highest numbers of pedestrians and cyclists. For example, the State Highway 6 and 6A corridors leading into and connecting Queenstown and Frankton experience average daily traffic (ADT) in the order of between 10,000 and 22,000¹. This is comparable to busy arterial roads in New Zealand's main population centres. While pleasant parallel routes outside of the transport corridor are provided in some instances, such as the Queenstown Trail along Frankton Arm, these do not always provide access to destinations along the route.

Traffic speeds along the corridors with the heaviest traffic in QLD are high for the urban context and are likely to impact on mode choices by making the urban extents of the road corridors unsafe and unpleasant to walk and cycle along. Posted speed limits follow standard practice of being set at 50 km/h within built up areas.

The corridor design of the many State Highways through built up areas continues to resemble a highway environment despite lower posted speed limits than in rural areas. Factors such as the width of traffic lanes, the presence of wide, paved medians and shoulders and a lack of active street frontages encourage higher speed travel along many routes. For example, as Ardmore Street passes through Wanaka, features of a highway-type environment continue despite the change in function of the street.

2.2.2 Street corridor and urban public open space infrastructure

2.2.2.1 Walking

Within QLD's urban areas, the majority of streets and public open spaces are accompanied by a level of pedestrian infrastructure typical for New Zealand towns and cities. This includes

¹ NZTA (2017) *Queenstown Integrated Transport Programme Business Case*. Wellington: NZTA

footpaths on both sides of the street and through parks in most locations, intersection treatments and zebra crossings in places.

The level of provision for walking in town centres is high relative to elsewhere in the District although issues linked with traffic volumes and a lack of legibility of the street environment exist. This is especially the case in the centre of Queenstown, where the built form is more conducive to a comfortable and rewarding walking experience, and pedestrian malls and wide footpaths invite people to get around on foot. Walking conditions in Queenstown are diminished by the number of vehicles using and passing through in the centre and confusion between modes.

In contrast to the higher level of provision and congestion of QLD's town centres, the quality of walking facilities in some suburban areas are lacking or are low in quality. For example, footpaths are not provided in many parts of Arrowtown, and in Fernhill, Queenstown, footpaths are provided on one side of the street only, and are relatively narrow.

2.2.2.2 Cycling

Cycle-specific facilities in QLD's urban areas are very limited. The cycle lanes that are in place are typically restricted to painted on-street lanes or paved shoulders which are frequently interrupted by a lack of provision at intersections, on-street parking and bus stops.

2.2.2.3 Trails

QLD has an extensive network of off-road recreational walking and cycling facilities within and surrounding the major town centres (see Figure 1 and Figure 2). These provide high quality opportunities for recreation and tourism in scenic settings, but in most cases, do not perform a transport function due to the distance between destinations, the facility type and topography.

Figure 1: Wakatipu Basin Walking Planning Map (source: On Foot, By Cycle, QLDC, 2008)



Figure 2: Wanaka Walking Planning Map (source: On Foot, By Cycle, QLDC, 2008)

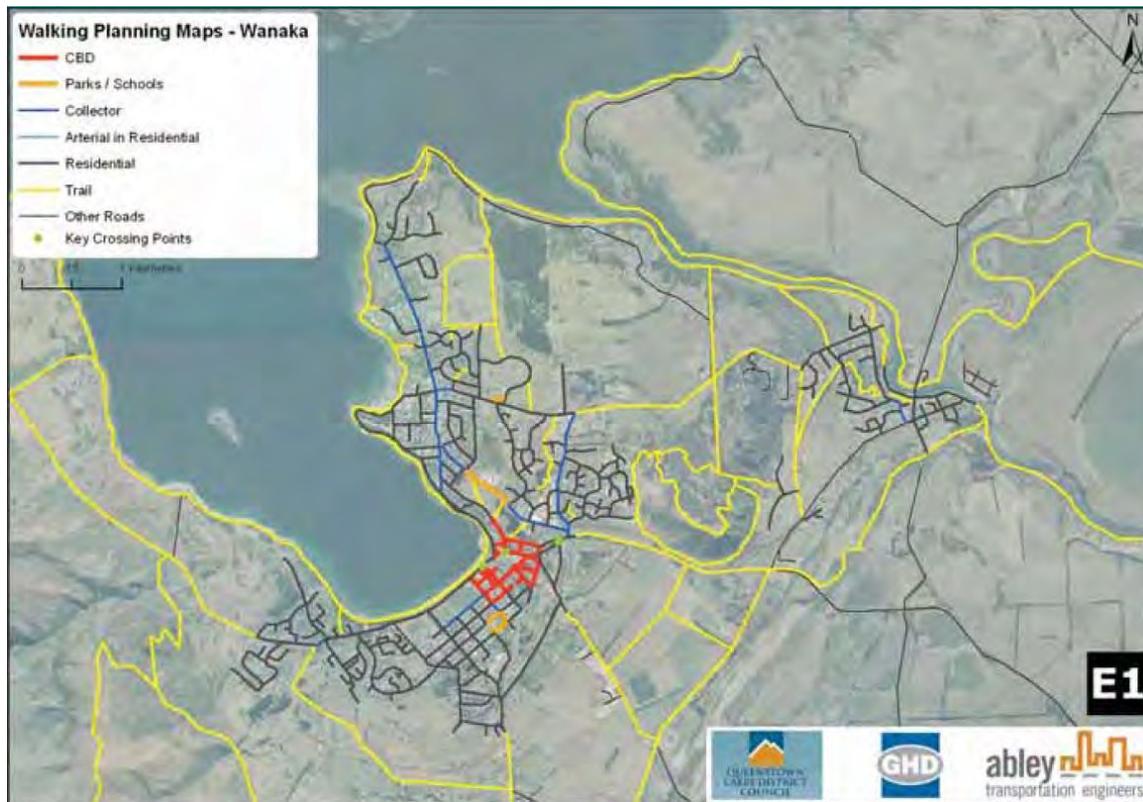


Figure 3:Wakatipu Basin Cycling Planning Map (source: On Foot, By Cycle, QLDC, 2008)



Figure 4: Wanaka Cycling Planning Map (source: On Foot, By Cycle, QLDC, 2008)



2.2.3 Current levels of walking and cycling

Walking and cycling for transport are minority modes in QLD. The most readily available sources of data are the census journey to work data and the results of local journey to school surveys.

2.2.3.1 Journey to work

In QLD, the mode shares for main means of travel to work for walking and cycling are 15% and 4% respectively (for those who travelled to work on census day in 2013)². A further 2% used public transport, which incorporates some distance of walking. These figures are comparable with national averages of around 10% active modes and 6% for public transport.

2.2.3.2 School travel surveys

Data from the 2017 schools travel survey indicates a significant proportion of school students use active modes for part or all their journey to school. Mode shares by school for walking, cycling and scooting are between 12 and 45%³. Additionally, bus mode share is between 14 and 35%, incorporating walking some distance to and from bus stops. While there is considerable

² Statistics NZ 2013 census data

³ QLDC (2017) *Annual travel survey reports*

variability in modal shares between schools within QLD, they are broadly comparable with national averages. Nationally, in the order of 30% of school students walk to school and 2-3% cycle; around 9% of primary aged children take public transport and around 23% of secondary school students⁴.

2.2.4 Policy context

A number of strategies and plans include active modes. The content of these documents ranges from overall visions to plans for specific corridors.

2.2.4.1 Otago Southland Regional Land Transport Plans (2015)

This document sets the strategic direction for land transport in Otago Southland, including providing for walking and cycling. The role of walking and cycling is set out, along with an outline of intentions to encourage increased use of active modes for transport. Walking and cycling is incorporated into several of the Plans' objectives and policies, and forms a key part of Section 4 regarding providing appropriate transport choices. In the case of QLD, funding allocation does not appear to align with the regional objectives and policies. Of a total of \$63.6 million recommended expenditure for QLD for the period 2015-18, no funding is recommended to be allocated to walking and cycling specific transport projects. Active modes may, however, benefit from expenditure on the maintenance, renewal and upgrade of local roads.

2.2.4.2 2015-2045 Infrastructure Strategy (2015)

This document sets out QLD's strategy for investment in infrastructure, including walking and cycling, to address issues facing the District over a 30-year time frame. The improvement and expansion of cycleway and walkway networks and the improvement of safety are elements under the plan for transportation infrastructure. The wording of the provisions emphasises recreational and off-road walking and cycling as opposed to on-street facilities that are integrated with the wider road environment and land use.

2.2.4.3 Queenstown Integrated Transport Programme Business Case (PBC) (expected to be adopted by 1 September 2017)

This PBC sets out transport related problems facing Queenstown and makes the case for solutions to those problems. The recommended programme includes a significant investment in the improvement and extension of the network of active transport infrastructure in the form of the Wakatipu active travel network and an upgrade of the Frankton Track parallel to State Highway 6A. Increased pedestrianisation of the town centre is also proposed with the aim of improving conditions for people on foot and discouraging private vehicle usage. Reference is also made to a number of land use QLDC initiatives that will reinforce the aims of the programme and encourage walking and cycling.

Active transport initiatives form part of the programme. The PBC outlines proposed timeframes, identifies interdependencies, makes a financial case and sets out a delivery and monitoring strategy. Walking and cycling initiatives proposed in the programme are estimated to cost \$49.5 million, 64% of which will be provided by QLDC and 36% NZTA.

⁴ Ministry of Transport (2014) *NZ Household Travel Survey*

Following the recommendations of the PBC, a business case is expected to be developed for a District-wide active travel network in 2017.

2.2.4.4 On Foot, By Cycle (Draft) (2008)

On Foot, By Cycle is the QLD's dedicated active modes strategy. The degree of influence of the strategy is reduced, however, by the time passed since it was written, the fact that it was not finalised or implemented, and is expected to be largely superseded by the abovementioned active travel network business case.

This overarching strategy's purpose is to assist in applications for central government funding of walking and cycling initiatives. It incorporates the aims of the Upper Clutha Walking and Cycling Strategy and Wakatipu Trails Strategy, which are focused on recreational and off-road active modes infrastructure. On Foot, By Cycle sets out a vision and objectives which, in summary, seek to: *“see more people walking and cycling and greater satisfaction within the community with the ease, safety and security of walking and cycling in the district.”* The strategy outlines the process for the design of walking and cycling facilities and recognises the need to improve future standards by considering the wider road environment and its impact on active modes. A proposed hierarchy of arterial and local urban walking and cycling facilities and rural trails is provided in map form (see Figure 1-4). Six targets are stated, relating to increasing walking and cycling, achieving high resident and visitor satisfaction with walking and cycling conditions and reducing pedestrian and cyclist casualties.

A strategy for implementation is summarised, including acknowledgment that improvements to the road environment through influencing broader strategies and setting and enforcing rules through local planning policy, traffic management plans, bylaws, subdivision standards and enforcement.

2.2.4.5 Queenstown Town Centre Transport Strategy (2016)

This strategy aims to improve enjoyment of the town centre by residents and visitors by reducing congestion caused by private vehicle reliance. Central to the proposals put forward by the strategy is the improvement of the pedestrian and cycling environment, including the creation of shared spaces and improvements to active modes facilities on town centre roads. Dedicated walking and cycling infrastructure will be supported by changes to car parking controls.

2.2.4.6 Land Development and Subdivision Code of Practice (2015) and Draft Land Development and Subdivision Code of Practice (2017)

This document guides the development of rural roads and urban streets in QLD. The substantive standards for the provision of walking and cycling facilities are summarised in a Table 3.2 which specifies land uses, development densities, operating speeds, and design parameters. While some best practice principles are set out, the implementation of best practice design standards is not ensured.

Generally, the Code of Practice adheres to best practice principles with regard to the provision of walking and cycling paths and lanes in terms of their suitability for the projected volume and speed of traffic, as set out in Table 3.2. Exceptions to the application of best practice occur in the rural environment where developments above 200 dwelling units, primary freight access or

access to offices and education are proposed. In these cases, targeted operating speeds of 70-100 km/h and maximum traffic volumes of 1000-2500 vehicles per day would make the facility types proposed inadequate to provide for safe walking and cycling. Separated facilities within the road corridor or standalone paths should be provided for pedestrians and cyclists in all cases where targeted travel speeds exceed 30 km/h and for cyclists where they exceed 50 km/h. Whether these facilities are provided in the rural environment should be decided on a case-by-case basis, informed by the context of the development within the walking and cycling infrastructure networks and with regard to destinations such as places of employment and schools.

Importantly, there is no functional mechanism which ensures that appropriate provision for cycling is made as part of land development and subdivision. The Code of Practice requires a 'trigger' of the road being a local authority defined cycle route, which implies that there needs to be an adopted cycle network plan in place for the guidance to effectively influence what is eventually built on the ground. As outlined above, cycle network planning for QLD is restricted to the hierarchy of routes set out in *On Foot, By Cycle* (2008), which was not finalised and has not been implemented.

There is little guidance on intersection design in the Code. Junctions are where most crashes involving cyclists occur, and are commonly the sites of increased rates of crashes involving pedestrians. As such, intersection designs should be specified as critical elements of the street network and should incorporate pedestrian and cyclist priority where possible to improve conditions for active modes and introduce traffic calming to minimise travel speeds, particularly in residential areas and village and town centres. Key parameters including pedestrian and cyclist crossing distances, vehicle turning radii and sight lines.

On-street painted cycle lanes are proposed in the Code and separated cycle paths are referred to. Where painted on-street cycle facilities are proposed, they should be a minimum of 1.8m wide. Where painted cycle lanes occur adjacent to parallel parked cars, there is a risk of cyclists having doors opened in their path. Where this occurs, the cycle lane should be separated from the parking bays by a horizontal surface treatment with a width of 0.8-1.0 m. A reference in the Code states that: *"Separate cycle paths shall be provided where good design requires separation from the carriageway or a different route to be selected"*. This provision is not sufficiently clear for it to lead to best practice cycle provision outcomes.

The Code does not include arterial roads and motorways and leaves the design of these corridors to the relevant road controlling authorities. While this omission is logical given the document's context, the lack of guidance of walking and cycling facilities should be addressed elsewhere in QLD planning policy. Arterial roads in particular are often key walking and cycling routes due to their directness and accompanying land uses.

The Draft Land Development and Subdivision Code of Practice (2017) (viewed by MRCagney on 16 August 2017), do not diverge significantly from the 2015 version of the document with regard to providing for public transport and active modes. No amendments are made to Table 3.2 aside from minor changes to terminology and notes. Exceptions where the 2017 draft is different include:

- Appendix J – Cycle Trail and Track Design Standards and Specifications is added, which outlines requirements for routes intended for recreational and touristic use and

recognises that design for the transport cycling infrastructure network is outside the scope of the guidance provided. Some recreational and touristic routes in QLD will also serve a transport function and should be designed accordingly. This overlap should be recognised in both the trail guide and any future street design guide by cross referencing.

3. Recommended process for improving level of service for public transport and active modes

3.1 Public transport

The public transport system requires a supportive network for the entirety of the journey, from door to door. This comprises public transport routes and services, and the infrastructure which allows people to travel to and from stops and stations. For QLD, the majority of public transport network planning is carried out by the Otago Regional Council (ORC).

As stated in the Regional Public Transport Plan, ORC will carry out detailed network planning. It is assumed that best practice principles to the design of the network will be applied, and that ORC's work will include the specification of bus and ferry stop locations as required and the design of bus stop shelter designs.

QLDC and ORC will need to collaborate to ensure that public transport network planning is effectively integrated with transport, resource and land use planning locally. This will include the planning and design of bus priority measures to ensure target levels of service are achieved and planning for access to bus stops by active modes using the street network. Bus stops for rapid services which stop less often and park and ride facilities are more likely to be accessed by a variety of modes, including walking and cycling, and should be planned for and designed accordingly. Provided that stops are appropriately spaced, local bus stops will mostly be accessed by walking. Best practice principles for public transport access include:

- The first consideration should be pedestrians crossing the street at the immediate stop location. Public transport stops should be located close to intersections where pedestrian crossings can be provided.
- Key paths leading to public transport stops should provide for access for varying ages and physical abilities. Paths should be universally accessible, direct, and well-lit.
- Particular attention should be focused on area that may be deemed unsafe by a range of users, particularly at night.

Further bus stop design guidance should be sought from existing publications. The following documents should be referred to:

- Bus Stop Infrastructure Design Guidelines (Auckland Regional Transport Authority, 2009)
- Public Transport Interchange Design Guidelines (Auckland Transport, 2013)
- Auckland Urban Street and Road Design Guide (Auckland Transport, 2017)
- Auckland Transport Code of Practice (2013)

- Transit Street Design Guide (National Association of City Transportation Officials (USA), 2016)

3.2 Active modes

As outlined above, QLD has a number of important elements in place to facilitate the development of an extensive, high quality network of walking and cycling infrastructure. A series of actions is proposed below to bring together existing initiatives and progress the development of the network integrated with other transport programmes, cognisant of land use changes and in conjunction with District Plan update process.

3.2.1 Audit existing walking and cycling facilities

Stage 1 of an audit of walking and cycling facilities was carried out in early 2016. This report outlined the characteristics of a high-quality walking and cycling network, reviewed existing policy and provided a methodology for the collection of data.

Recommendation: Complete the Walking and Cycling Audit as proposed in the Queenstown Town Centre Transport Strategy.

3.2.2 Establish a monitoring programme

On Foot, By Cycle set out targets for encouraging the improvement of active modes infrastructure in the QLD.

Recommendation: Walking and cycling activity should be monitored against the following targets:

- To increase the proportion of journey to work walking trips beyond 15% and cycling trips beyond 5%
- To increase every year the proportion of residents and visitors who are satisfied with the ease, safety and security of walking and cycling within the QLD
- To reduce the number of pedestrians and cyclists injured or killed in crashes as a proportion of all injuries and fatalities

3.2.3 Network planning update

Recommendation: An active network should be planned and communicated as recommended in the Queenstown Integrated Transport Programme Business Case. It should encompass the Wakatipu area as well as Wanaka.

The active travel network plan should update and build on the network proposed in On Foot, By Cycle and Plan and link into the existing trail network.

It should follow the below steps:

- Identifies target customers – i.e. all ages and abilities or more targeted toward particular groups to begin with?

- Identify target trip types that network development should focus on to inform facility types – for example short to medium distance trips to activity centres and future park and ride stations, journeys to work and school.
- Identify and plan around key destinations and trip generators e.g. schools, town centres, Fernhill and Frankton suburbs
- Apply best practice network planning principles to identify key active modes corridors:
 - Select routes that provide direct access to key destinations and follow corridors of high (current or latent) demand
 - Select routes that link with other parts of the network to form a coherent and legible network
 - Establish an appropriate network density, with a finer-grained network in areas of higher demand
 - Select routes that are attractive for users and that offer a pleasant, interesting, safe and secure environment
 - Selecting routes that minimise major gradient changes.

3.2.4 Active modes infrastructure

The hierarchy of pedestrian and cycling facilities should be allocated according to their location and function within a framework of street types.

QLDC is in the process of establishing a hierarchy of roads and streets according to the One Network Road Classification (ONRC), published by the NZ Transport Agency. While this will set out a structure, more detailed planning and design guidance will need to be carried out to ensure best practice provision for people on foot and on bicycles.

A recent example of a more detailed framework which guides provision for active modes is provided in Auckland Transport's Urban Street and Road Design Guide. Considerations for choosing facility types include land use, public transport infrastructure and traffic conditions. Examples of street types, which determine the type of pedestrian/cycling facility include:

- Mixed use arterial – high travel speeds (40-50km/h) and traffic volumes, pedestrian crossing facilities including at bus stops. Footpaths should be a minimum of 3.0 m in addition to 3.0 m of commercial space and a 1.5 m wide street tree and street furniture zone between the footpath and travel lane.
- Main street – a destination in its own right with continuous street frontages and large clear footpaths 3.0 m wide. A 1.5 m wide commercial zone along the street frontage and a 1.5 m wide street tree and street furniture zone can also be included.
- Local street – mostly residential land use, very low traffic volumes and speeds, fine grained street design and footpaths 1.8-2.4 m wide.

Figure 5 outlines the situations in which different types of on-street cycling facilities should be implemented. This represents a refinement of the cycling guidance provided in the Land

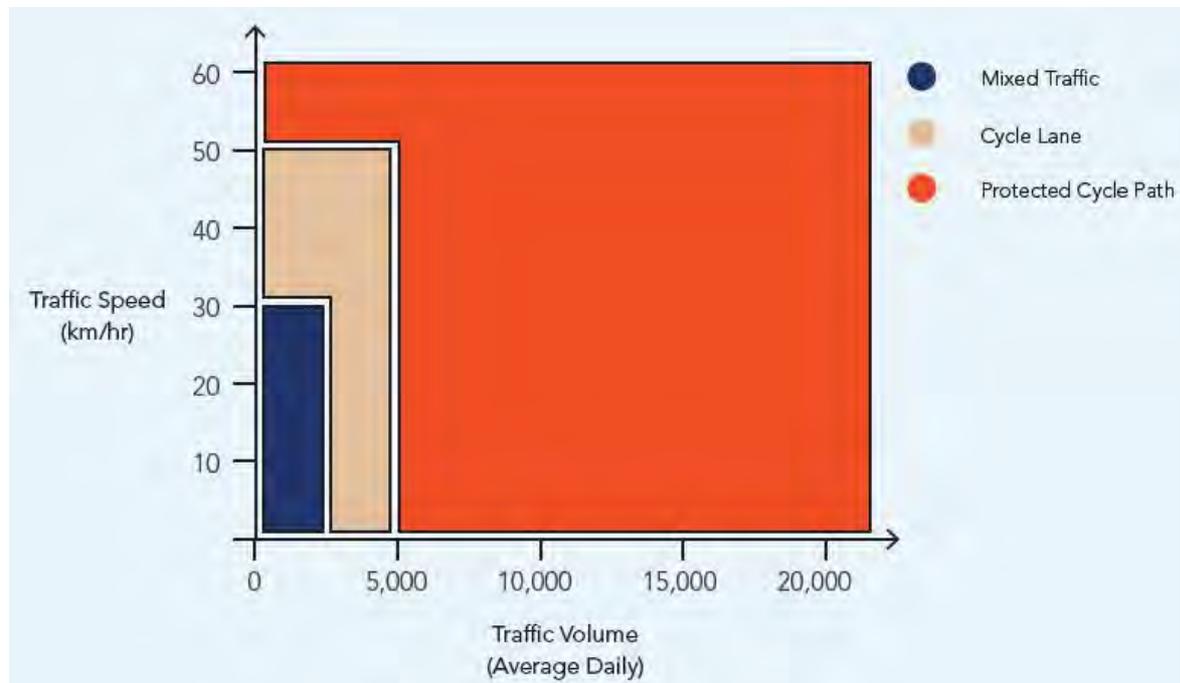
Development and Subdivision Code of Practice (2015) based on current best practice. The most important difference between the two sets of guidance are the lower speed thresholds set in Figure 5.

The facility types in the Auckland guidance are similar to those used in the Development and Subdivision Code of Practice [QLD equivalents are listed in square brackets]. The facility types traffic and conditions are:

- Mixed traffic/greenways/traffic calming on quiet, low speed streets [shared (in movement lane)]
- Painted on-street cycle lanes on streets moderate speeds and traffic volumes [on sealed shoulder where it is a local authority defined cycle route]
- Separated cycleways (also referred to as protected cycle paths) on busy streets [separate provision where local authority defined cycle route]
- Standalone cycling or shared paths through public open space

There are two main differences between the two sets of guidance. Firstly, sealed shoulders are replaced by painted on-street cycle lanes in the Auckland guidance. The latter refers to a specifically designed cycling facility as opposed to a leftover paved space also intended for emergency stopping. Secondly, separate provision is divided into separated cycleways and standalone cycling or shared paths.

Figure 5: Cycling facilities according to traffic conditions (Auckland Transport, 2016)



3.2.4.1 Cycle parking

In commercial areas, cycle parking should be provided in the road corridor. The QLDC Cycle Facilities Guidelines (2009) should be reviewed against the following best practice principles from the London Cycle Design Standards (2014) and revised as required.

- *“Fit-for-purpose – meeting identified current and future demand, with an appropriate balance of short-stay and longer-stay provision.*
- *Well-located – convenient, accessible and as close as possible to the destination.*
- *Secure, visible and well-overlooked – stands that allow for secure locking in places that are well-lit and with high levels of natural surveillance.”*

Recommendation: Include cycle parking to best practice standards in streetscape upgrades along commercial/main street corridors.

3.2.5 Design standards/guidelines

The design of walking and cycling facilities for developments in QLD is guided by the District Plan and Land Development and Subdivision Code of Practice. There is no District-wide guidance for existing roads and streets for the implementation of corridor upgrades or redesigns, although QLDC is in the process of establishing a hierarchy of roads and streets according to the ONRC.

Recommendation: A roads and streets design framework should be developed which provides greater detail of classification and design guidance than the ONRC including design principles, parameters and dimensions for each road and street type. It should reference best practice examples should be developed covering existing urban areas within QLD as well as future developments.

The road and streets design framework should be integrated with existing QLDC, ORC and NZTA transport and urban planning policy, including the ONRC. Best practice precedents of comprehensive street design guides exist within the New Zealand context, such as Auckland’s forthcoming Urban Street and Road Design Guide and recently published Local Paths Design Guide.

3.2.6 Review of proposed infrastructure

Specialist capability within QLDC should be allocated to the design of walking and cycling infrastructure and the design review of facilities proposed by consultants. If the required resources and expertise are not available within QLDC, it should be developed or out-sourced. This process should draw on knowledge from other councils, the NZTA and private sector as required.

3.2.7 Post-implementation monitoring

Post-implementation reviews of walking and cycling infrastructure should be conducted regularly. Reviews could follow the methodology used by NZTA in assessing its infrastructure developments. NZTA’s post-implementation reviews aim to:

- “assess and explain how well projects and packages have achieved their main expected transport benefits...to give an overall assessment of the value for money of completed projects or packages reviewed
- Explain any variation between actual results and expected benefits and costs, and
- Identify lessons learned that can be used to make business improvements”

4. Potential impacts of improved level of service for public transport and active modes

4.1 Public transport

Public transport has the potential to play a key role in addressing the problems facing QLD, as outlined by the Queenstown Integrated Transport PBC. Aligned to the purpose of the PBC, the Wakatipu Basin Public Transport Detailed Business Case identified benefits of improving public transport provision in the District, which are summarised as follows:

- Improved liveability and visitor experience/attractiveness
- Improved access to the Queenstown town centre and improved functionality of the town centre transport network for all users
- Improved network performance and capability
- More effective investment in transport
- Improved economic growth
- Reduced environmental impact from the transport system

4.2 Active modes

4.2.1 Safety implications for the QLD

Encouraging more walking and cycling in QLD can play a crucial role in improving local road safety. Increasing the levels of walking and cycling by designing the streets of its towns around the needs of pedestrians and cyclists is likely to improve safety for all road uses by encouraging lower speeds and safer driving behaviour. The effect of ‘safety in numbers’ or ‘numbers in safety’ is demonstrated by an international study by Jacobsen (2003)⁵. This study compared pedestrian and cyclist casualty rates with the levels of walking and cycling in numerous US and European cities. It was concluded that the likelihood of a motorist colliding with a pedestrian or cyclist decreases as levels of walking and cycling increase.

4.2.2 Quality of place and amenity implications for the QLD

In addition to having a transport function, more walking and cycling will increase place value in the QLD. Having people socially, economically and environmentally engaged in the public

⁵ Jacobsen, P.L. (2003) ‘Safety in numbers: more walkers and bicyclists, safer walking and bicycling’. *Injury Prevention*, Vol. 9, pp. 205-209

domain is the foundation of public life. Developing a human scaled environment that is design around a safe, comfortable and convenient pedestrian experience encourages positive interactions and will result in lower traffic volumes and speeds.

People on bicycles, like pedestrians, are able to interact with the urban environment using all of the senses. The moderate range, ease of stopping and parking a bicycle facilitates cyclists use of local amenities and contribution to the local economy. Furthermore, a combination of the relatively low speed of cycling and the relatively low mass of a person on a bicycle means cycling reduces the chances of a crash and makes casualties highly unlikely in the case of a collision. This, in addition to the absence of exhaust emissions and the very low noise levels of cycling means that the mode has negligible adverse impacts on the local environment. These factors combine to allow people on bicycles to play a positive role in public life and enhance place value.

4.2.3 Trade-offs

Due to set street corridor widths in much of the District, trade-offs will need to be met between different modes in order to improve conditions for alternative modes. Where spatial constraints occur, compromises on the type or design of transport infrastructure may be required. The following examples are listed in order of preference in terms of their adverse impact on improvements to the street network for alternative modes:

- The narrowing of general traffic lanes, the removal of on-street parking and turning/slip lanes and the reconfiguration of signal phasing cycles to favour alternative modes is likely to be necessary to accommodate improved provision for pedestrians, cyclists and bus service users. This may have an impact on the ease of accessibility of town centres by private car and increase travel times to and through centres by car.
- Where bus-only lanes cannot be provided, bus use of the kerb-side lane may be shared with parking outside of peak times and/or with high occupancy vehicles (transit or T2/T3 lanes).
- Shared path corridors may not be sufficiently wide to segregate the movements of pedestrians and cyclists, even where path widths and existing or projected numbers of people on foot and on bicycles should determine that separation is necessary to allow for safe and comfortable use.
- Cycle facilities may need to be provided at the minimum feasible width, or provided as shared paths or painted facilities where best practice design would be to introduce generous protected facilities.
- Footpaths may not be able to be widened to best practice standards and/or associated uses of the street corridor such as commercial zones and street tree and street furniture zones may not be able to be provided.

5. Current Regulatory Framework

5.1 Introduction

Public transport infrastructure can encompass a variety of different structures and land uses to support public transport services. In QLD's context, public transport infrastructure includes

structures and land uses such as bus shelters, bus interchanges, bus terminals, ferry piers, and park and ride facilities. The ways in which public transport infrastructure is provided for and managed by the Proposed District Plan will be crucial to the successful implementation of programmed improvements, and will be of significant relevance to key stakeholder agencies like ORC, NZ Transport Agency (NZTA) and public transport operators.

Furthermore, QLDC and its partner agencies also have plans to improve and expand the District's walking and cycleway network (as proposed in some of the aforesaid documents), and publicly available infrastructure to support these plans may include separated cycleways, painted cycle lanes, trails (e.g. off-road within a park), and cycle parking structures (e.g. hoops and racks).

The different types of infrastructure mentioned may be provided within the legal road reserve (e.g. bus shelter on a footpath), and/or it may be provided on a site (e.g. bus interchange or park and ride), with differing consequences on the ways these structures and land uses are regulated via a District Plan.

The following sections discuss the ways in which public and active transport (i.e. walking and cycling) are currently regulated in the Operative District Plan, and offer recommendations on a potential future regulatory framework for the same in the Proposed District Plan, based on recent best practice and our own experience.

5.2 On-road infrastructure

The road reserves in the District are unzoned, and do not assume the zoning of the land they adjoin. Consequently, the provisions in the individual zone chapters do not apply to transport infrastructure provided on the road reserve. Rather, the Operative District Plan's Section 14 (Transport) regulates transport infrastructure on the road reserve.

The Transport Section, in our view, takes an 'enabling' approach to transport infrastructure provision in the road reserve. Rule 14.2.2.1 states any activity which complies with all site standards and is not listed as a controlled or discretionary activity shall be a permitted activity. Except for parking areas such as park and rides (which are unlikely to be located on a road reserve), no infrastructure for public transport or active transport that are likely to be erected on the road reserve are captured as controlled or discretionary activities, meaning they would be permitted activities in all circumstances. As the site standards typically relate to parking and access design, these do not constrain the development of infrastructure like bus shelters, cycle parking, separated cycleways and painted lanes, and these are therefore permitted activities.

Any earthworks required for the erection of the infrastructure on the road reserve are regulated by Section 22 (Earthworks) of the Operative District Plan. Earthworks are permitted by Rule 22.3.2.1(a) subject to compliance with the relevant site standards. The site standards in this Earthworks Section regulate, among other things, earthworks volume, and the depth of cut and fill, but these pertain only to 'zones'. It is unclear how QLDC treats the definition of 'zone' vis-à-vis the road reserve, but if it is unzoned, then such site standards would not apply. Consequently, the only earthworks standards applicable relate to erosion and sediment control measures, earthworks near water bodies, cultural heritage and archaeological sites, and construction noise, as per Standards 22.3.3 (iv) to (vii).

Based on this assessment, the Operative District Plan takes an enabling approach to on-road transport infrastructure, and typical infrastructure such as bus shelters, cycleways and cycle parking would generally be permitted activities on the road reserve throughout the District. As it stands, this existing regulatory regime would facilitate future improvement and expansion of public and active transport infrastructure from a consenting perspective, to accompany planned transport service improvements. However, we would also point out that the Operative District Plan's Transport Section is not explicit about the types of transport infrastructure it wants to provide for within the road reserve, which creates a level of uncertainty for plan users.

5.3 Off-road infrastructure

5.3.1 Land transport

As mentioned, public and active transport infrastructure is not limited to the road reserve, and may be found on private or publicly owned land outside of the road reserve. For example, this could be in the form of park and rides, bus terminals, or ticketing facilities. As sites may be situated in a variety of zones, off-road transport infrastructure on the land is currently regulated by the zone in which a site is located, in addition to the Transport Section. This creates a level of regulatory complexity and uncertainty as the consenting requirements may change depending on location.

As stated by the *Parking Advice* technical note, car parking areas in the following zones are controlled activities under the Transport Section of the Operative District Plan:

- Town Centre;
- Business;
- Industrial A and Industrial B Zones;
- Ballantyne Road Mixed Use Zone;
- Corner Shopping Centre Zone; and
- Activity Area 2 of the Kingston Village Special Zone

Accordingly, park and rides, which are typically off-road, would be controlled activities in these zones, subject to compliance with the site standards which typically relate to parking and access design (Rule 14.2.2.2(i)). As it stands, this operative rule would facilitate any planned park and ride facilities in the above zones.

Other transport infrastructure such as bus interchanges and cycle trails are also located off-road and the planning requirements vary according to the zone. In addition, consideration must also be given to activities like bus depots to service public transport operators. We have used a plausible example to demonstrate how the Operative District Plan would regulate transport infrastructure. This is a bus interchange in the Queenstown Town Centre zone (as planned in the Queenstown Town Centre Masterplan).

A bus interchange in the Queenstown Town Centre zone would be regulated by rules addressing general buildings, i.e. there are no specific provisions for this particular activity. This would be captured by Rule 10.6.3.2, rendering a bus interchange a controlled activity, subject to compliance with the site and zone standards (assuming it is not located in any special overlays

such as the Special Character Area). As it stands, this operative rule enables the provision of bus interchanges within the Queenstown Town Centre, although not as a specific activity. Relevant site and zone standards include, among other things, maximum building height (12 metres, but varies depending on actual site location), verandas, and building coverage, which would need to be assessed on a case by case basis.

5.3.2 Water-based transport

As expressed in documents like the Masterplan and the Queenstown Integrated Transport PBC, there is a desire from QLDC and its partner agencies to explore water-based transport as a viable public transport mode in the District (e.g. regular scheduled ferries). Water-based transport would generally require infrastructure off-road, and would encompass the interface between land and water. For instance, associated park and rides and ferry terminals may be located on land-based sites, whereas piers for ferries are located on water, which is zoned Rural General in the ODP.

We note that the operation of ferry boats on the lakes in QLD is regulated in part by local bylaws. This is an appropriate method of regulating the safety and amenity effects of boating activity, rather than managing all aspects through the district plan.

As with the land-based off-road transport infrastructure discussed in the preceding section, the planning requirements for water-based transport infrastructure (located on land) vary according to the zone(s) in which the infrastructure is proposed. Again, this creates a level of regulatory complexity and uncertainty as the consenting requirements may change depending on location. Regardless of the zoning of the lakeshore, any structure or mooring which passes across or through the surface of any lake and river (such as a jetty) is a discretionary activity pursuant to Rule 5.3.3.3 or non-complying in certain areas. In addition to the zone's rules, the Operative District Plan planning maps for prospective locations for water-based transport services such as Kelvin Peninsula (Map 37) has a notation indicating 'all structures and moorings are non-complying except for jetties', which would capture infrastructure like piers on the water of Lake Wakatipu, creating added complexity.

The surface of the lakes in the district are zoned 'Rural', except for the area in proximity to the Queenstown Town Centre in Queenstown Bay. The Rural Zone includes provisions that regulate structures on or above the surface of the lakes, including jetties, wharfs and piers. All structures or moorings on waterbodies require resource consent assessment, because of their ability to impact upon landscape, recreational safety and conservation values associated with a shoreline or shore waters.

The Rural Zone rules effectively separate boating activities into either commercial or recreational categories, and apply more stringent regulations to commercial activities via the activity status, i.e. recreational boating is permitted subject to standards, whereas commercial boating is discretionary.

6. Recommended Regulatory Framework

Our review of the existing regulatory framework vis-à-vis public and active transport infrastructure in the preceding section highlights some plain differences in the way they are provided for and regulated – depending on whether they are on the road reserve or off-road, and if off-road, depending on the particular zone or if structures on the surface of water are

proposed. In our view, this creates an unnecessary level of complexity and uncertainty with regard to planning for public and active transport infrastructure via District Plan provisions.

As an alternative, we recommend 'bundling' all provisions related to transport infrastructure and associated works (e.g. earthworks) into the same chapter, and make some differentiations depending on whether that infrastructure is on-road or off-road, or on land or on water. The upcoming drafting of the Proposed District Plan's Transport Chapter therefore presents a good opportunity to do this under one chapter, to facilitate understanding of the planning requirements of transport infrastructure by plan users, and to ensure the benefits of public transport infrastructure are appropriately accounted for in the PDP provisions and resource consent processes.

6.1 On-road infrastructure (Public Roads)

We support the 'enabling' approach taken by the Operative District Plan with regard to transport infrastructure on the road reserve, and the present approach with placing these activities within the Transport Section. We support rolling over this approach to the proposed Transport Chapter, although this should be done with added clarification of the types of infrastructure that should be permitted or controlled activities on the road reserve (e.g. bus shelters, cycle parking, etc.). In this way, this provides greater certainty to plan users, rather than relying on generic 'catch-all' provisions that state any activity not listed as being classified as a higher activity status is permitted or controlled.

QLDC could subsequently classify as permitted or controlled activities the transport infrastructure it anticipates for the District. Alternatively, QLDC may also wish to consider a 'catch-all' permitted/controlled activity type and definition, e.g. 'public transport facilities' or 'transport utility' that would encompass all types of transport infrastructure. The latter approach would simplify the plan and reduce the length of the list of different types of infrastructure permitted or controlled by the plan.

Furthermore, activities associated with providing transport infrastructure such as earthworks, would also benefit from being bundled into one transport chapter. The new Transport Chapter could subsequently adopt the same permissive earthworks rules and standards for transport infrastructure, but make the same exceptions where earthworks are in sensitive areas (e.g. heritage, takata whenua overlays).

6.2 Off-road infrastructure

The current regulatory approach to off-road transport infrastructure is relatively complex, creating a level of uncertainty for plan users which is able to be mitigated. Rather than using individual zone provisions to regulate transport infrastructure, we recommend bundling off-road transport infrastructure provisions into the one unified Transport Chapter of the Proposed District Plan. It is recommended that a separate set of rules and standards for off-road infrastructure be created, to distinguish between the range of transport activities anticipated or deemed acceptable off-road by way of activity status vis-à-vis on-road infrastructure.

To address potential concerns regarding the adverse effects of off-road infrastructure on the broader environment and surrounding sites, activity standards and assessment criteria can be set to appropriately manage these effects. For example, standards and assessment criteria could be set around trip generation and traffic effects for park and rides exceeding a certain

number of spaces, or around the proximity of infrastructure to residentially zoned sites or culturally sensitive locations.

In this way, QLDC can adopt a streamlined and easy to understand approach to consenting off-road infrastructure, while managing location or intensity-based concerns via standards and assessment criteria. In our view, this would assist in accounting for the positive effects of public and active transport within the broader environment, and facilitating the planning and provision of public and active transport infrastructure planned in documents such as the Queenstown Town Centre Masterplan and the Integrated Transport Programme Business Case.

6.3 Surface of Lakes

One aspect of public transport provision regulation we think would be better retained in a separate section of the PDP, i.e. not the Transport Chapter, is aspects related to the surface of lakes and rivers.

As noted above, the Rural Chapter and the Queenstown Town Centre Chapter of the PDP include rules that are proposed to regulate structures on the surface of lakes and rivers, e.g. wharfs and piers, and rules that are proposed to regulate boating activities on the surface of lakes and rivers, e.g. commercial sailing or jetboating.

Including rules to regulate wharfs or piers servicing a scheduled public ferry, and rules to regulate the boating activity itself, in the Transport Chapter of the PDP, would in our view create a potentially confusing overlap between the separate sections of the plan, which could be used to create effectively the same structure on the surface of the water, but with different applicable objectives and policies and different assessment criteria, intended to manage the same effects on the environment. This situation might also create some difficulties with the definition of commercial boating versus the definition of a public ferry service, and multiple different users of the same wharf or pier facility.

Therefore, rather than creating additional rules regulating activities on the surface of lakes and rivers, we suggest that if the opportunity presents itself, e.g. via a plan change/variation, the Council should consider adding objectives and policies to the relevant parts of the Queenstown Town Centre Zone and Rural Zone. The additional objectives and policies should reference the QLD desire to implement an effective public transport network, and acknowledge the broader positive effects a well-connected public transport network provides.

7. Summary and conclusions

This technical note has examined the existing conditions and policy direction for alternative modes. At present, the use of public transport is lacking, although this is anticipated to improve following the imminent rollout of the new bus and fare system, and further improvements planned long-term. In relation to active transport, on-road cycling facilities are generally limited, although there is an established off-road cycle trail network that is useful for recreational purposes, but not necessarily for everyday transport.

The value of providing for active and public transport infrastructure and services is well documented in a number of strategic plans and documents for the District, including the most recent Queenstown Town Centre Masterplan. We recommend establishing a clear active modes network plan and a process for implementing the network and reviewing development

proposals, to ensure all future improvements are consistent with these strategies and best practice, and most importantly, to get more people walking and cycling. The implementation of this network plan will involve making trade-offs to improve provision for all modes due to spatial constraints.

In terms of the planning requirements for transport infrastructure, there is an existing enabling approach for on-road infrastructure, but the consenting requirements for off-road and water-based infrastructure are currently complex and uncertain. We therefore recommend carrying over the enabling approach towards on-road infrastructure to the new Transport Chapter, albeit with greater clarity, and to bundle the provisions for on-road and off-road transport infrastructure into one unified Transport Chapter of the Proposed District Plan. This would have the benefit of streamline and facilitating the consenting and planning process for the public and active transport infrastructure planned for the District.

Appendix 3. Operative Queenstown Lakes District Plan Operational Standards Review (August 2017)



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OPERATIVE QUEENSTOWN LAKES DISTRICT PLAN OPERATIONAL STANDARDS REVIEW

Prepared for Queenstown Lakes District Council

August 2017



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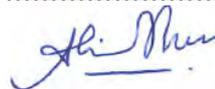
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REVISION SCHEDULE

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			Prepared by	Checked by	Reviewed by	Approved by
1	14/06/2017	Draft for comment	Theek Morapaya	Oliver Brown / Sarah Connolly	Iain Banks	Ali Sher Siddiqui
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3	18/08/2017	Final_v4	Theek Morapaya	Iain Banks	Iain Banks	Ali Sher Siddiqui

Executive Summary

MWH, now Stantec, was commissioned by Queenstown Lakes District Council (QLDC) to undertake a review of the Transport Rules (Chapter 14) of the QLDC Operative District Plan, to ensure that these rules align with relevant industry standards and practice. To ensure that this review is undertaken efficiently by making use of all available information, the previous reviews undertaken by TDG, GHD and MWH were also taken into consideration.

The review has compared the Rules with relevant New Zealand and Australian standards and guidelines as well as best practise used in comparable district plans of other Councils. In doing so, the review has identified the current rules which do not align with these documents, and provides recommendations as to the changes required. Where certain rules are considered as requiring changes, but no relevant information relating to the proposed changes are found in the industry standard or practice, these rules have been identified as requiring further investigation.

Section 1 of this report is an introduction which provides background information relating to this study and describes the study approach. It also outlines the industry standards and guidelines used for the review.

Section 2 of this report provides a review of all sub rules of *14.2.4.1 Parking and Loading*, with the exception of *Rules 14.2.4.1(ii), 14.2.4.1(iii) relating to the Frankton Flats Special Zone*. This identified that all rules within this section require changes, including *Rule 14.2.4.1 Minimum Parking Space Numbers* which require further analysis.

Section 3 of this report provides a review of all sub rules of *14.2.4.2 Access*. This identified that with the exception of *14.2.4.2 (v) Maximum Number of Vehicle Crossings*, all other rules require changes.

Section 4 of this report provides a review of *Appendix 7*. This identified that with the exception of the *Car Space Layout Diagram*, all other information within Appendix 7 require changes.

Section 5 of this report provides a review of *Appendix 6*. This identified that the updated QLDC road hierarchy and the updated classification of all QLDC roads needs to be provided within Appendix 6. In addition, all references to road classifications within the Transport Rules needs to be updated to match the new road hierarchy.

Queenstown Lakes District Council

Operational Queenstown Lakes District Plan

Operational Standards Review

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1 Introduction

MWH (now Stantec and referenced as such throughout the document), has been commissioned by Queenstown Lakes District Council (QLDC) to undertake a review of the Transport Rules set out in Section 14 of the QLDC Operative District Plan ('District Plan'). The main purpose of this study is to ensure that these transport rules align with relevant industry standards or best practice, and provide justification where these rules differ from the standards. This report provides a summary of the review recommendations.

Background

A review of the Transport Rules section of the District Plan was previously undertaken by Traffic Design Group (TDG) and GHD in 2009 to provide recommendations that reflect what was then best industry practice and standards. In addition, a more recent review was undertaken by MWH in 2013, where the transport rules were compared against the industry standards as well as district plans of other similar Councils within New Zealand.

The findings of the previous reviews are documented in the following reports, which have been utilised for this study.

- Plan Change 27: Updating District Plan References – Transport Section, TDG, Feb 2009.
- Plan Change 27B Proposed Amendments to Part 14: Transportation of Partially Operative District Plan, GHD, March 2009.
- Queenstown Lakes District Council District Plan Review, MWH (now part of Stantec), April 2013.

Study approach

To ensure this review is undertaken efficiently by making use of all available information, the aforementioned documents were first peer-reviewed to identify whether their recommendations are still relevant. Where the industry standards and guidelines referred to in these reports have changed, the District Plan rules have been reviewed against the latest standards.

The District Plan rules have been compared against the following key standards and guidelines:

- Australian / New Zealand Standard – Parking Facilities, Part 1: Off-street car parking (AS/NZS 2890.1:2004);
- Australian Standard – Parking Facilities, Part 2: Off-street commercial vehicle facilities (AS 2890.2:2002);
- New Zealand Standard – Design for Access and Mobility: Buildings and Associated Facilities (NZS 4121:2001);
- New Zealand Standard – Land Development and Subdivision Engineering (NZS 4404:2010);
- Queenstown Lakes District Council – Land Development and Subdivision Code of Practice, Superseding NZS 4404:2004 and Council Amendments (2015);
- AUSTROADS Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AUSTROADS Part 4A);
- New Zealand Transport Agency (Formerly Land Transport Safety Authority) Road & Traffic Standards 6, Guidelines for Visibility at Driveways (RTS 6);
- New Zealand Transport Agency (Formerly Land Transport Safety Authority) Road & Traffic Standards 13, Road Safety Guidelines for Service Stations (RTS 13);
- New Zealand Transport Agency (Transit New Zealand) Planning Policy Manual (2007) (PPM)
- Compliance Document for New Zealand Building Code, Clause D1 Access Routes – Second Edition (2011) (Building Code)

In addition, the District Plan rules have also been compared to District Plans of the following local Councils:

- Auckland City Council (ACC) Unitary Plan.
- Buller District Council (BDC) District Plan.
- McKenzie District Council (MDC) District Plan.
- Western Bay of Plenty (WBoP) District Plan.
- Hamilton City Council (HCC) District Plan.
- Christchurch City Council (CCC) District Plan.

2 Transport Rule 14.2.4.1 Parking and Loading

The following sections present each of the existing transport rules within section 14.2.4.1 *Parking and Loading* and confirm whether the current rule is considered appropriate or if modification should be considered. Where modification is recommended the potential wording is presented with supporting rationale. The potential wording is shown in ***bold italics*** with the current rule wording amended with strikethrough (~~strikethrough~~) where required. It is noted that the purpose of the recommended wording is to convey the general intent of the rule and is not considered to be final. It is expected that some re-drafting will be undertaken by a planner prior to notification in order to ensure that the recommended changes to the rules are clear, vires and provides sufficient certainty.

The particular transport rules examined are:

- 14.2.4 Site Standards, excluding;
 - 14.2.4.1 (ii) Frankton Flats Special Zone
 - 14.2.4.1 (iii) Parking requirements within Frankton Flats Special Zone (B)
 - Rules relating to Three Parks Zone.

2.1 Rule 14.2.4.1 (i) Minimum Parking Space Numbers

As there are no industry standards which specify appropriate parking rates for land uses, a full review of this rule against industry standards and practice cannot be undertaken. However, Trips Database Bureau (TDB) is considered an appropriate source of information as it provides New Zealand and Australia wide parking rates which can be used by QLDC as guidance. The QLDC Land Development and Subdivision Code of Practice (CoP)¹ and NZS 4404:2010 also states that TDB can be used for guidance on parking and loading requirements.

Stantec agrees with TDG findings which identified that reviewing the land uses and parking rates provided in Tables 1 and 1A of the operative District Plan will be beneficial in ensuring that these are current and appropriate for Queenstown. This will allow for any gaps in land use types provided within these tables to be addressed, and appropriate parking rates to be specified using TDB as guidance. For example, there is often a need for drop off/ pick up parking spaces at pre-schools and primary schools. However this is not recognised within the current Rule. In addition, parking requirements for land uses such as storage, camping grounds, caravan parks and places of assembly are also currently not included within this Rule. It is noted that due to its complexity, the review of the current parking rates of Tables 1 and 1A based on TDB is not included in this report and is to be undertaken as a separate exercise prior to updating the District Plan.

In terms of parking rates, coach parking rates specified in Table 1 require some changes. At present Table 1 specifies coach parking for some High Density Residential Zones and visitor accommodation activities (e.g. hotels and hostels). A review of the parking rates provided for these activities indicated that the District Plan currently specifies more coach parking for unit type visitor accommodation compared to backpacker hostels, where each guest room will have a higher number of occupants. It is noted that some visitor accommodation may only require spaces for coaches to stop to drop off/pick up passengers and some may not even require coach parking/stopping provision due to the

¹ QLDC Land Development and Subdivision Code of Practice (2015), Section 3.3.6 Parking, passing and loading

visitors using coaches which only travel to/from the city centre. This is currently not recognised within this Rule and would form part of the separate advice on parking, referred to above.

Stantec agrees with TDG findings which identified that although QLDC aims to encourage sustainable travel and active modes, at present Table 1 and 1A provide no district wide, zone specific or activity specific bicycle parking requirements other than for the Three Parks Zone. Therefore, to improve consistency among different zones and to encourage modal shift, it is recommended that the bicycle parking requirements of Table 1D or a variation of it should be incorporated in Tables 1 and 1A. In addition, to encourage sustainable travel, and in line with TDG findings, it is recommended that a note is added to this Rule to explicitly state that a Travel Plan can result in reduced parking demand, thereby reducing the amount of parking required. The CCC District Plan can be used as an example² of using this approach in district plans, as it takes Travel Plans into consideration in the matters of discretion for the minimum number of car parks required. In addition it also provides a separate section³ on parking reduction adjustment factors which includes Travel Plans.

As identified by TDG, at present, note (i) of this Rule currently recommends that fractional parking spaces are rounded up when calculating the total parking requirement. However, it is unclear whether this requires fractional parking spaces of each different activity to be rounded up before summation, or if the rounding up of the total is undertaken. Stantec agrees with TDG findings as the lack of clarity may see this particular note being interpreted differently, resulting in a difference of several parking spaces in the overall parking provision. This may result in an oversupply of parking, and require more parking spaces than required at constrained sites. Coach parking requirements in particular will be affected by this as rounding up fractional parking spaces means that even smaller visitor accommodations will require a coach parking space. It is also unclear which factors trigger the need for coach parking.

In addition, as also identified by TDG, note (iii) of this Rule states that the total parking requirements for any development shall be the sum of the requirements for each area associated with different activities. Stantec agrees with TDG findings which identified that this Rule currently does not recognise the ability of complementary land uses to share parking spaces. Although this can be assessed under an Assessment Matter, it is recommended that stating this explicitly under the rules may promote effective use of land by only providing the necessary parking. This will also assist in QLDC achieving its aim to avoid excessive parking being provided and promote the efficient use of land.

Note (iii) of this rule also states that when calculating overall parking requirements for a development, the separation of the area into activities will only be required where the gross floor area of an activity exceeds 10% of the total gross floor area of the development. As the reason behind this 10% trigger is unclear and no justification for this can be established, it is recommended that this section of the note is removed from the Rule. Removal of this requirement is not expected to result in a significant effect on the overall parking space number and the need for parking requirements for a relatively small activity at large developments can be carried out as site specific assessment.

Recommendation:

- As a separate exercise, review parking rates in association with TDB and identify where Queenstown Lakes District specific surveys are required. As recommended in Section 2.3 of this report, campervan parking requirements for relevant land uses are to be identified as part of this review.
- Incorporate drop off/ pick up space requirements for educational facilities and day care centres into Table 1 and 1A as recommended in Section 2.10.
- Compare the Three Parks bicycle parking requirements to CCC District Plan and incorporate bicycle parking requirements either from Table 1D (Rule 14.2.4.3) or a variation of it into Tables 1 and 1A and compare to Christchurch District Plan.
- State within the Rule that a Travel Plan can result in reduced parking demand, thereby reducing the amount of parking required.

² CCC District Plan, Section 7.4.4.1 (a) (I)

³ CCC District Plan, *Table 7.5.14.1 Parking reduction adjustment factors*

- Amend Note (i) of Rule 14.2.4.1 (i) as follows:

Note (i): In calculating the total parking requirement, the requirement for residents/visitors and the requirement for guests or staff shall be added together, then rounded up to the next highest whole number. E.g. for 5 units the requirements are:

residents/visitors 5 x 1.25 = 6.25

staff/guests 5 x 0.25 = 1.25

total of 7.5, rounded up, gives a total requirement of 8.

Similarly, where the total parking requirement includes different activities, the requirements of all activities shall be added together, then rounded up to the next highest whole number.

- Amend Note (iii) as follows:

*Note iii: The parking requirements listed in Table 1 are categorised by activity. ~~When calculating the overall parking requirements for a development, the separation of area into different activities will be required where the gross floor area of an activity (or public floor space or other such measurement that the standards for the relevant activity is based upon) exceeds 10% of the total gross floor space of the development.~~ The total parking requirement for any development shall be the sum of the requirements for each area. **Where it can be demonstrated that joint provisions for parking can be provided for activities located on one site or several sites in an area in accordance with Rule 14.2.4.1 (iv) (e) (iii), dispensation in respect of the parking requirement for one or more of the activities may be allowed.***

2.2 Rule 14.2.4.1 (iv) Location and Availability of Parking Spaces

There are no industry standards which are applicable to this rule, therefore a full review of it against industry standards and practice cannot be undertaken. However, to improve clarity and readability, some changes are recommended to clause (b) of this rule.

Clause (b) is considered relevant to both heavy vehicle parking and manoeuvring. Therefore, it is recommended that this section of the rule is repeated under Rule 14.2.4 (ix). In addition, the latter part of this clause should be amended to clearly refer to 'heavy' vehicle reverse manoeuvring and to improve clarity the definition of a heavy vehicle should also be included. Similar to the CCC District Plan, the definition of a heavy vehicle has been obtained from Heavy Motor Vehicle Regulations 1974.

As outlined in clause (b), this rule specifies that heavy vehicle parking or loading spaces should be located to ensure that no reverse manoeuvring onto/from any road other than a service lane is carried out. This clause can be misinterpreted to consider that heavy vehicle reverse manoeuvring onto or from a service lane located off State Highways and arterial roads is acceptable, whilst *Rule 14.2.4.1 (xiii) Loading Areas* prevents any loading vehicles from reversing onto or from State Highways, arterial roads and collector roads.

It is considered that heavy vehicle reverse manoeuvring are only appropriate on local roads with low traffic volumes and speeds. The Code of Practice for Temporary Traffic Management defines a low volumes road as having less than 500 vehicles per day. An environment with a posted speed limit of 50 km/hr less is considered to be a low speed environment. Therefore, it is recommended that this rule is amended to only permit heavy vehicle reverse manoeuvring onto or off a road with a traffic volume of less than 500 veh/day and a speed limit of 50 km/hr or less. It is noted that although from a traffic engineering perspective this recommendation is considered appropriate, from a planning point of view, the wording of this rule may need to be changed. In addition, it is also recommended that the Clause (b) is amended to include heavy vehicle manoeuvre areas which should also comply with this rule.

As the updated QLDC road hierarchy is not known at this stage, to maintain consistency with *Rule 14.2.4.1 (xiii)*, the recommendations below use the outdated road hierarchy terminology (arterial, collector and local roads). Therefore, as discussed in Section 5 of this report, when updating this

Rule, the references to Arterial, Collector and Local Road needs to be amended based on the updated QLDC road hierarchy.

In addition, the section of Clause (b) which refers to noise emission standards is considered to be irrelevant to transport matters. Therefore, to improve clarity it is recommended that QLDC provides the noise emission related specification in a more suitable section in the District Plan.

Recommendation:

- Amend Clause (b) of Rule 14.2.4.1 (iv) to read:

*All required heavy vehicle **manoeuvring area**, parking or loading space shall be located so that **its use by those vehicles complies with the relevant noise emission standards for the activity to which the parking relates, and to ensure that no heavy vehicles are only is required permitted** to carry out any reverse manoeuvring onto or from ~~any road other than a service lane~~ roads where the traffic volume is less than 500 veh/day and the road has a posted speed limit of 50km/hr or less.*

Note: A heavy vehicle refers to a motor vehicle (other than a motorcar that is not used, kept, or available for the carriage of passengers for hire or reward) the gross laden weight of which exceeds 3,500 kg; but does not include a traction engine or vehicle designed solely or principally for the use of fire brigades in attendance at fires.

- Clause (b) to be cross referenced under Rule 14.2.4 (ix), Reverse Manoeuvring.
- If the noise emission related requirement is/can be covered elsewhere in the District Plan, remove the text highlighted in red above.
- Update the references to Arterial, Collector and Local Roads as per the new QLDC road hierarchy.

2.3 Rule 14.2.4.1 (v) Size of Parking Spaces

Rule 14.2.4.1 (v) currently states that:

All required parking spaces other than for residential units, and associated manoeuvring areas are to be designed and laid out in accordance with the requirements in Appendix 7.

However, as discussed in Section 2.8 of this report, it is recommended that residential parking space sizes are also provided in Appendix 7. Therefore, to maintain consistency it is recommended that this Rule is amended by removing the text which refers to residential units. As additional requirements relating to residential parking spaces are covered within Rule 14.2.4.1 (x), it is also recommended that a new note is added to refer to it.

At present the District Plan provides parking space dimensions for some large vehicles such as coaches, rigid trucks, midi-buses and B-trains. However, it provides no parking space dimensions for camper vans. As no information relating to parking space dimensions of campervans is found in relevant industry standards or any of the District Plans of other Councils, it is considered that parking space dimensions for such vehicles should be carried out as a site specific assessment where applicable. However, it is noted that providing no rule within the District Plan which requires parking spaces for such vehicles may mean that assessing this as a site specific matter may not be possible. Therefore, it is recommended that as part of the separate exercise undertaken for *Rule 14.2.4.1 (i) Location and Availability of Parking*, campervan parking requirements is also identified for relevant land uses.

The contents of Appendix 7 is discussed in detail within Section 3 of this report.

Recommendation:

- Amend Rule 14.2.4.1 (v) as follows:

All required parking spaces ~~other than for residential units~~, and associated manoeuvring areas are to be designed and laid out in accordance with the requirements in Appendix 7.

Note: refer to 14.2.4.1 (x) for additional requirements of residential parking spaces.

- As part of the separate exercise recommended in Section 2.1, campervan parking space requirements should be considered for relevant land uses.

2.4 Rule 14.2.4.1 (vi) Parking Area and Access Design

This rule specifies that all vehicle access design is to be undertaken in accordance with the standards contained in NZS4404:2004. This design standard has been updated since the publication of the District Plan, and has been superseded by NZS4404:2010. In addition, the CoP provides Council amendments to this standard. Therefore, it is considered that the CoP is more relevant to this Rule.

Review of this Rule indicated that although the key purpose of it is to provide specifications relating to accesses internal to subdivision, this purpose is currently not captured within this Rule. Therefore, it is considered that adopting the CoP requirements relating to this matter is appropriate. As the CoP provides extensive information relating to parking area and access design, it is recommended that the CoP is referenced within the Rule. However, we understand the CoP is currently in the process of being updated. Therefore, it is recommended that once this is complete, the updated CoP should be referenced within this rule.

The Rule currently specifies a specific formed width and a legal width for accesses serving 1 to 6 units and 7 to 12 units. This would mean that if an accessway is required to have a wider legal width, a resource consent would be needed. Therefore, to address this it is considered that this should be changed to 'minimum' legal width. Specifying a 'minimum' formed width will allow wider vehicle accesses which promote increased operating speeds and safety issues to be constructed. Therefore, no changes are considered necessary to the 'formed width' title.

Comparison of the Rule against the CoP indicated that the first table provided within the rule is inconsistent with the CoP as it requires more width for accesses serving 1 -3 units, less width for vehicle accesses serving 4- 6 units and less legal width for accesses serving 7 -12 units. However, the width requirements provided in this table is considered acceptable as the widths are sufficient to accommodate fire trucks (3.5 m), provides sufficient space for in-ground services and enables efficient land use. Therefore, the only recommended change to the table is to amend the formed width of accesses serving 7 to 12 units to 5.5 m – 5.7 m to align with the CoP.

The Rule currently restricts the width requirements to vehicular accesses serving residential and/ or visitor accommodation in High and Low Density Residential Zones. As these requirements should apply to shared vehicles accesses serving residential and/or visitor accommodation in all zones, it is recommended that this rule is amended to remove the zone restriction. In addition, the existing advise note should also be amended to state that in some zones (such as in High Density Residential and Rural where no density rule exists) where it may not be possible to determine the maximum capacity, the application will need to rely on the development being proposed in the resource consent application.

The current Rule also specifies that for formed accesses serving 1 – 6 units, passing bays are to be provided at intervals greater than 25 m and that the passing bays shall be at least 8 m long and 2.5 m wide. This does not align with the CoP which specifies that to allow vehicles to pass, accesses shall have a widening of not less than 5.5 m over a 15 m length and are provided at no more than 50 m spacing.

Recommendation:

- Replace all references to NZ4404:2004 found within this rule with '**QLDC Land Development and Subdivision Code of Practice (2017)**'.
- Amend the following section of the Rule 14.2.4.1 as shown
 - All vehicular access to fee simple title lots, cross lease, unit title or leased premises shall be in accordance with the standards contained in NZS4404:2004 **QLDC Land Development and Subdivision Code of Practice (2017)**, and*
 - Except all shared vehicular accesses serving residential and/or visitor accommodation units in the High and Low Density Residential Zones shall be in accordance with the out in NZS4404:2004 except for developments identified following:- table below:**

(a)

<i>The Greater of the Actual Number of Units Served or; the Potential Number of Units served by the Access as a Permitted or Controlled Activity</i>	FORMED WIDTH (m)	MINIMUM LEGAL WIDTH (m)
1 to 6	3.5	4
7 to 12	5 5.5 - 5.7	6

(b) Where the shared vehicle access adjoins a local distributor or higher road in the hierarchy, including a State Highway, it shall have a 5m formed width and a 6m legal width for a minimum length of 6m as measured from the legal road boundary.

(c) No private way or private vehicle access or shared access shall serve sites with a potential to accommodate more than 12 units on the site and adjoining sites.

(d) Private shared vehicle accesses shall have legally enforceable arrangements for maintenance put in place at the time they are created.

(e) **To allow vehicles to pass, formed access widths for 1 to 6 units shall have widening to not less than 5.5 m over a 15 m length at no more than 50 m spacing provide passing bays at intervals no greater than 25 metres (end of one passing bay to the beginning of the next). Passing bays shall be at least 8 metres long and at least 2.5 metres wide, plus any tapers desired.**

The access width rules provided above do not apply at the time of subdivision to developments authorised and implemented under existing and live resource consents at the time of adoption of these rules.

The access width rules provided above do not apply to existing private shared vehicle accessways for the purpose of controlling the number of units that may be built using the accessways, unless the total land served by the accessway could provide for more than 12 units.

*Note: Calculation of maximum developable capacity shall require, where necessary, creation of sections to serve as future accessway extensions to link to other sites beyond the immediate development. **In some zones where it may not be possible to determine the maximum capacity, the application will rely on the development being proposed in the resource consent application.***

2.5 Rule 14.2.4.1 (vii) Gradient of Car Parks

Rule 14.2.4.1 (vii) states that:

“Car parking area shall have a gradient of no more than 1 in 20 in any one direction.”

This differs from standard AS/NZS 2890.1:2004⁴ as it specifies a maximum gradient of 1 in 20 parallel to the angle of parking, whilst allowing a maximum gradient of 1 in 16 in any other direction. The Building Code⁵ states that handrails need to be provided for accessible ramps which are steeper than a gradient of 1 in 20. This suggests that a maximum gradient of 1 in 20 is considered appropriate for wheel chair users. Given this, it is recommended that the current rule which specifies a gradient of 1 in 20 is kept unchanged as this would ensure that car parks are generally designed to provide a comfortable gradient for wheel chair users.

⁴ AS/NZS 2890.1:2004, Section 2.4.6.1 Maximum Gradients, (a) & (b)

⁵ Compliance Document for New Zealand Building Code, Clause D1 Access Routes, Section 6.0.3 Accessible Stairways and Accessible Ramps

Recommendation:

- As recommended in GHD findings, retain the rule as is, allowing applicants to argue for a steeper car parking angle in accordance with NZS 2890.1:2004 on a case by case basis.

2.6 Rule 14.2.4.1 (viii) Car Spaces for People with Disabilities

Clause (a) of Rule 14.2.4.1 (viii) states that:

- a) *Car parking areas shall include spaces for people with disabilities provided at the rate of*
- 1 to 10 spaces: no requirement*
- 11 to 50 spaces: 1 disabled person's space*
- up to 100 spaces: 2 disabled persons' spaces*
- plus 1 more for every additional 50 spaces.*

This clause does not align with the Building Code or NZS 4121:2001 as the mobility parking requirements specified in these standards are higher than that of this Rule.

Based on AS/NZS 2890.1, the Building Code⁶ specifies one mobility parking space for up to 10 parking spaces, two mobility parking spaces for up to 100 parking spaces and one mobility parking space for every 50 additional parking spaces.

The NZS 4121:2001⁷ requires no less than one mobility parking space for 1 – 20 parking spaces, no less than two mobility parking spaces for 21 - 50 parking spaces and no less than 1 mobility parking space for every additional 50 parking spaces.

As identified in GHD's review findings, the level of mobility parking provision set out in these two industry standards increases the number of mobility parking spaces required, particularly within smaller car parks. Therefore, changing the District Plan Rules to align with these standards may potentially be controversial.

However, it is considered that this Rule needs to be changed to align with relevant industry standard and practice. Stantec therefore agrees with GHD recommendations to adopt the mobility parking requirements specified in the Building Code to align this Rule with the national best practice. As mobility parking provision will mostly relate to a new or an alteration to a building, aligning this Rule with the Building Code is considered sensible as any new application will need to comply with the Building Code at the consent stage. In addition, the wording of the current rule should be amended to ensure that the mobility parking requirement does not apply for residential parking areas.

AS/NZS 2890.1 requires the width of parking spaces located adjacent to obstructions such as columns or walls to be increased by 300 mm. As noted in the Building Code, this requirement also applies for mobility parking spaces. However, in addition to columns and walls, obstructions for mobility parking spaces would also include kerbs and gardens. Therefore, it is recommended that this requirement is added as a note into Table 1 of Appendix 7.

In addition, it is considered that this rule also needs to be prescriptive in terms of accessible routes from the car park to the buildings. The Building Code provides a number of requirements relating to accessible routes such as slip resistance, width, protection from falling, door locations and accessible ramp design. As the Building Code provides extensive information relating to accessible routes, it is recommended that the Rule is amended to specify that accessible routes are designed in accordance with the Building Code.

Recommendation:

- Amend Rule 14.2.4.1 (viii) to align with the Building Code:
 - a) **Non-residential** car parking areas shall include spaces for people with disabilities provided at the rate of

⁶ Compliance Document for New Zealand Building Code, Clause D1 Access Routes, Section 10.2 Modifications to AS 2890

⁷ NZS 4121:2001, Section 5.4, Table 1 – Number of car parks

~~1 to 10 spaces: no requirement~~ 1 disabled person's space

~~11 to 50 spaces: 1 disabled person's space~~

~~Up to 100 spaces: 2 disabled persons' spaces~~
plus 1 more for every additional 50 spaces.

- b) Car parking for people with disabilities shall be located as close as practicable to the building entrance. The spaces should be on a level surface and be clearly signed.
- c) **Accessible routes shall be provided to give direct access from the car park to the building. Accessible routes to be designed in accordance with Compliance Document for New Zealand Building Code, Clause D1 Access Routes.**

2.7 Rule 14.2.4.1 (ix) Reverse Manoeuvring

There are no industry standards which are applicable to this rule, therefore a full review of it against industry standards and practice cannot be undertaken. However, to improve clarity and readability, some changes are recommended.

This Rule currently requires off-street manoeuvrability to be assessed using a 90th percentile car. While this previously aligned with NZTA requirements, it is no longer valid as the NZTA now refer to AS/NZS 2890.1 for geometric design of facilities for light vehicles.

The AS/NZS 2890.1:2004 which has increased the size of design vehicles based on a survey of vehicle fleets in Australia in 2000, recommends the use of a B85 vehicle for parking spaces, and parking aisles. It also recommends the use of a B99 vehicle for all locations where failure of a vehicle to physically fit into facilities (e.g. access driveways, ramps and circulation roads) results in delay or safety issues.

A B85 vehicle is defined in AS/NZS2890.1:2004 as a design vehicle whose physical dimensions represent the 85th percentile class of light vehicles on the road. A B99 vehicle is defined as a design vehicle whose physical dimensions represent the 99.8th percentile class of all light vehicles on the road.

To align this Rule with AS/NZS 2890.1:2004, all references to 90th percentile car should be replaced with a B85 vehicle and references should be made to a B99 vehicle for locations where failure to undertake reverse manoeuvring could cause safety or congestion issues.

This Rule currently requires the off-street manoeuvring spaces to be designed to ensure that a 90th percentile car is able to manoeuvre into and out of parking spaces within only one reverse manoeuvre. While this may be possible for most angled parking spaces, when entering/exiting parallel parking spaces more than one reverse manoeuvre may be required. Therefore, similar to the CCC District Plan⁸, this section of the rule should be amended to exempt parallel parking spaces from this requirement. In addition, as this Rule applies to all light vehicles including cars, it is recommended that to improve clarity the wording within the Rule should be changed from 'car' to a 'B85 vehicle'.

The current rule provides no restrictions relating to the on-site reversing distance. This means that in some instances where the current rule allows reverse manoeuvring (e.g – accessway serving nine parking spaces on a local road) reversing along a long, narrow and winding access will also be allowed. Reversing along a significant distance has the potential to create safety issues, particularly if no space is available for oncoming vehicles to pass or the accessway alignment restricts visibility for the driver. Therefore, it is considered this needs to be incorporated into the rule.

The latter part of this Rule provides incorrect references to previous clauses which relate to heavy vehicle manoeuvring and loading, and this needs to be updated. The current clauses provided within this rule are not considered to be subsets of the first paragraph. Therefore it is recommended the first paragraph is also provided as a clause. In addition, as discussed in Section 5, the reference to Arterial, Collector and Local Road needs to be amended based on the updated QLDC road hierarchy.

⁸ Christchurch City Council District Plan, Appendix 7.5.6 (a)

Recommendation:

- Amend Rule 14.2.4.1 (ix) as follows:
 - a) ~~Where off-street manoeuvring facilities are required, a 90th percentile car~~ **B85 vehicle, as defined in Appendix 7, shall be able to manoeuvre into and out of any required parking spaces with only one reverse manoeuvre, except for parallel parking spaces. The B99 vehicle, as defined in Appendix 7, shall be used at all locations where failure of a vehicle to be able to physically fit into the facility would occasion intolerable congestion and possible hazard. Such locations shall include all access driveways, ramps and circulation roadways.**
 - b) ~~(a)~~ Off-street manoeuvring shall be provided to ensure that no vehicle is required to reverse onto or off a State Highway or **arterial road**.
 - c) ~~(b)~~ Off-street manoeuvring shall be provided ~~to a 90th percentile car~~ **for a B85 vehicle** to ensure that no ~~car~~ **B85 vehicle** is required to reverse either onto or off any **collector road** where:
 - i. the frontage road speed limit is 80km/h or greater, or
 - ii. six or more parking spaces are to be serviced by a single accessway, or
 - iii. three or more residential units share a single accessway, or
 - iv. the activity is on a rear site
 - d) ~~(c)~~ Off-street manoeuvring shall be provided ~~to a 90th percentile car~~ **for a B85 vehicle** to ensure that no ~~car~~ **B85 vehicle** is required to reverse either onto or off any **local road** where:
 - i. ten or more parking spaces are to be serviced by a single accessway, or
 - ii. five or more residential units share a single accessway, or
 - iii. the activity is in a rear site

Note: refer to 14.2.4.1 # iv (b) and 14.2.4.1 # xiii (b) (iv) for reverse manoeuvring provisions for heavy vehicles and loading spaces. A list of Arterial and Collector roads and a definition of Local roads is contained in Appendix 6.
- Update the references to Arterial, Collector and Local Roads (highlighted in Red) as per the new QLDC road hierarchy.

2.8 Rule 14.2.4.1 (x) Residential Parking Spaces

The residential parking space dimensions specified in Clause (a) of this Rule do not align with the parking space dimensions provided in Table 1 of Appendix 7. However, it appears that the minimum internal widths specified in this Rule equate to the sum of the minimum stall width and the 300 mm clearance (as specified in Table 1) either side of the parking space. In this respect, the dimensions specified in this Rule are also consistent with AS/NZS 2890.1:2004. Therefore, to reduce confusion it is recommended that clause (a) of this is removed and *Rule 14.2.4.1 (v) Size of Parking Spaces* is amended to ensure that it refers to Appendix 7 for all parking space dimensions including residential parking spaces.

This Rule currently requires the manoeuvring area from the property boundary to the garage entrance to be designed to accommodate a 90th percentile car. Similar to the previous, to align this Rule with AS/NZS 2890.1:2004, all references to 90th percentile car should be replaced with a B85 vehicle. In addition, it is also recommended that Clause (b) is amended to ensure that garage lengths can accommodate a B99 design vehicle, by specifying a minimum garage length of 5.5 m. This equates to the length of the B99 vehicle (5.2 m) plus a clearance of 300 mm to ensure vehicles do not encroach onto footpaths or roads.

Recommendation:

- Amend Rule 14.2.4.1 (x) as follows:

(a) Any residential parking spaces for Class 1 and Class 2 users (see definitions in Appendix A7), required by this Plan shall have the following minimum internal dimensions:-

	WIDTH	DEPTH
Single	3.1m	5.5m
Double	5.6m	5.6m

Note: A row of three parking spaces would require a total width of 8.7m and not the minimum 7.5m width indicated by Table 1 in Appendix 7. A row of more than three parking spaces would use Table 1 widths for the intervening spaces between the two end parking spaces of 3.1m each. The last spaces at the end of each row shall be counted as single spaces to provide sufficient width to fully open vehicle doors in the end parking spaces.

- a) *(b) The minimum width of the entrance to a single garage shall be no less than 2.4m wide. **The minimum length of a garage should be 5.5 m.** The manoeuvring area from the property boundary to the garage entrance shall be designed to accommodate a 90 percentile car a **B85 design vehicle** as set out in Appendix 7.*
- b) *(c) Where two parking spaces are provided for on a site containing only a single residential or Visitor Accommodation unit, the two parking spaces may be provided in tandem.*

2.9 Rule 14.2.4.1 (xi) Queuing

Stantec agrees with TDG's findings which identified that the queuing space lengths provided in Table 2 of this Rule are broadly comparable to Table 3.3 of AS/NZS 2890.1:2004. However, it is important to note that the queuing spaces specified in this standard are only applicable for car parks with control points (e.g. boom gates), whilst the queuing space specified in the District Plan rule applies to all vehicles entering a parking or a loading area. Therefore, consistent with TDG findings, it is considered that the queuing spaces specified in this Rule are more applicable to accesses with control points. For accesses with no such devices, the queuing length provided by the District Plan rule may be greater than what is required in practice.

In addition to the queuing spaces, AS/NZS 2890.1:2004⁹ also outlines a number of other factors which affect the size of the queuing area. These include the traffic volume in surrounding streets, the number of parking spaces in the car park, anticipated peak entry/exit flow, rate of entry/exit at control points, parking accumulation and turnover and the freedom of movement beyond the control point. However, Stantec agrees with TDG in that the standard is not prescriptive in terms of how these factors can be used for determining the queue spacing.

This Rule also states that 'where the parking area has more than one access the required queuing space may be divided between the accesses'. However, it provides no further information relating to how this division should occur. The AS/NZS 2890.1:2004 recommends that queuing areas in a multiple entry car parks should be based on the expected volume of traffic served by each entry point.

Given the above, it is considered that the standard provides more information relating to queuing in areas where the current District Plan rule falls short. However, the standard is considered more restrictive than the current District Plan rule, as it requires a minimum queue length of 2 vehicles for even smaller car parks, whilst the current district plan only requires a minimum queue length of 1 vehicle. This would mean that as per the standard, even land uses such as residential areas with one parking space would require a queue space to cater for 2 vehicles. Therefore, it is considered the current Table 2 within this rule should remain unchanged. However, a note should be added to

⁹ AS/NZS 2890.1:2004, Section 3.4 Queuing Areas

this table stating that in certain circumstances reduced provision may be possible based on the other factors listed within Section 3.4.

Recommendation:

- Stantec agrees with TDG recommendations to amend Rule 14.2.4.1 (xi) as follows:

*On-site queuing space shall be provided for all vehicles entering a parking or loading area. The required queuing space length shall be in accordance with the Table 2 below, ~~except that where~~ **Where** the parking area has more than one access the required queuing space may be divided between the accesses **based on the expected traffic volume served at each access point**. Queuing space length shall be measured from the road boundary at the vehicle crossing to the nearest vehicle control point or point where conflict with vehicles already on the site may arise.*

Note: Table 2 represents typical queue space requirements for car parks. In certain circumstances reduced provision or a greater provision may be possible based on factors set out below:

(i) Traffic volume in surrounding streets.

(ii) The number of parking spaces in the car park.

(iii) Anticipated peak entry/exit flow.

(iv) Rate of entry/exit at control points.

(v) Hourly parking accumulation and turnover.

(vi) Freedom of movement beyond the control point.

Except:

This Rule shall not apply to vehicles entering a parking or loading area gaining access from Local Access Roads within Activity Area 1 of the Mount Cardrona Station Special Zone.

Table 2 - Queuing Space Lengths

NUMBER OF PARKING SPACES	MINIMUM QUEUING LENGTH
3 – 20	6m
21 – 50	12m
51 – 100	18m
101 – 150	24m
151 – or over	30m

- Stantec agrees with GHD recommendations to provide a new assessment matter as follows:

(u) whether a queuing space less than that required in Table 2 will serve the proposal safely and effectively, taking into account the factors set out within the note.

2.10 Rule 14.2.4.1 (xii) Set Down Areas

This Rule specifies that all educational and health facilities must provide an on-site manoeuvre area to allow vehicles to set down and pick up children or patients. However, it provides no further information as to the length/size of the manoeuvre areas required.

In addition, the latter part of this rule also notes that manoeuvre areas should be provided at these facilities to ensure that no vehicle is required to reverse onto or off the site. This effectively restricts reverse manoeuvring from these facilities completely, whilst Rule 14.2.4.1 (ix) only restricts reverse manoeuvring based on factors such as the classification of the road, speed limit of the road and the number of parking spaces. However, reverse manoeuvring at drop off/pick up parking spaces at these types of land uses has the potential to affect the safety of vulnerable pedestrians such as children, elderly, sick or disabled pedestrians. Therefore, it is considered that this section of the rule should remain unchanged and additional text should be added to ensure that reverse manoeuvring within the site is also restricted.

It is also considered that on-site manoeuvre areas or drop off/pick up spaces should be specified for land uses such as primary schools and childcare centres. However, no guidance relating to this is found in the industry standards. A review of District Plans of other Councils indicated that HCC currently specify drop off/pick up parking space requirement for large childcare centres and schools. As these drop off/pick up parking space requirements are considered appropriate, it is recommended that the drop off/pick up parking space requirements outlined in HCC District Plan are adopted in the District Plan and incorporated into Table 1.

Although set down areas at health care facilities could provide benefits in terms of managing traffic associated with these activities, this is currently not covered by any of the District Plans of other Councils. Therefore, it is recommended that set down area requirement for health care facilities is retained within this rule, and further investigation is undertaken with the use of TDB to identify relevant drop off/pick up spaces required for activities of this type. This can be undertaken as part of the exercise recommended in Section 2.1.

Recommendation:

- Add the following drop off/pick up parking space requirements to Table 1 of Rule 14.2.4.1 (xii):
Childcare facilities for six or more children: 1 drop-off/pick up car space per 5 children.
Primary and Intermediate schools: 1 drop-off/pick up space per 50 students and 1 bus space per 200 students where school bus services are provided.
Secondary schools: 1 drop-off/pick up space per 100 students and 1 bus space per 200 students where school bus services are provided.
- As part of the separate exercise recommended in Section 2.1, review TDB to identify relevant drop off/ pick up parking space requirements for healthcare facilities and add them into Table 1.
- Amend the rule as follows:
All educational and health facilities or activities must provide an on-site manoeuvre area to allow vehicles to drop-off/pick up children or patients as per Table 1. Such areas shall be provided to ensure that no vehicle is required to reverse either onto or off the site as well as within the site.

2.11 Rule 14.2.4.1 (xiii) Loading Areas

Stantec agrees with TDG's findings which identified that this Rule assumes that the type of land use determines the type of delivery vehicle used, as it currently specifies the minimum dimensions of loading spaces based on the activity which it caters for. As this may not hold true for all activities which require loading spaces, similar to AS 2890.2:2002¹⁰ specifying them based on the type of loading vehicle may be more appropriate.

However, Stantec also agree with GHD findings, that for new developments in particular, it would be difficult to assess the size of the delivery vehicle required at the time of the development. It will also be difficult to predict whether a change in vehicle type will be required in the future due to changes in activities within the development or transport operations. Given this, it is recommended that the District Plan continues to specify the minimum loading space dimensions based on the land use at the time of resource consent. However, it is recommended that a new Assessment Matter is added to ensure that loading spaces are designed to accommodate the largest vehicle servicing the development.

Austrroads Guidelines recommend that local roads are designed to accommodate a medium rigid vehicle. As activities such as retail premises, offices and warehouses will mostly be located on local roads or be accessed via local roads, it is expected that these activities will most likely be serviced by a vehicle of this size. Therefore, it is recommended that based on loading space dimensions provided

¹⁰ AS 2890.2:2002, Section 2.1 General

in AS 2890.2:2002¹¹, the length of a loading space servicing retail premises, offices, warehouse etc. should be changed from 8 m to 9 m to accommodate a medium rigid vehicle.

In terms of height clearance for loading vehicles, AS 2890.2:2002 specifies a clearance of 4.5 m. This is higher than the current height restrictions of 3.8 m and 2.6 m specified within this Rule. The dimensions outlined in NZ Transport Agency Vehicle Dimensions Fact Sheet¹² indicates that rigid vehicles have a maximum height of 4.3 m. Given that the loading vehicles servicing the first two activities are expected to be of this size, it is recommended that the height restriction specified by the Rule is changed to align with the standard. As the third activity type is only likely to be serviced by relatively smaller loading vehicles such as vans, the current height restriction of 2.6 m is considered appropriate

The changes recommended above would mean that this Rule will essentially specify the same loading space sizes for the first two activities and a smaller loading space for other activities which do not handle goods. Therefore, to improve clarity it is recommended that the table within Clause (b) is amended to only provide two activity types. As some activities which do not handle goods (e.g. preschools, dairy) will still require loading spaces, it is considered that the minimum loading space size for the third activity type in Clause (b) should be retained within this Rule. However, as it is considered that loading spaces are not required for residential and visitor accommodation, these activities should be excluded from the rule.

This Rule currently does not take into account the possibility of providing loading spaces which can be shared by several activities/developments located within close proximity. This will particularly be possible if the loading demand of some activities occur at different times to the other activities, allowing for many activities to share a single loading space. Therefore, it is recommended that providing for shared loading spaces should be incorporated into the Rule similar to that of WBoP District Plan Rules.

This rule currently exempts a number of streets within the Queenstown city centre from requiring on-site loading spaces. While this list of streets is considered appropriate, it is recommended that it should be reviewed to identify if it needs to include any additional streets which may not need loading space requirements due to urban design reasons.

In terms of heavy vehicle reverse manoeuvring, it is recommended that note (iv) of clause (b) is amended to be in line with the recommendations of Section 2.2 of this report. In addition, to maintain consistency with the table, it is recommended that Clause (b) (i) is amended to refer to the 'length' of a loading space rather than its 'depth'.

Recommendation:

- Amend the Clause (b) of Rule 14.2.4.1 (xiii) as follows:

b) *Every loading space shall be of the following dimensions:*

ACTIVITY	MINIMUM SIZE
<i>Transport depots or similar</i>	<i>9m length 3.5m wide 3.8m high</i>
<i>Retail premises, offices, warehouse, bulk stores, industries, service industries and similar All activities (except for residential, visitor accommodation and the activities listed below)</i>	<i>8m length 9m length 3.5m wide 3.8m 4.5m high</i>
<i>Offices and activities of less than 1500m² floor area not handling goods and where on-street parking for occasional delivery is available.</i>	<i>6m length 3m wide 2.6m high</i>

¹¹ AS 2890.2:2002, Section 4.2 Dimensions of Service Bays

¹² <http://www.nzta.govt.nz/resources/factsheets/13>

Notwithstanding the above:

- (i) Where articulated trucks are used in connection with any site sufficient space not less than 20m in ~~depth~~ **length** shall be provided.
- (ii) Each loading space required by the Plan shall have unobstructed vehicular access to a road or service lane.
- (iii) Parking areas and loading areas may be served in whole or in part by a common manoeuvre area which shall remain unobstructed.
- (iv) ~~No vehicle is allowed to reverse manoeuvre into or out of a loading space from a State Highway, arterial road or collector road.~~ **Heavy vehicles are only required to carry out any reverse manoeuvring onto or from a road with a traffic volume of less than 500 veh/day and a speed limit of 50km/hr or less.**
- (v) **Whether each loading space required by the Plan shall be sufficient in size to accommodate the largest vehicle expected to service the activity**

Note: A heavy vehicle refers to a motor vehicle (other than a motorcar that is not used, kept, or available for the carriage of passengers for hire or reward) the gross laden weight of which exceeds 3,500 kg; but does not include a traction engine or vehicle designed solely or principally for the use of fire brigades in attendance at fires.

- Provide a new assessment matter within (iii) *Parking and Loading Provision* as follows:

(p) Whether it can be shown that joint provisions for loading can be provided for activities located on one site or several sites in an area.

2.12 Rule 14.2.4.1 (xiv) Surface of Parking and Loading Areas

As there are no industry standards which specify surfacing requirements of parking and loading areas, a full review of it against industry standards and practice cannot be undertaken. However, similar to TDG findings it was identified that Austroads Guidelines¹³ state that a sealed area of 10 m from the edge of the traffic lane is sufficient to ensure that debris does not enter the traffic lanes. Therefore, the current District Plan requirement of 6 m sealed distance is considered inadequate.

Stantec also agrees with the GHD findings that at times, sealing of these surfaces may be at odds with local heritage and character elements of certain areas such as Arrowtown. Therefore, agreeing with GHD, it is recommended that to manage such potential issues, a new assessment matter should be added to assess the suitability of any alternative surfaces in such areas.

Recommendation:

- Stantec agrees with TDG and GHD recommendation to amend Clause (b) of Rule 14.2.4.1 (xiv) as follows:
 - (b) ~~The first 6m~~ **10m** of such areas (as measured from the ~~road boundary~~ **edge of the traffic lane**) shall be formed and surfaced to ensure that material such as mud, stone chips or gravel is not carried onto any footpath, road or service lane.
- Add an assessment matter to allow for the suitability of alternative surfaces in areas such as Arrowtown to be assessed:
 - (n) Whether an alternative surface of parking and layout areas to that required by Rule 14.2.4.1 (xiv) may be suitable on sites due to local heritage and characteristics such as within the Residential Arrowtown Historic Management Zone.**

¹³ Austroads Guide to Road Design Part 4, Figure 7.2 Example of a layout of a rural property access

2.13 Rule 14.2.4.1 (xvi) Landscaping and/or other obstructions

As there are no industry standards which specify the extent of landscaping within a car park, a full review of it against industry standards and practice cannot be undertaken. However, Stantec agrees with TDG findings relating to AS/NZS 2890.1:2004¹⁴ which identified that this standard recommends that when providing trees and shrubs in car parks, safety aspects such as sight distances of pedestrians and vehicles should not be compromised. Therefore, it is recommended that a new clause is added to this rule to ensure specific consideration is given to the effect of landscaping on road users and safety, particularly for pedestrians.

Recommendation:

- Add a new clause to Rule 14.2.4.1 (xvi):
 - (d) ***Landscaping and/or other obstructions shall not restrict the visibility of motorists leaving a site or create an unsafe environment for persons using the car park or adjacent footpath.***

2.14 Rule 14.2.4.1 (xvii) Illumination

This Rule currently requires all non-residential parking and loading areas which accommodate 5 or more vehicles and are used at night to be illuminated to a minimum lighting level of 3 lux with high uniformity. AS/NZS 2890.1:2004¹⁵ requires the minimum lighting levels for open air (including roof-top) car parks to be provided in accordance with AS/NZS 1158.3.1.

The District Plan Rule provides no clarification relating to the meaning of ‘high uniformity’ and a method of measuring this. Although AS/NZS 1158.3.1 provides specific requirements including uniformity, it is recommended that this Rule should reference the recently updated QLDC lighting standard as it provides technical specifications relating to lighting design based on AS/NZS 1158.3.1.

In addition, the reason for illumination of parking and loading areas which only accommodate five or more vehicles is unclear. To ensure that all non-residential parking and loading areas which are used at night are well lit regardless of the number of vehicles it accommodates, it is recommended that the rule is amended remove the section ‘*which accommodate 5 or more vehicles*’.

Recommendation:

- Amend the rule as follows:
 - All parking and loading areas, excluding those for residential use which are designed to accommodate 5 or more vehicles and which are used at night, shall be illuminated to a minimum maintained level of 3 lux, with high uniformity, during hours of operation. shall be designed as per Queenstown Lakes District Council Southern Light Part One - A Lighting Strategy (March 2017) and Queenstown Lakes District Council Southern Light Part Two – Technical Specifications (March 2017).*

¹⁴ AS/NZS 2890.1:2004, Section 4.8 Landscaping

¹⁵ AS/NZS 2890.1:2004, Section 4.7 Lighting

3 Transport Rule 14.2.4.2 Access

The following sections present each of the existing transport rules within section 14.2.4.2 Access and confirm whether the current rule is considered appropriate or if modification should be considered. Where modification is recommended the potential wording is presented with supporting rationale. The potential wording is shown in ***bold italics*** with the current rule wording amended with strikethrough (~~strikethrough~~) where required.

It is noted that the purpose of the recommended wording is to convey the general intent of the rule and is not considered to be final. It is expected that some re-drafting will be undertaken by a planner prior to notification in order to ensure that the recommended changes to the rules are clear, vires and provides sufficient certainty.

3.1 Rule 14.2.4.2 (i) Length of Vehicle Crossings

The NZ Transport Agency Planning Policy Manual (PPM) and the Road & Traffic Standards 6 (RTS 06) standards are considered to be relevant to this Rule as these documents provide information relating to maximum driveway widths / lengths.

Based on Ministry of Transport and Transit New Zealand (now NZTA) publications, RTS 06¹⁶ recommends a maximum driveway width of 9 m for two way traffic operation. It also recommends a maximum width of 6 m and 3.5 m for one way traffic operation where activities attract high volume of traffic and low volume of traffic respectively. The PPM recommends a vehicle crossing width of 3.5 m – 6 m in low volume (less than 30 veh/day) accessways.

Clause (a) of this rule states that the lengths specified are measured at the property boundary. This, indicates that this Rule essentially provides the width of vehicle crossings (excluding flares), although it refers to these dimensions as 'lengths'.

These widths broadly align with both standards discussed above. However, it is noted that a maximum crossing width of 9 m may not be sufficient for accessways which service land uses such as cool stores or which cater for coaches. It is considered such cases are an anomaly and can be dealt with through the resource consent process.

This rule currently provides no information relating to vehicle crossing flares or the vehicle crossing width at the kerb. However, this information can be found within the diagrams provided in the current CoP¹⁷ as they specify a width of 3.5 m at the kerb for residential vehicle crossings and a minimum width of 7 m at the kerb for commercial/ industrial crossings. The vehicle crossing widths at the property boundary specified in the CoP diagrams are identical to that of this Rule.

Although these CoP diagrams are relevant to this Rule, the 3.5 m width specified for residential vehicle crossings is considered inadequate particularly for residential vehicle crossings which are wider than 3 m at the property boundary. As per the diagram, for a vehicle crossing with a width of 3 m at the boundary, the width at the kerb is required to be 500 mm wider. This appears to only apply for vehicle crossing in non-rural zones, as Diagram 2, 3 and 4 in Appendix 7 provide radius at which the rural crossings need to be designed at the kerb. It is recommended that this vehicle crossing width at the kerb is increased from 500 mm to 1 m and this is included in the district plan rule. In addition, a new rule should be added to ensure that vehicle crossings are located as such that at least 500 mm offset is provided from the side property boundary and/or adjoining crossing on the same or adjacent lots. This will ensure that sufficient space for pedestrians is provided between crossings.

Given the above, it is recommended that the CoP diagrams are updated to reflect the proposed changes to the vehicle crossing width at the kerb and included within Appendix 7. As we understand the CoP is currently being updated, the recommended changes to the CoP diagrams can be undertaken as part of this process. In addition, a new assessment matter is provided to ensure that vehicle swept paths are provided to demonstrate that the proposed vehicle crossing access can

¹⁶ RTS 06, Section 4.3 Driveway Width

¹⁷ QLDC Land Development and Subdivision Code of Practice (2015), Appendix F – Vehicle Crossings

accommodate the expected vehicles. This will also ensure that vehicle crossings are not designed to be unnecessarily wide.

It is considered that referring to the 'width' of the vehicle crossing as the 'length' may be confusing to the reader. Therefore, to improve clarity it is recommended that the Rule title is changed to 'Width of Vehicle Crossings'. It is also recommended that Clause (b) is removed from the Rule as it contradicts Clause (a).

Recommendation:

- Amend the Rule as follows:
 - i ~~Length~~ **Width** of Vehicle Crossings
 - a) *The following crossing ~~lengths~~ **widths** shall apply as measured at the property boundary:*

LAND USE	LENGTH WIDTH OF CROSSING AT THE PROPERTY BOUNDARY (m)	
	Minimum	Maximum
Residential	3.0	6.0
Other	4.0	9.0
 - ~~b) The length of culverts and crossings shall be the actual length of channel covers or the length of the fully dropped curb.~~
 - c) *For all vehicle crossings in a non-rural zone, the width of the vehicle crossings at the kerb is to be 1 m wider than the width at the boundary.*
 - d) *All vehicle crossings to be located a minimum 500 mm from side property boundaries and/or adjoining crossings on the same or adjacent lots.*
 - Provide new assessment matter within (v) Access as follows:
 - (u) *Whether the vehicle crossing can accommodate the expected vehicles at the site is demonstrated by providing swept paths for appropriate vehicles.*

3.2 Rule 14.2.4.2 (ii) Design of Vehicle Crossings

This Rule currently allows for a vehicle access to cross the property boundary at an angle of 90 degrees plus or minus 15 degrees and a vehicle crossing to intersect the carriageway at an angle of between 45 and 90 degrees. As per industry practice, to maximise visibility and safety, vehicle crossings are generally provided as perpendicular as possible to the carriageway. Therefore, it is recommended the angles referred to in Clauses (a) and (b) are swapped.

As discussed in Section 3.1, two new diagrams of non-rural residential and commercial vehicles crossings are added to Appendix 7, it is considered that these new diagrams also need to be referenced within this rule. In addition, the Transit New Zealand standards referred to in Clause (d) need to be updated with the PPM, as this specifies¹⁸ that accessways are required to be sealed up to the property boundary.

Recommendation:

- Amend Rule 14.2.4.2 (ii) as follows:
 - Vehicle crossings providing access to a road in a Rural Zone shall comply ~~with the standards in Appendix 7~~ (Diagram 2, 3 or 4 **in Appendix 7** depending on the activity served by the access).*
 - For all other accesses the design of the vehicle crossing **shall comply with Diagram 5 or 6 in Appendix 7**, and shall be such that:*
 - (a) *the access crosses the property boundary at an angle of ~~90 degrees plus or minus 15 degrees~~ **between 45 degrees and 90 degrees**;*

¹⁸ PPM, Appendix 5A, App5A.2, Accessway Standard

- (b) *the vehicle crossing intersects with the carriageway at an angle of ~~between 45 degree and 90 degrees~~ **90 degrees plus or minus 15 degrees**;*
- (c) *roading drainage shall be continuous across the length of the crossing;*
- (d) *all vehicular accessways adjacent to State Highways shall be sealed from the ~~State Highway boundary to the edge of carriageway~~ **to the property boundary** in accordance with ~~Transit New Zealand's standards~~ **NZTA Planning Policy Manual (2007)**.*

3.3 Rule 14.2.4.2 (iii) Maximum Gradient for Vehicle Access

AS/NZS 2890.1:2004 is considered to be the most relevant standard to this Rule, as it provides information relating to design of access driveways.

The standard specifies a maximum gradient for different types of accesses such as domestic driveways, access driveways, as well as ramps (straight and circular) within parking buildings. In addition, it provides gradients for vehicular control points, queuing area, across footpaths and near property boundary separately.

Stantec agrees with GHD's findings in that the District Plan Rule only broadly specifies the maximum gradients for vehicle accesses and provides no distinction between public and domestic driveways. Residential driveways are usually used by drivers who are familiar with its geometry, and public vehicle accesses are used frequently by drivers who may not be familiar with the geometry. Therefore, in line with GHD's findings, it is considered that as the driver expectations of these two types of accesses are different, a blanket standard for both types of driveways may not always be appropriate.

Stantec also agrees with GHD's findings in that this Rule provides no information relating to gradients at curved ramps and provides no gradient restrictions at key areas such as vehicular control points, queuing area, across footpaths and near property boundary separately.

However, adopting these extensive gradient requirements of the standard within the District Plan rules may result in a complex assessment process. Given that the current vehicle access gradients specified within this rule are considered appropriate for most situations, and no issues relating to these gradients were noted by the Council during consent application stage, it is considered the current rule should remain unchanged.

In addition, it is considered that clause (c) of this rule should be amended to state that vehicle break over angles need to be measured at any location along the vehicle crossing.

Recommendation:

- Amend the Rule as follows:
 - a) *The maximum gradient for any private way used for vehicle access shall be 1 in 6.*
 - b) *In residential zones where a private way serves no more than 2 residential units the maximum gradient may be increased to 1 in 5 provided:*
 - (i) *The average gradient over the full length of the private way does not exceed 1 in 6; and*
 - (ii) *The maximum gradient is no more than 1 in 6 within 6m of the road boundary; and*
 - (iii) *The private way is sealed with non-slip surfacing.*
 - (c) *Vehicle break-over angles shown in Appendix 7 shall not be exceeded. **The vehicle break-over angle is measured at any location along the vehicle crossing.***

For the purpose of this rule gradient (maximum and average) shall be measured on the centreline of the access.

3.4 Rule 14.2.4.2 (iv) Minimum Sight Distances from Vehicle Access

The minimum sight distances provided in Table 3 of this Rule are consistent with District Plans of other Councils, PPM and RTS 06 as they are all specified based on speed. However, the concept of legal speed limit and the operating speed (or 85th percentile speed) is approached differently in these documents.

The PPM assumes the 85th percentile speed to be 10km/h higher than the legal limit unless measured onsite and Western Bay of Plenty has also followed this approach. RTS 06 provides sight distances based on operating speed which is specified as the measured 85th percentile speed or speed limit plus 15%. The NZS4404:2010 uses target operating speed, and recommends sight distances are determined from NZTA or Austroads Guides. Austroads Part 4A uses the 85th percentile operating speed concept for existing roads and design speed for new roads.

The target speed in NZS4404:2010, design speed in Austroads and the operating speed in RTS 06 and PPM do not have the same definition. Therefore, it is recommended that the RTS approach is adopted, as it only uses operating speed which can either be measured or assumed. However, for new developments on proposed roads the sight distance requirements may be potentially greater than a development on an existing road where the 85th percentile speed can be measured.

The current District Plan rule specifies sight distances for different activity types (residential and other activities), whilst the standards do not differentiate the sight distance between activity types. However RTS 06 differentiates the sight distances between low volume (up to 200 vpd) and high volume (over 200 vpd) driveways as well as different road frontages (local, collector and arterial). In addition, it also provides sight distances for a lower operating speed of 40 km/hr.

The sight distances of 'residential activities' broadly align with the sight distances provided within RTS 06 for accessways on local road, whilst most sight distances of 'other activities' are identical to the sight distances specified in RTS06 for accessways on arterial roads. However, a few sight distances of 'other activities' were identified to be lower than that the corresponding RTS sight distances.

Given the above, it is recommended that the current sight distances of 'other activities' provided in Table 2 that are lower than the corresponding RTS 06 sight distances are amended to be in line with RTS 06. In addition, sight distances for the lowest operating speed of 40km/hr is also added to the table. In addition, it is recommended that similar to RTS 06 a note is added to the table to state that where speed survey data is unavailable the operating speed is calculated as the speed limit plus 15%.

Recommendation:

- Amend Table 3 of Rule 14.2.4.2 (iv) as follows:

OPERATING SPEED LIMIT (km/hr)	SIGHT DISTANCE (m)	
	Residential Activity	Other Activities
40	30	70
50	45	80 90
60	65	105 115
70	85	140
80	115	175
90	140	210
100	170	250
110	210	290
120	250	330

Note: Operating Speed = 85th percentile speed on frontage road. This can be taken as the speed limit plus 15% if survey data is not available.

3.5 Rule 14.2.4.2 (v) Maximum Number of Vehicle Crossings

As there are no industry standards which specify the maximum number of vehicle crossings allowed for a property, a full review of it against industry standards and practice cannot be undertaken. However, it is noted that Table 4 is comparable to the CCC District Plan rules¹⁹ which also specify the maximum number of vehicle crossings based on similar frontage lengths and type of road frontage. Given this, it is recommended that Table 4 is retained within the District Plan to ensure that the impact of vehicle crossings on the adjacent network is minimised.

It is noted that a vehicle crossing provides a potential vehicle conflict point regardless of which side on the road it is located on. Therefore, in high speed environments, the impact of vehicle crossings on the opposite side of the road should also be taken into account. This can be done as a site specific assessment where applicable.

In addition, as discussed in Section 5, the reference to Arterial, Collector and Local Road needs to be amended based on the updated QLDC road hierarchy.

Recommendation:

- No changes are recommended to Table 4.
- Update the references to Arterial, Collector and Local Roads in Table 4 of Rule 14.2.4.2 (v) as per the new QLDC road hierarchy.

3.6 Rule 14.2.4.2 (vi) Distances of Vehicle Crossings from Intersections

The PPM and the RTS 06 standards are considered to be relevant to this Rule as these documents specify standard distances between vehicle crossings and intersections.

Based on Ministry of Transport and Transit New Zealand (now NZTA) publications, RTS 06²⁰ specifies appropriate distances required between vehicle crossings and intersections for land uses such as service stations, rural selling place as well as rural and urban environments.

The PPM²¹ specifies minimum access way separation from intersections for vehicle crossings located on state highways or on local roads which intersect with state highways. These distances are specified according to the posted and 85th percentile speed limits of the road at which the vehicle crossing is located, with speed limits ranging from 50km/hr to 100km/hr.

The accessway spacing recommended in the Rule is broadly comparable with the spacing specified in the PPM. However, it is unclear whether the spacing in the Rule and the standards take into account the intersections located on the opposite side of the road to the vehicle crossing. As an intersection provides a vehicle conflict point regardless of which side on the road it is located on, it is recommended that the accessway spacing requirement take this into account. The CCC District Plan²² clarifies this using a diagram which shows that the minimum spacing requirement needs to be met between vehicle crossings and intersections on both sides of the road. Therefore, it is considered that including this CCC District Plan diagram within Appendix 7 may provide further clarification to this Rule.

Following a comparison against District Plans of other councils, it is recommended that the speed limit thresholds of the two tables are changed to 'less than 70km/hr' and 'equal to or greater than 70km/hr'. The 70km/h split is consistent with the increase in minimum spacing recommended in the PPM. The current 100km/h split is not considered logical, as one table applies to 100km/h zones only. The proposed split is consistent with speed limits in semi-rural / rural and urban areas, with the larger spacing required in semi-rural / rural environments. A consequence of the change is some existing sites in areas with a speed limit of 70km/h or higher may not have long enough property

¹⁹ CCC District Plan, Appendix 7.5.11, Table 7.5.11.2 & 7.5.11.3

²⁰ RTS 06, Section 4.2 Distance from intersections and between driveways

²¹ PPM, Appendix 5B, Table App5B/3 – Guidelines for minimum accessway spacing

²² CCC District Plan, Figure 7.14b

boundaries to achieve a compliant access. This will not affect existing properties, but may alter the required section layout in new subdivisions.

In addition, as discussed in Section 5, the reference to Arterial, Collector and Local Road needs to be amended based on the updated QLDC road hierarchy.

Recommendation:

- Reduce the distances as noted below. The changes provide consistency with other District Plans and the NZTA PPM:
 1. Collector / Arterial – reduce distance from 35m to 30m
 2. Collector / Arterial – reduce distance from 75m to 60m
- Based on the above recommendations, amend the two tables as shown below:

No part of any vehicle crossing shall be located closer to the intersection of any roads than the distances permitted in Table 5 below and as shown in Diagram 7 in Appendix 7.

Table 5 - Minimum Distance of Vehicle Crossings from Intersections

Roads with a speed limit of less than 100 km/h – 70km/hr

FRONTAGE	INTERSECTING ROAD		
	Arterial	Collector	Local
Arterial	40	40	40
Collector	35 30	30	30
Local	25	25	25

Roads with a speed limit equal to or greater than 100 km/h – 70km/hr

FRONTAGE	INTERSECTING ROAD		
	Arterial	Collector	Local
Arterial	100	100	100
Collector	75 60	60	60
Local	50	50	50

- To provide further clarification to this Rule, adopt Figure 7.14b from CCC District Plan and provide this within Appendix 7.
- Update the references to Arterial, Collector and Local Roads (highlighted in Red) as per the new QLDC road hierarchy.

3.7 Rule 14.2.4.2 (vii) Service Stations

RTS 13 is considered to be the most relevant standard to this Rule, as it provides guidelines for service stations. The District Plan Rule is considered to be generally consistent with this standard, with the exception of a few differences. These differences include the width of one-way service station driveways, the pump location with respect to the road boundary and the minimum vehicle path width through the station forecourt.

This Rule specifies the width of any one-way driveways into a service station to be between 4.5 m and 6.0m while RTS 13 specifies a slightly smaller range of 3.5 m – 5.0 m. The RTS 13 specifies that pumps should not be to be located within 7 m of any point of the driveway, whilst the District Plan Rule requires the pumps to be located a minimum distance of 12 m from the midpoint of a driveway. In addition, the Rule specifies a minimum path width of 4.5 m through the service station forecourt for vehicles, whilst RTS 13 specifies a turn radius of 4.5 m for a path width of 4.5 m. RTS 13 also specifies a minimum path width of 3.5 m for turns of 7.5 m or greater inside radii.

Given most of this Rule aligns with the standards, it is recommended that the Rule is amended to include the turn radii specifications provided in RTS 13.

Recommendation:

- Amend Clause (f) of this Rule as follows:
 - (f) *A minimum path width of 4.5m and a minimum inside turning radius of more than 7.5 m shall be provided for vehicles through the service station forecourt, except that for pumps which are not proposed to be used by heavy vehicles, a minimum path width of 3.5 m may be provided.*

3.8 Rule 14.2.4.2 (viii) Minimum Distance Between Vehicle Crossing onto State Highways

This Rule requires a vehicle crossing spacing of 200 m between any two vehicle crossings located on state highways in areas zoned as Rural General, Rural Lifestyle, Rural Residential, Gibbston Character, Ski-Area Subzone and Resort. As this accessway spacing is based on the zoning of the adjacent land, it gives no consideration to the legal speed limit and speed environment of the state highway.

The PPM²³ specifies minimum accessway spacing on state highways based on the posted and 85th percentile speed limits of the state highway with speed limits ranging from 50km/hr to 100 km/hr. As ultimately NZTA will be required to provide approval for an access onto the state highway, it is recommended that the PPM is used as the guiding document in determining the required minimum spacing.

Recommendation:

- Amend the Rule as follows:
 - The minimum distance between any two vehicle crossings (regardless of the side of the road on which they are located), either single or combined onto any State Highway situated in ~~those areas zoned Rural General, Rural Lifestyle, Rural Residential, Gibbston Character, Ski-Area Sub-zone and Resort on the planning maps attached to this plan,~~ shall be 200 m. **all zones shall be:***
 - (i) 40 metres where the posted speed is 70 km/h or lower*
 - (ii) 100 metres where the posted speed is 80 km/h*
 - (iii) 200 metres where the posted speed is 100 km/h*

²³ PPM, Appendix 5B, Table App5B/3 – Guidelines for minimum accessway spacing

4 Appendix 7

4.1 Table 1: Car Parking Layout

The parking space dimensions specified within this table were compared with the parking space requirements outlined within AS/NZS 2890.1:2004. This indicated that the user classes of these two documents are defined somewhat differently with the District Plan only specifying three user classes whilst the standard currently provides six user classes. The District Plan user classes include long term parking (Class 1), short to medium term parking (Class 2) and disabled parking. The user classes in the standard are defined in terms of the number of vehicle doors which require opening. User Class 1 and 1A are for when only the front door is required to be opened whilst User Class 2, 3 & 3A for when full opening of all doors are required. User Class 4 is disabled parking.

Stantec agrees with GHD review comments in that the comparison of these documents indicated that District Plan Class 1 is comparable to the User Class 2 of the standard as they provide similar combined aisle and car park lengths for these classes of parking spaces. Similarly, District Plan Class 2 is comparable to User Class 3A of the standard as these also provide similar combined aisle and car park lengths. However, in terms of parking space dimensions and the aisle widths, the standard allows slightly narrower stall widths (2.1 m) and aisle widths than the District Plan.

The District Plan requires the stall widths to be increased by 300 mm where there are obstructions such as walls. This is similar to the blind aisle specification provided in the standard which also requires the stall width to be increased by 300 mm when situated at the end of the aisle. However, it also requires an additional 700 mm is provided between the parking space and the wall. Therefore, it is recommended a new note is added to Table 1 to specify a 1m blind aisle provision.

The disabled parking specifications provided in Table 1 were compared against NZS 4121:2001 as this standard provides information on designing for access and mobility. This standard specifies a minimum stall length of 5 m, stall width of 3.5 m and for 90 degree disabled parking spaces. The District Plan disabled parking dimensions are in line with this.

Similar to the QLDC District Plan, the CCC District Plan also provides specific dimensions for parking spaces based on the parking space angle and different user classes. However, it also allows for the NZ building code and AS/NZ 2890.1:2004 to be used as design guidance as this is clearly stated in the CCC District Plan.

As AS/NZ 2890.1:2004 provides extensive requirements relating to parking space dimensions, updating the dimensions in Table 1 with the dimensions provided in Figure 2.2 of the standard may not be sufficient. In addition, adopting the AS/NZ 2890.1:2004 parking requirements will mean that the District Plan will allow narrow parking spaces which may not be appropriate for some land uses/activities. Although the QLDC District Plan specifies stricter parking space dimensions than that of the AS/NZ 2890.1:2004, the current dimensions provided in Table 1 are considered acceptable. Given this, it is recommended that similar to CCC District Plan, an advisory note is added to the table to state that AS/NZ 2890.1:2004 can be used for design guidance for parking areas in buildings. This will mean that QLDC can ensure that narrow parking spaces in AS/NZ 2890.1:2004 are only allowed at locations where practical.

In addition, as per Section 2.6 and Section 2.8 discussed above, it is recommended that an additional note is provided in the table to refer to residential parking spaces and mobility parking spaces.

Recommendation:

- Add the following notes to Table 1 of Appendix 7:

Stall widths shall be increased by 0.300m where they abut obstructions such as columns or walls. For mobility parking spaces obstructions would include a kerb and garden.

At blind aisles, the aisle shall be extended a minimum of 1 m beyond the last parking space.

Advisory note: Narrower parking spaces may be acceptable for parking areas in buildings where they are designed in accordance with the Australian/New Zealand Standard Offstreet Parking, Part 1: Car Parking Facilities, AS/NZS 2890.1:2004, and any subsequent amendments.

4.2 Table 2: Heavy Vehicle Parking Layout

The heavy vehicle parking space dimensions specified within this table were compared with the parking space requirements outlined within AS 2890.2:2002. This table currently provides stall depths and aisle widths for each heavy vehicle type based on parking angles ranging from 30 – 90 degrees. However, it provides no stall width requirements. AS 2890.2:2002²⁴ specifies a minimum stall width of 3.5 m for all heavy vehicle parking spaces, and provides stall lengths based on each vehicle class.

Although the stall lengths specified in the District Plan for rigid trucks and semi-trailers are similar to that of the standard, it is recommended that the minimum stall width of 3.5 m specified in the standard is adopted, which is stricter than the current District Plan Rule. As no information relating to parking space dimensions of coach and bus parking is found in relevant industry standards, it is considered that a 3.5 m width should also be applied to these vehicle types.’

It is noted that although this table provides parking dimensions for a number of different vehicles such as rigid trucks, semi-trailer, b-train, midi-bus and tour coach, the District Plan currently contains no rules which specifically require parking provisions for most of these vehicles. This would mean that the enforcement of these parking space dimensions may not be a possibility.

Recommendation:

- Add the following notes below the table:
 - a) *All heavy vehicle spaces shall have a minimum stall width of 3.5 m.*

4.3 1. Car Space Layouts (refer tables 1 and 2)

As the existing *1.Car Space Layouts* diagram provides a concise pictorial depiction of key dimensions and descriptions presented in *Table 1* and *Table 2*, no changes are required to this diagram.

4.4 2. Bicycle Layouts (refer tables 1 and 2)

The title of this figure currently refers to Table 1 and Table 2. However, as these tables provide no dimensions relating to bicycle parking, the reference to these tables should be removed from the title.

As a greater separation between bicycles improves ease of use and reduces the likelihood of damage to adjacent bicycles, it is recommended that the diagram is modified to increase the separation between bicycles from 500mm to 650mm. This is identical to the TCC and CCC District Plans, and only 50mm wider than the AS/NZ 2890.3²⁵.

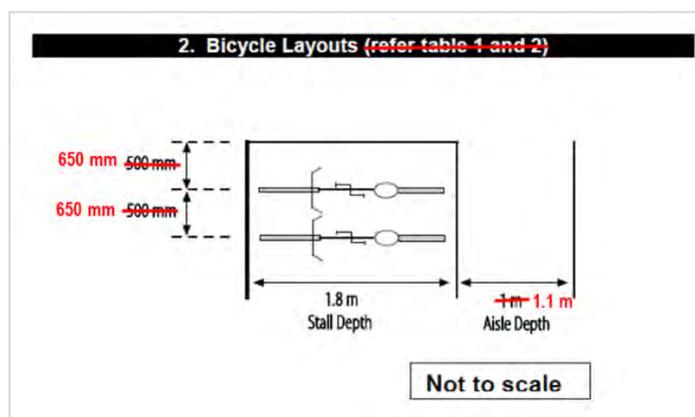
In addition, it is recommended that the aisle width is increased from 1.0m to 1.1m to align with the TCC and CCC District Plans. It is noted that this is less than the 1.5 m aisle width recommend for 90 degree parking in AS/NZ 2890.3. However, the proposed reduction in aisle width is considered appropriate due to the bicycle separation width being larger and the stall depth being 1.8m instead of 1.7m.

Recommendation:

- Amend the diagram to incorporate the changes shown in red follows:

²⁴ AS 2890.2:2002, *Section 4.2 Dimensions of Service Bays*

²⁵ AS/NZ 2890.3 Parking Facilities – Bicycle Parking Facilities



4.5 (Part 1) Vehicle Swept Path Design – (refer tables 1 and 2)

As discussed in Section 2.7 above, it was recommended that the 90th percentile design vehicle currently specified in the District Plan Rules is replaced with the B99 and B85 design vehicles from AS/NZS 2890.1. Therefore, to reflect this, the first diagram provided within this section should also be replaced with B99 and B85 design vehicles.

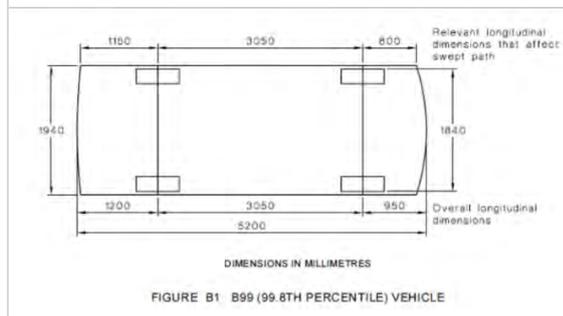
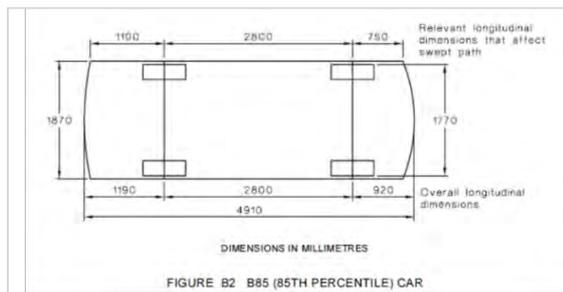
In terms of ground clearance, this diagram currently recommends a design clearance of 185 mm whilst, AS/NZS 2890.1:2004 recommends a lower design clearance of 120mm. A consequence of the higher clearance specified in the District Plan is that vehicles which are road legal may 'bottom out' in some circumstances.

In addition, the AS/NZS 2890.1:2004 specifies approach and departure angles of 10 degrees whilst the District Plan recommends an approach angle of 24 degrees and a departure angle of 17 degrees. As B99 and B85 vehicles have longer overhangs than the current District Plan vehicle, this combined with the reduced approach and departure angles will mean that the design of access ways will need to be flatter with larger transition curves used. The reduction in approach angle reduces the clearance from 370mm to 162mm and the departure angle reduces the clearance from 345mm to 210mm.

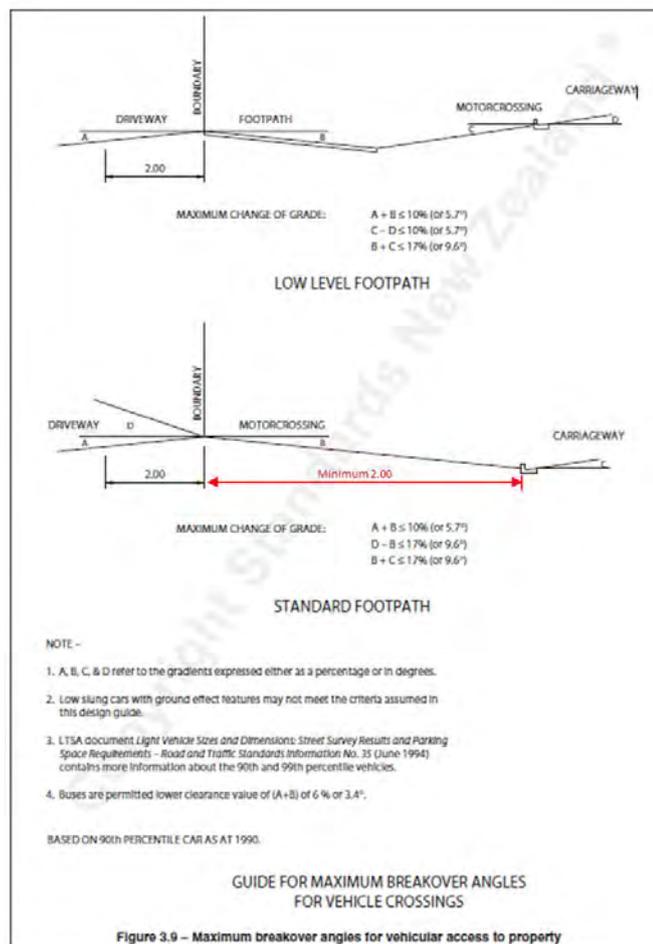
It is considered that that the Figure 3.9 from NZS4404:2004 provides a clear depiction of maximum breakover angles for a vehicle crossing. However this diagram is based on a 90th percentile car, whilst the design vehicles of the District Plan are B85 and B99 cars. Therefore, a check was undertaken to identify whether the breakover angles proposed in this diagram are able to accommodate the District Plan design vehicles. This indicated that a vehicle crossing across a standard footpath, a minimum distance of 2 m need to be provided between the property boundary and the carriageway. Therefore, it is recommended that the ground clearance angles presented within the NZS4404:2004 are adopted including the 2 m restriction discussed above.

Recommendation:

- Replace the current diagrams with the B99 and B85 design vehicles from AS/NZS 2890.1.



- Replace the current ground clearance diagram with Figure 3.9 from NZA 4404:2004 with the changes shown in red.

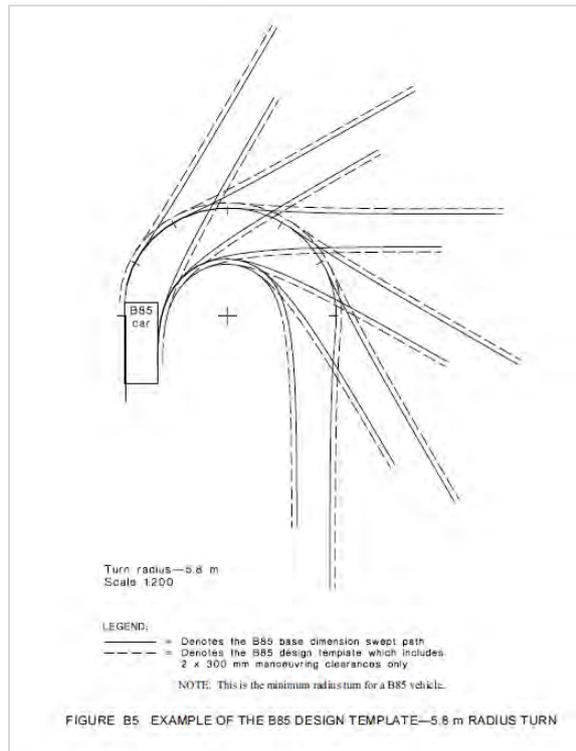


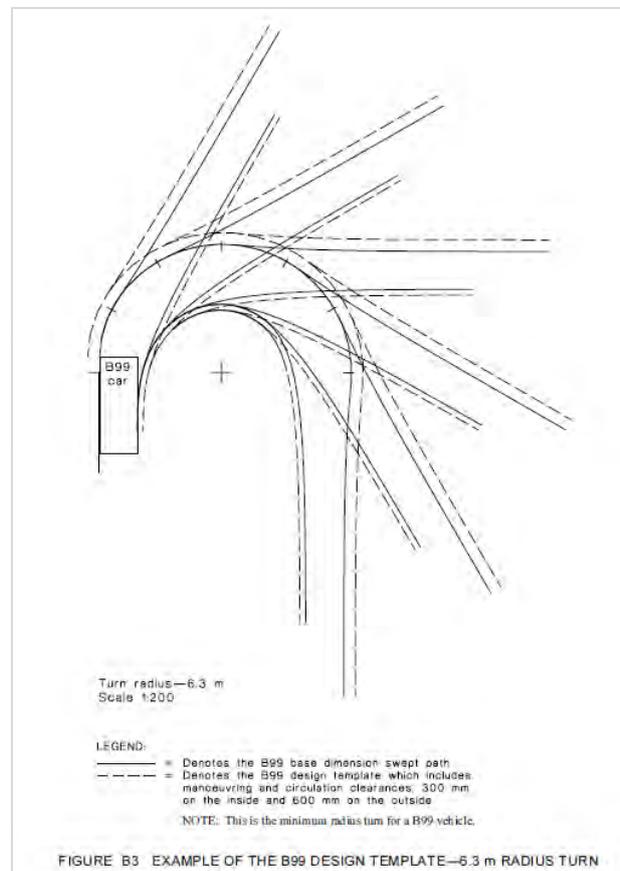
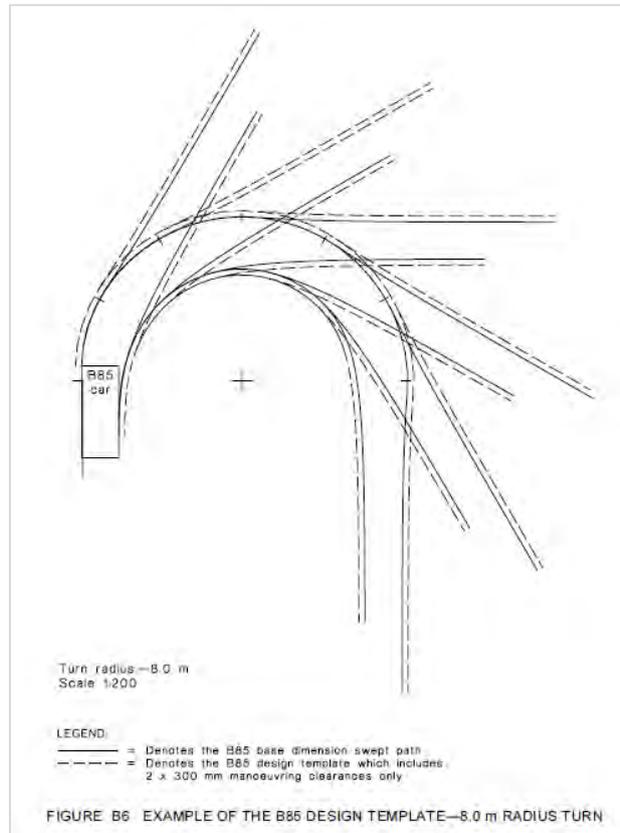
4.6 Vehicle Swept Path Design – Part 2

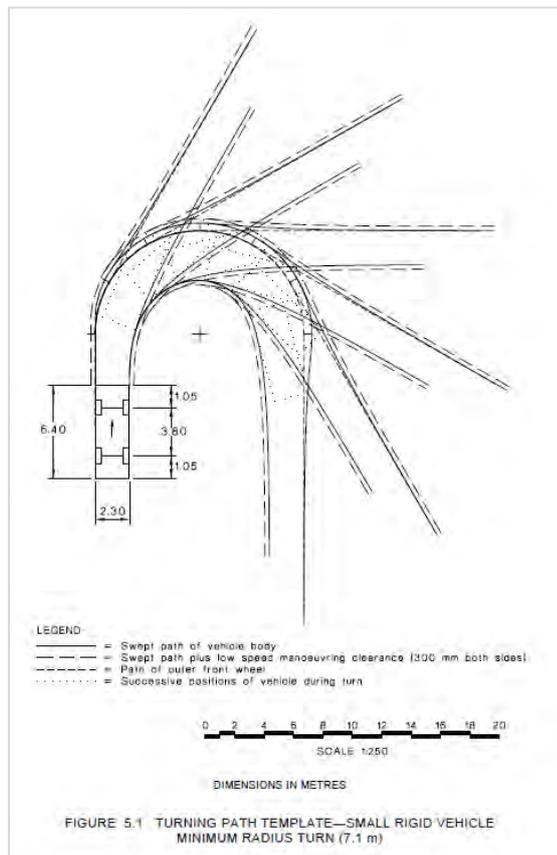
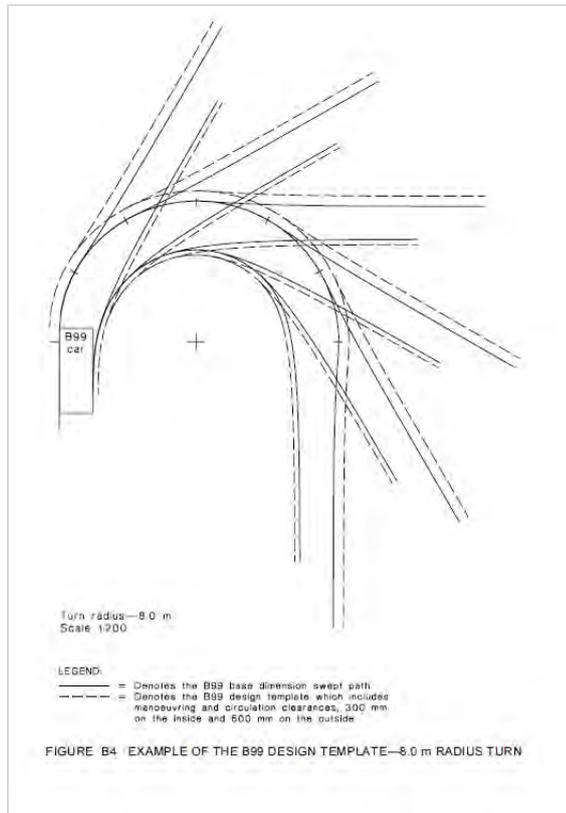
In line with the recommendations of Section 2.7, the current vehicle swept path provided within this section should be replaced with the swept paths of B99 design vehicle, B85 design vehicle and rigid trucks from AS/NZS2890.1. The swept path for a MRV shall be based on an 8.0m vehicle (which is a typical design vehicle in NZ), compared to the 8.8m long MRV specified in AS 2890.2.

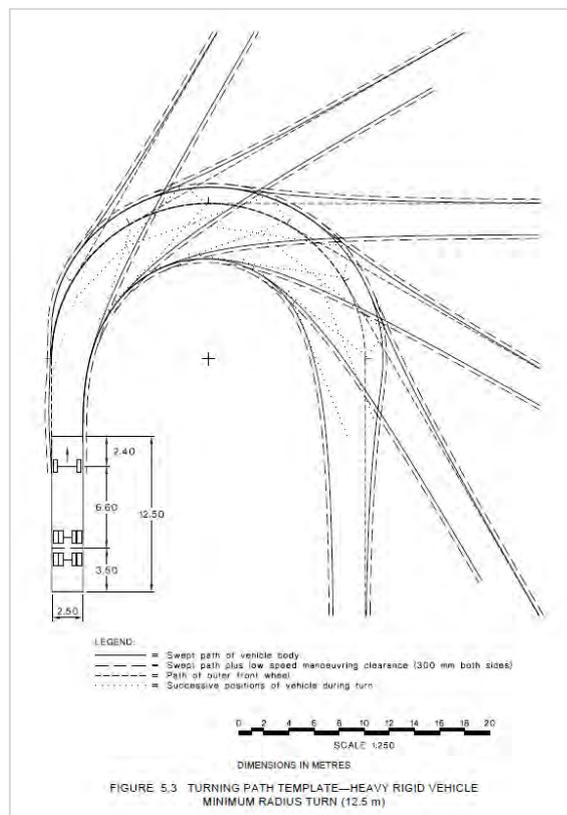
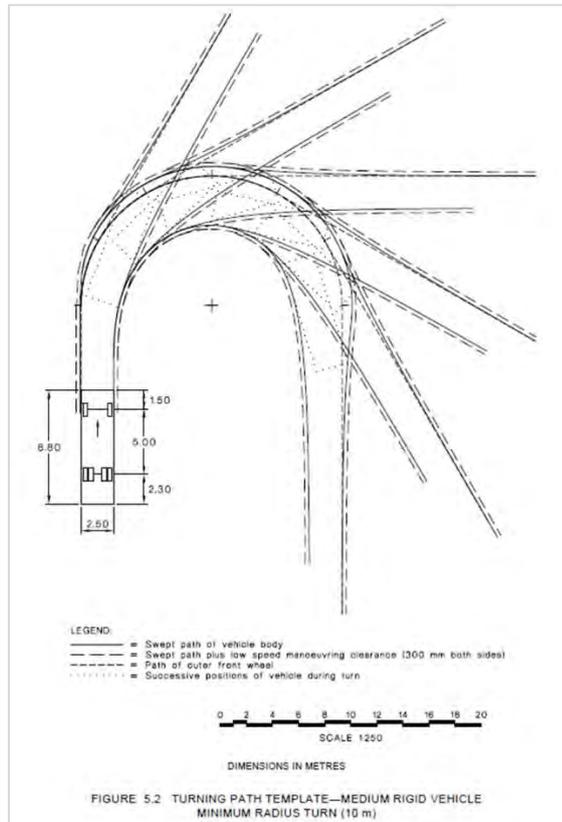
Recommendation:

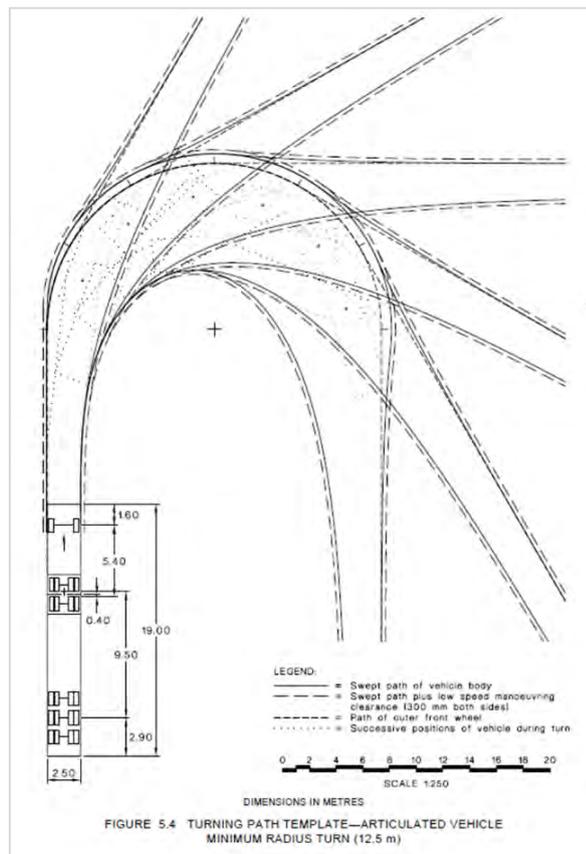
- Replace the current swept path diagrams with the following swept paths of B85 and B99 vehicles from AS/NZS2890.1 and rigid trucks from AS 2890.2.











4.7 Diagram 1: Sight Distance Measurement Diagram

This diagram currently indicates that for accesses, the sight distance is required to be measured 3.5 m and 5.5 m from the edge of the traffic lane at accesses and intersections respectively. This is measured at a height of 1.15 m.

This diagram aligns with Austroads Guidelines²⁶ which recommend that the sight distance at an intersection is measured at a distance of 5 m from the edgeline of the major road, and specifies a minimum distance of 3 m. However, Austroads measures the sight distance at a height of 1.1 m.

This diagram is comparable to the accessway sightline diagram provided in the PPM, as both these documents recommend that sight distances are measured at a distance of 3.5 m back from the edge line. However, the PPM measures the sight distance at a height of 1.05 m.

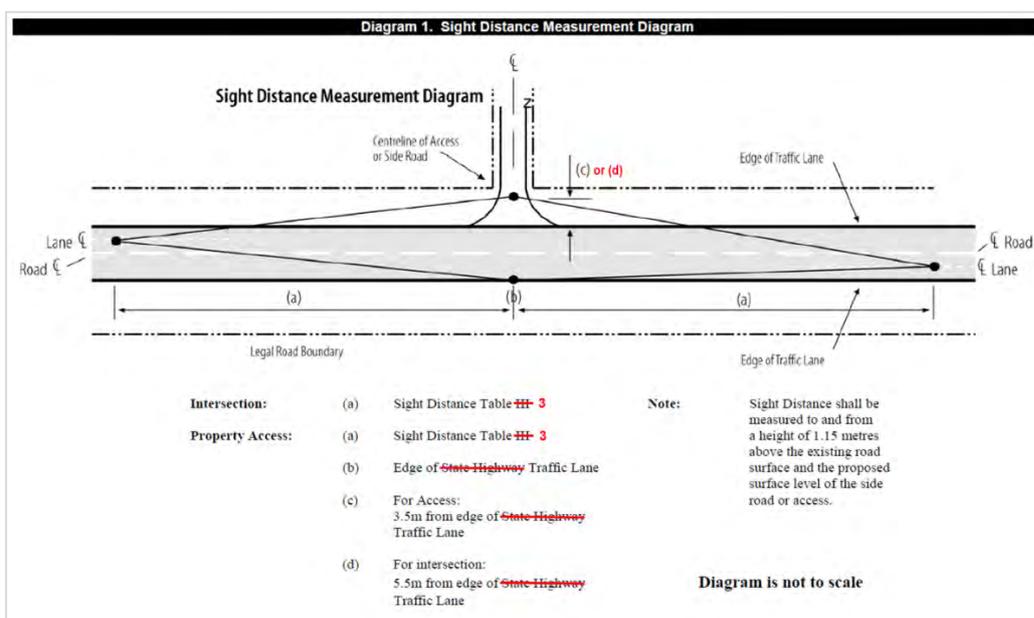
The specifications of RTS 06 is slightly different to that of the aforementioned standards as it recommends that the sight distances are measured 5 m from the centre of the nearest traffic lane. However, similar to the District Plan diagram, it recommends that this is measured at a height of 1.15 m.

As the current diagram align with most standards, no changes are proposed to the distances specified. However, to improve clarity it is recommended that all references to 'State Highway' are removed as this diagram applies to all roads within QLDC. In addition, references to 'Table iii' should be changed to 'Table 3' and the location of '(d)' should be shown in the diagram.

Recommendation:

- Amend the diagram to incorporate the changes shown in red:

²⁶ Austroads Guide to Road Design Part 4A, Section 3.2.2 Safe Intersection Sight Distance



4.8 Diagram 2, Diagram 3 & Diagram 4

Stantec agrees with TDG findings as it is considered that Diagrams 2, 3 and 4 appear to have been based on the Diagram C, D and E of the PPM²⁷. However, a number of elements are considered to be missing in the current diagrams. These include, the curve radii of the vehicle crossing, location of the culvert, minimum accessway width and information relating to the gate location. It is understood that as part of the updated CoP a new diagram (R04) showing a private rural access will be provided. This diagram is considered relevant for rural accesses with low volumes.

Therefore, in line with TDG findings, it is recommended that Diagrams 3 and 4 are replaced with Diagram D and E of the PPM, whilst Diagram 2 is replaced with the R04 of the updated CoP. In addition, to provide guidance as to which layout applies to which situation, it is also recommend that Table App5B/4²⁸ of the PPM is provided prior to the diagrams.

Recommendation:

- Prior to the diagrams, provide the Table App5B/4 of the PPM with the changes marked in red.

Type of traffic using accessway (more than one slow, heavy or long vehicle movements per week?)	Volume of traffic using accessway (ecm/day) ¹	Volume of traffic using road state highway (vpd) ²	Accessway type
No	1-30	< 10,000	Diagram and 2 Perspective C
		>=10,000	Diagram and 3 Perspective D
	31-100	< 10,000	Diagram and 3 Perspective D
		>=10,000	Diagram and 4 Perspective E
Yes	1-30	All	Diagram and 3 Perspective D
	31-100	All	Diagram and 4 Perspective E

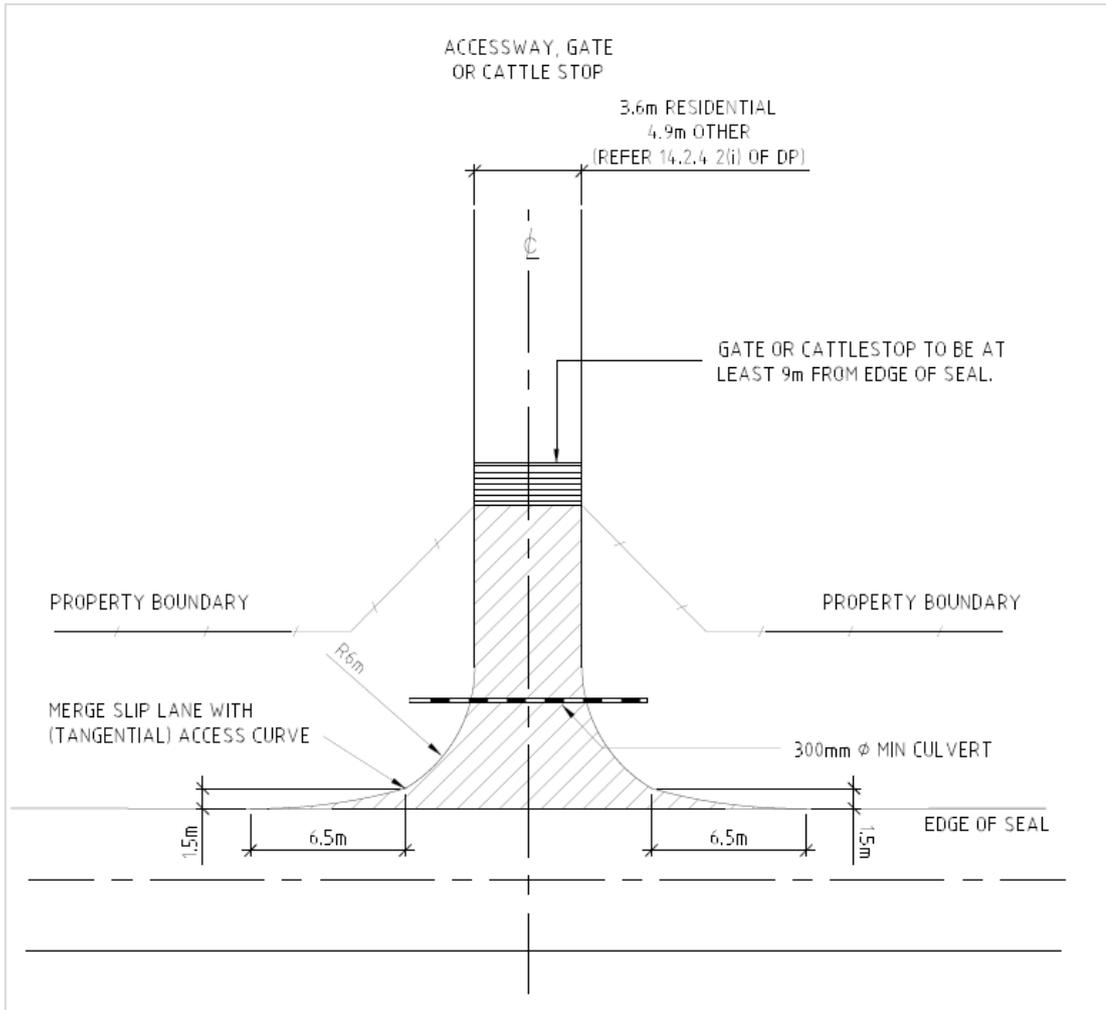
¹ Equivalent car movements per day. This is calculated either as an annual average, or as a weekly average, whichever is the greater, to cater for seasonal peaks.

² Vehicles per day

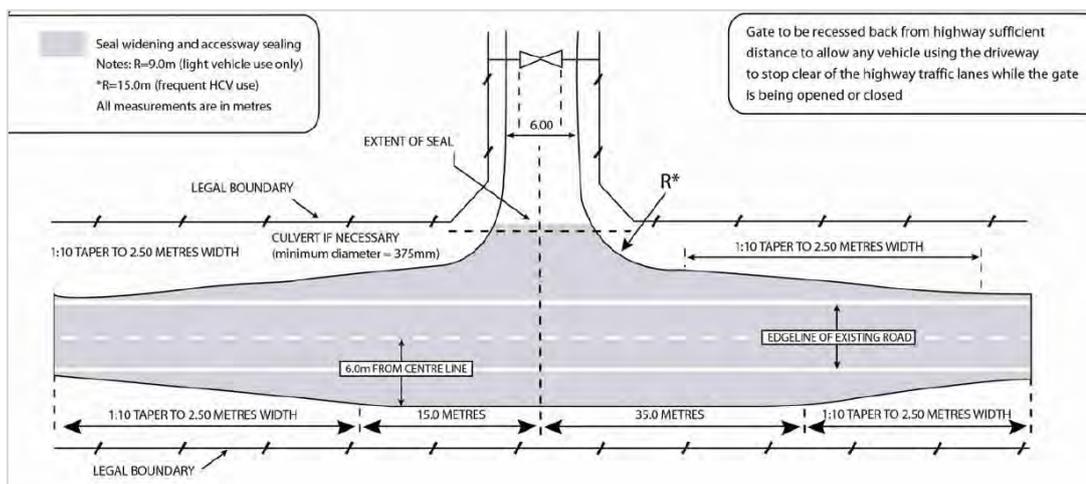
²⁷ PPM, Appendix 5B, Page 216, 218 & 220

²⁸ PPM, Appendix 5B, Page 215

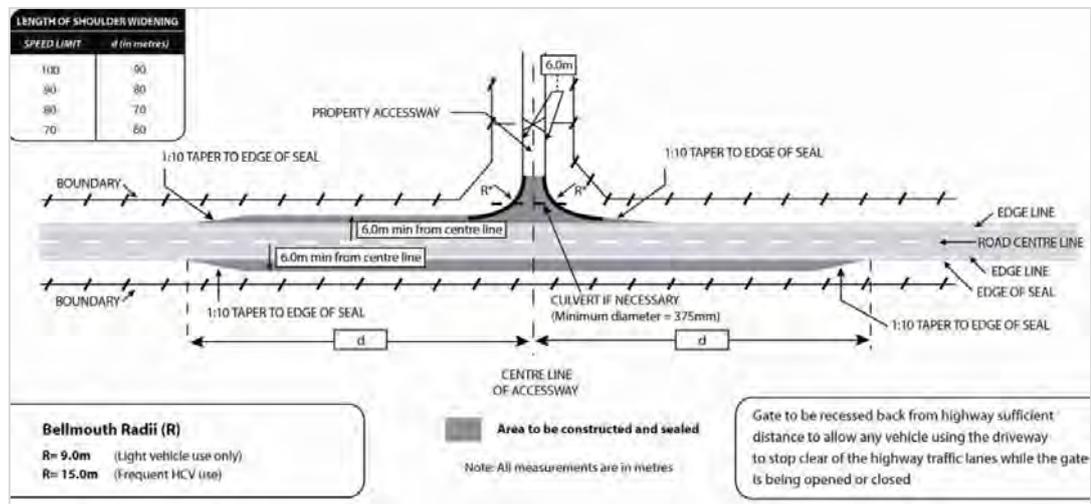
- Replace Diagram 2 with the R04 of the updated CoP as shown below:



- Stantec agrees with TDG recommendation to replace Diagram 3 with Diagram D of PPM shown below:



- Stantec agrees with TDG recommendation to replace Diagram 4 with Diagram E of PPM shown below:



4.9 Diagram 5: SH6 Roundabout Works

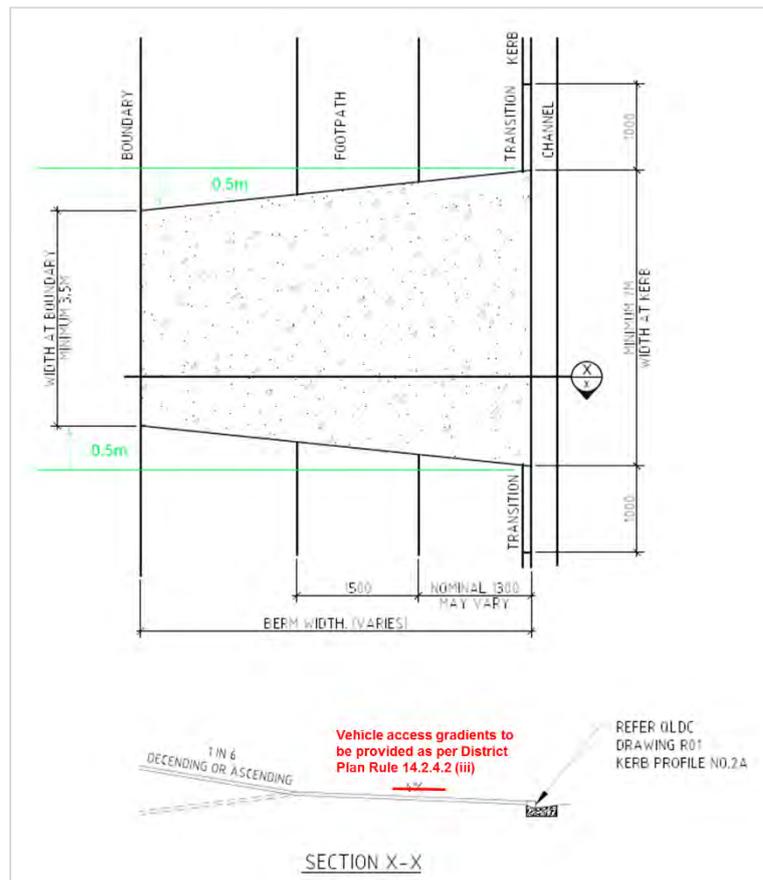
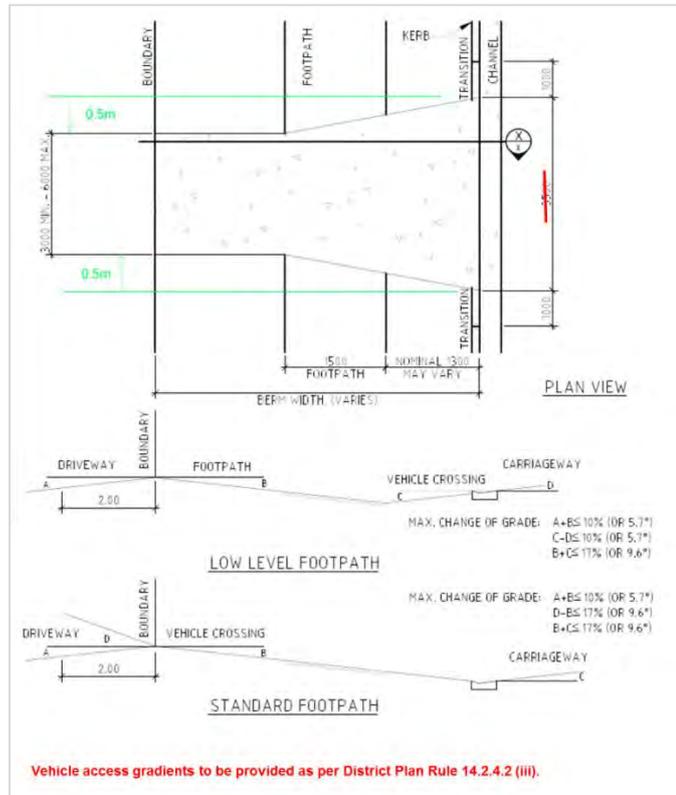
As this diagram provides a layout of an intersection that has already been built, it is recommended this diagram is removed from Appendix 7.

4.10 Diagram 5 & Diagram 6: Residential and Commercial/Industrial Vehicle Crossings

As discussed in Section 3.1, it is recommended that to clarify the required vehicle crossing widths at the property boundary and the kerb, Diagram R02 and R03 from the CoP is included within Appendix 7. It is understood that changes may be made to these diagrams as part of the updated CoP. Therefore, following the update, it is recommended that these diagrams are replaced with the updated diagrams with the CoP.

Recommendation:

- Provide the following diagrams from CoP with the mark ups (shown in red) as Diagram 5 and Diagram 6 within Appendix 7.

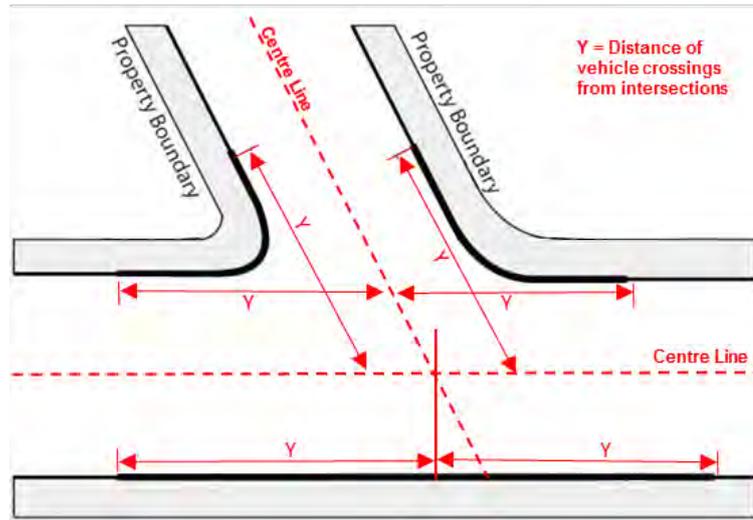


4.11 Diagram 7: Distances of Vehicle Crossings from Intersections

As discussed in Section 3.6, it is recommended that to clarify that the spacing requirements specified within Rule 14.2.4.2 (vi) applies to intersections on both sides of the road, Figure 7.14b from CCC District Plan is included within Appendix 7.

Recommendation:

- Provide the following diagram from CCC District Plan with the mark ups (shown in red) as Diagram 7 within Appendix 7.



5 Appendix 6: Road Hierarchy

At present, Appendix 6 of the District Plan provides a list of existing Arterial, Collector and Local roads located within the QLDC area. However, it provides no information relating to the method of road classification used to obtain this list or the QLDC definition of each road type. Therefore, a review of the current QLDC road hierarchy against relevant industry standards and practice cannot be undertaken.

We understand however that QLDC has recently undertaken a review of their road hierarchy based on NZTA's One Network Road Classification (ONRC) system. ONRC is considered an appropriate guidance document as it divides the roads in New Zealand into six categories based on the traffic volumes, connection to important destinations and the availability of alternative routes. The categories include National, Arterial, Regional, Primary Collector, Secondary Collector and Access.

It is noted that although traffic volumes is a key element which affects the classification of a road, it is important that the intended function of the road is also taken into consideration. For example, a residential road with a high volume of through traffic may get classified as a Collector Road although its intended function is to provide local access only. Therefore, it is recommended that this is taken into consideration when updating the classification of each road.

Recommendation:

- Provide the updated QLDC road hierarchy and the updated classification of all QLDC roads within Appendix 6.
- Consider showing the updated road classification in a map form instead of the current tabular form.
- Update all current references to road classifications within the Transport Rules with the relevant ONRC road classifications.

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Appendix 4. Memorandum entitled “Onsite loading for Queenstown Town Centre Zone” (28 August 2017).

Memorandum

To: Peter Hansby
From: Stephen Hewett
Copy: Gabrielle Tabron
Subject: Onsite loading for Queenstown Town Centre Zone

Date: 28 August 2017
Our Ref: 3331989

Based on the transport and public realm work that has been undertaken to develop the Queenstown Town Centre Masterplan sites fronting the following roads will not be required to provide off-street loading. Loading zone for Good Service Vehicles will be provided on-street to provide servicing to these sites:

- Queenstown Mall - This would be a shared space with the ability for Goods Service Vehicles to access Queenstown Mall at agreed times
- Beach Street - This would be a shared space with the ability for Goods Service Vehicles to access Beach Street agreed times
- Shotover Street - Additional on-street loading spaces have been included in the Masterplan for Good Service Vehicles
- Camp Street - On-street loading spaces have been included in the Masterplan for Good Service Vehicles on the south side of Camp Street
- Rees Street - This would be a shared space with the ability for Goods Service Vehicles to access the street at agreed times
- Marine Parade - This would be a shared space with the ability for Goods Service Vehicles to access the street at agreed times
- Church Street - This would be a shared space with the ability for Goods Service Vehicles to access the street at agreed times
- Earl Street - This would be a shared space with the ability for Goods Service Vehicles to access the street at agreed times on the north-west side
- Ballarat Street - This would be a shared space with the ability for Goods Service Vehicles to access Beach Street agreed times
- Memorial Street - - This would be a shared space with the ability for Goods Service Vehicles to access Beach Street agreed times

Lakeview Subdivision has not been advanced sufficiently as part of the Masterplan to confirm the off-street loading zone requirements.

Stephen Hewett

Business Director - Transportation

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Appendix 5. An assessment of the zones in terms of their accessibility and the level of intensification anticipated by the zone

Zone	Accessibility and level of intensification anticipated by the zone
High Density Residential Zone - Queenstown (HDR)	<p>The zone enables high density development and most areas are highly accessible for both walking to the Town Centre and to a public transport route.</p> <p>Discrete areas of the HDR zone in Queenstown are not within walking distance of the Town Centre; namely a small area of Lomond Crescent, parts of Frankton and Fernhill Roads, and the Kawarau Village area in Kelvin Heights. However, these areas are accessible by existing and proposed public transport³², with those along Frankton Road being highly accessible by public transport due to its frequency.</p> <p>Furthermore, the Kawarau Village area is walkable (within 800m - 1.2 km) to the Remarkables shopping area and the Remarkables Primary school and it is noted that much of this area is already or will be developed for visitor accommodation, which is subject to a higher parking ratio than residential development.</p>
High Density Residential Zone - Wanaka	The zone enables high density development and is accessible to the Town Centre. With the exception of a very small area, it is within a flat 800m walk of the Town Centre.
Medium Density Residential Zone - Park to Suburb St	The zone enables medium density development and is highly accessible for both walking to the Town Centre (less than a 700m flat walk) and to public transport stops (less than a 200m walk).
Medium Density Residential Zone - Belfast to Vancouver	The zone enables medium density development but is more than an 800m walk from proposed public transport route and the Town Centre, via steep terrain.
Medium Density Residential Zone - Fernhill Road to Aspen Grove	The zone enables medium density development and is accessible (less than a 600m walk) to a public transport route.
Medium Density Residential Zone - Wanaka	The zone enables medium density development and is accessible to the Town Centre via walking and cycling (noting there is no public transport). With the exception of a small area, the zone is within an 800m flat walk from the Town Centre.
Medium Density Residential Zone - Arrowtown	The zone enables medium density development and is accessible for both walking to a secondary centre and to a public transport route (with the exception of a small part of the zone, it is within an 800m flat walk from both).
Business Mixed Use Zone - Queenstown	The zone enables high density development and is accessible to all modes. Activities exist and will establish within the zone which will provide daily amenities; it is highly accessible to a public transport route; and the entire zone is within a 1.2 km flat walk to the Town Centre.

³² For the purpose of this Appendix “proposed public transport (routes)” refers to the bus routes commencing throughout the Wakatipu in late 2017

Zone	Accessibility and level of intensification anticipated by the zone
	The desire to increase the feasibility of providing for affordable housing in this zone is considered to outweigh the slightly lower level of accessibility of the northern-most part of the zone.
Business Mixed Use Zone - Wanaka	<p>The zone enables medium density development and is accessible for walking to a primary centre in that with the exception of a small area, the zone is within an 800m flat walk from the Town Centre and/ or from the Three Parks commercial core.</p> <p>The desire to increase the feasibility of providing for affordable housing in this zone is considered to outweigh the slightly level of accessibility of the part of the zone.</p>