

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

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of Hearing Stream 13 –
Queenstown
Annotations and
Rezoning Requests

**STATEMENT OF EVIDENCE OF ULRICH WILHELM GLASNER
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

INFRASTRUCTURE

24 May 2017

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Appendix 1: Extract from evidence of Mr Ulrich Glasner for Upper Clutha hearing dated 20 March 2017

1. INTRODUCTION

- 1.1 My full name is Ulrich Wilhelm Glasner. I hold the position of Chief Engineer at Queenstown Lakes District Council (**QLDC** or **Council**). I have been in this position since July 2013.
- 1.2 I was previously employed at Western Bay of Plenty District Council as the Utilities Asset Manager from 2008 and before that in a number of consultant and management roles in New Zealand and Germany.
- 1.3 I hold an Engineering degree (Diplom Ingenieur) from University of Applied Sciences - Wiesbaden. I have 28 years' experience in Civil Engineering. I am a member of IPENZ, IPWEA and Water NZ. I am a Chartered Professional Engineer (CPEng).
- 1.4 My experience includes investigations, issues and options studies, and the design and construction of several wastewater and stormwater pump stations, reticulation and collection systems. I have managed the design of stormwater and wastewater systems in Germany and New Zealand.
- 1.5 My current role at QLDC involves asset management (three waters and solid waste), contract management, procurement, strategic planning, and management of road works. I also have responsibility for delivering infrastructure work approved in the Annual Plan for QLDC, including three waters, transport, solid waste and other capital works. As Chief Engineer I also have responsibility for the ongoing operation and maintenance of infrastructure assets. This involves co-ordination of the high level work programme for the infrastructure team, and managing staff and contractors to deliver projects and services within approved timeframe and cost limits.
- 1.6 In relation to the Proposed District Plan (**PDP**) I have provided written evidence on behalf of the Council on the Strategic Direction and Residential chapters, and in relation to infrastructure matters for the Ski Area Sub Zones hearing and the Upper Clutha rezonings.

- 1.7** I have now been asked by QLDC to provide evidence in relation to infrastructure matters for the Stage 1 rezoning submissions located in Queenstown.
- 1.8** Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.
- 1.9** The Council, as my employer, has authorised that I give this evidence on its behalf.
- 1.10** I refer to documents included in the Council's Bundle (**CB**), Supplementary Bundle (**SB**) and Second Supplementary Bundle of Documents (**SSB**). The key documents I have used, or referred to, in forming my view while preparing this brief of evidence are:
- (a) my evidence for Introduction and Strategic chapters dated 19 February 2016 [**CB37**];
 - (b) my evidence for Residential chapters dated 14 September 2016 [**CB57**];
 - (c) evidence of David Wallace for Subdivision chapter dated 18 July 2016 [**SB74**];
 - (d) my evidence dated 20 March 2017 to the Upper Clutha Hearing Stream 12 [**SSB102**];
 - (e) the Queenstown wastewater modelling capacity results, both current day and future growth, 2025 and 2055 (**Wastewater Model**);
 - (f) the Queenstown water modelling capacity results, both current day and future growth 2025 and 2055 (**Water Model**);
 - (g) Discussion Document on Service Levels for Three Waters Services (Internal Draft for discussion – Nov 2016);
 - (h) QLDC, Three Waters Asset Management Plan 2015-2030, February 2015;

- (i) QLDC, Long Term Plan 2015-2025;
- (j) Land Development and Subdivision Code of Practice 2015 (Subdivision Code of Practice);
- (k) QLDC 2015-2045 Infrastructure Strategy;
- (l) Three Waters Strategic Direction Working Document 2011 and Beyond;
- (m) Otago Regional Council Plan Change 6A (Water Quality), Regional Plan: Water for Otago (1 May 2014); and
- (n) Groundwater Contamination Risk, Septic Tank Density and Distribution within Otago, Prepared by Sean Leslie (undated).

1.11 All references to PDP provision numbers, are to the Council's Reply version of those provisions (unless otherwise stated).

2. SCOPE

2.1 My evidence addresses the infrastructure-related effects of the Stage 1 rezoning submissions located within the Queenstown area. I consider whether there is capacity in terms of wastewater and water supply, to service the proposed rezonings. I also take in the need for supply of water for firefighting purposes.

2.2 The individual submissions have been broadly categorised into the following groups:

- (a) **1A** Queenstown Urban – Business and Industrial;
- (b) **1B** Queenstown Urban – Frankton and South (includes Kelvin Heights, Lake Johnson, Jacks Point);
- (c) **1C** Queenstown Urban – Central, West and Arthurs Point (includes Queenstown Hill, Fernhill/Sunshine Bay, Gorge Road, Arthurs Point);
- (d) **1D** – Jacks Point zone; and
- (e) **2** Rural.

2.3 I have taken a view on each of the site specific zoning requests as to whether I oppose, or do not oppose, the relief sought, in terms of infrastructure effects.

2.4 I have read Ms Banks' first statement of strategic evidence for this hearing, and in particular the part where she explains each of the zones recommended by the Council in the PDP. I refer to and rely on that evidence, in terms of the type and densities of zones that the Council has recommended through its right of replies in the substantive hearings, and that are being pursued. I have used the Council's position on all zones, when considering their appropriateness.

2.5 As stormwater is addressed at the time of subdivision or actual development and is required to comply with the Council's requirements under the Subdivision Code of Practice, it is not being assessed individually in relation to the rezoning requests.

2.6 In assessing each of the site specific submissions, I have considered three key points:

- (a) the serviceability of the area, whether it is anticipated that the site would connect to the water and wastewater networks, and the ease and cost of servicing to the expected level of service, including ongoing operations maintenance costs from additional facilities;
- (b) the location of the area in terms of elevation, whether the area will have adequate water pressure and can drain wastewater under gravity, and if it is adjacent to similarly zoned land to support efficient servicing of the area; and
- (c) if the area will be serviced by the network, whether there are any capacity issues, and if there are whether there are projects to resolve them within the Long Term Plan (**LTP**).

3. EXECUTIVE SUMMARY

3.1 The effect of the water demand from the submitted rezonings has been assessed against the Water Model, including the current day, 2025 and 2055 growth scenarios. There is no current water model for Arthurs Point. In general, water supply is less of an issue for submitter requests for more intensive residential zoning, where

residential zoning is currently proposed, because the same FW2 level of firefighting supply is anticipated. Where zoning with a higher fire risk is proposed, that increases the anticipated firefighting requirements (e.g. commercial requiring FW3). The water model results are used to assess the ability to adequately service these proposed areas.

- 3.2** For properties at higher elevations, additional water reservoirs or booster pump stations may be required to provide water supply to those houses. Council would prefer to rationalise facilities and not promote an increase in the number of facilities to supply water at this higher elevation because of ongoing operations and maintenance costs.
- 3.3** The Water Model results for Queenstown also include head loss details. High head loss indicates increased pressure losses as a result of friction within the pipe and therefore more inefficient water transportation, i.e. trying to pump too much water through a certain sized pipe. Where the Water Model shows a head loss greater than 5 m/km this above general pipe design guidance.
- 3.4** The effect of the wastewater loads from the rezonings sought have been assessed against the Wastewater Model including the current day, 2025 and 2055 growth scenarios. The Wastewater Model extends to Arthurs Point for both water and wastewater where the models show there is currently no capacity within the system. I have considered whether the lack of capacity will be resolved through planned projects in upcoming Annual Plan reviews and LTP periods. I also identify where LTP projects are required and are provided for to enable the rezoning (i.e. the upgrade is already planned).
- 3.5** I note that if an area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s. In some cases there are capacity issues but as the change is quite minor in terms of additional capacity requirements I do not oppose some of those rezonings.

- 3.6** It is much more efficient to service new developments where capacity already exists. In my opinion, it is not in the Council's best interest for its water and wastewater networks to extend further into currently zoned rural land outside the urban limits, as this will result in increased operational, maintenance and renewal costs for QLDC over the long term.
- 3.7** Mr Barr has confirmed that proposed Residential Zoning (including Rural Residential zoning) that adjoins the Urban Growth Boundary (**UGB**) would be expected to connect to Council services (water supply and wastewater). Where this zoning can adequately be serviced with existing infrastructure I do not oppose it from an infrastructure perspective. However, when I am unclear on the level of upgrades required to adequately service a Rural Residential Zone adjoining the UGB, I oppose the zoning from an infrastructure perspective. This is because I do not support the ad hoc and inefficient extension of infrastructure, particularly where I understand there is sufficient available land within the UGB to serve further residential growth.
- 3.8** Rural and Rural Lifestyle zonings outside the scheme boundary are not anticipated to connect to the Council network but be privately serviced onsite at the developer's cost. These types of developments will not affect the Council's Infrastructure network (nor ongoing maintenance costs) and therefore I generally do not oppose this type of development.

4. BACKGROUND

Assumptions

- 4.1** I refer to and rely on my evidence provided in the Upper Clutha hearing at paragraphs 4.1 - 4.33 (where relevant), where I set out the assumptions and methodology that I used in assessing the impacts of the rezonings sought. This extract is set out in **Appendix 1** for ease of reference. I have used the same approach in this evidence (where relevant).

4.2 Where a submission has included an estimate of the number of residential lots, I have generally relied on that information. Specifically, I have relied on the estimate in submissions if there is one and where robust information has been provided to support the estimate. Where no information was provided, or where in my opinion a greater number of lots could realistically be developed, I have estimated the number of lots and explained this in my assessment.

4.3 The minimum lot sizes for the different zones provide a guide for estimating the number of lots:¹

- (a) Low Density Residential – 450 m²;
- (b) Medium Density Residential – 250 m²;
- (c) High Density Residential – 450 m²;
- (d) Queenstown Heights Sub Zone – 1,500m²;
- (e) Large Lot Residential A – 4,000 m²;
- (f) Large Lot Residential B – 2,000 m²;
- (g) Business Mixed Use – 200 m²;
- (h) Rural Lifestyle 2 hectare average, with individual allotments up to 1 hectare;
- (i) Rural Residential – 4,000 m²; and
- (j) Rural Visitor – no set criteria, hence number of lots not assessed, unless specified in submission.

4.4 My opinions on wastewater and water are based on the Council's computer Queenstown Water Model and Wastewater Model capacity results where available. The models supporting these were built in 2016. The water model was built by Mott MacDonald and the wastewater model by Tracey Myers from CH2M Beca Ltd. The models give a mathematical representation of the infrastructure networks (pipes, pumps, reservoirs and other assets) and the results produce information about pressure, flow and pipe capacity throughout the network. 2025 and 2055 Growth scenarios have been built to assess the effects of future growth on water and wastewater. These are currently being updated to incorporate the

1 See Rule 27.6.1 in **[CB18]**.

PDP, and minor amendments that are anticipated. There is currently no water model available for the Arthurs Point network.

- 4.5** The Queenstown water network has multiple reservoirs and intakes. For sites serviceable by the Queenstown and Arthurs Point networks I have assessed the location of the area in terms of elevation compared to the closest reservoir elevation. The model refines this assumption in areas within the modelled network.
- 4.6** There are Scheme Boundaries for the water and wastewater networks. For Queenstown and Arthurs Point the schemes share the same boundary line. The scheme boundary line defines the limit of the schemes at present. The schemes are designed to service all properties within or partially within the boundary lines, taking into account the zonings defined in the District Plan. The boundaries are physically defined on the QLDC WebMap available on the QLDC website.
- 4.7** The Queenstown water and wastewater master plans are currently being revisited. The master plans will inform the 2018 LTP programme and ensure there are infrastructure solutions that respond to growth and level of service requirements. This will lead to modifications to the existing LTP, which this assessment has been based on. It has been noted in the submissions where projects that will mitigate capacity constraints are based on the master plans rather than the current LTP.
- 4.8** The Otago Water Plan Change 6A (water quality) was approved on 26 March 2014 and is now operative. The plan change made provision for controlling contaminants and sediment coming off rural properties into waterways from runoff, leaching and drains (non-point sources). The cumulative effects of diffuse discharges from septic tanks in a rural/urban environment can be as damaging as discharges from agricultural activities. Hence, Otago Regional Council (**ORC**) are currently considering a plan change (6B) addressing the septic tank permitted activity rule, utilising a nitrogen-loading approach. It is anticipated that in the near future QLDC may be required to reticulate wastewater in some currently

unserved communities in order to meet the ORC's requirements in pending Plan Change 6B.

4.9 I consider that any rural zoned land will not be affected by plan change 6B because advanced wastewater treatment systems can be used to meet the requirements where needed, such as for rural residential zones in the large lake catchment area. In the future QLDC will need to update its rules regarding treatment levels to reflect this.

5. REQUESTS FOR REZONINGS – QUEENSTOWN BUSINESS AND INDUSTRIAL (1A)

Summary of rezonings between Hansen Road and Quail Rise, Frankton

5.1 A number of rezoning submissions have been made relating to the area referred to as the 'Frankton MDRZ' located between Hansen Road and the Quail Rise Special Zone, on the northern side of SH6. Submissions have also been made on the Rural land in the same vicinity, between Hansen Road and Hawthorne Drive roundabout.

5.2 Overall I support intensification in the Hansen Road to Quail Rise area notified Rural and Medium Density Residential (**MDR**) in the PDP. This area is close to both the water supply source and the wastewater treatment plant, making it an efficient area to service from an infrastructure point of view. There are planned upgrades to water and wastewater infrastructure in the council LTP that will ensure network capacity is available to this area. If this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP project/s.

5.3 I address specific submissions, relating to this area, in this section and in Section 6.

Peter and Margaret Arnott – 399, The Jandel Trust – 717, Hansen Family Partnership – 751, FII Holdings Limited – 847

- 5.4** Peter and Margaret Arnott have sought that 1.35 ha of land be rezoned from Rural to Local Shopping Centre (**LSCZ**) / Business Mixed Use (**BMUZ**). It has been estimated that this could potentially yield 80 additional residential lots. The area is located on the northern side of Frankton - Ladies Mile Highway east of the Frankton Substation (near Grant Road).
- 5.5** The Jandel Trust has sought that 26 ha of land be rezoned from Rural / MDR to BMUZ / Industrial. It has been estimated that this could yield 1519 additional residential lots. The area is located on the northern side of Frankton - Ladies Mile Highway from east of the Frankton Substation (near Grant Road) to the end of Ferry Hill Drive.
- 5.6** Hansen Family Partnership has sought that 19 ha of land be rezoned from Rural / MDR to Low Density Residential (**LDR**)/ MDR/ High Density Residential (**HDR**)/ BMUZ/ LSCZ/ Industrial. It has been estimated that this could yield up to 1,116 additional residential lots. The area is located on the northern side of Frankton - Ladies Mile Highway between Hansen Road and the Eastern Access Road (**EAR**).
- 5.7** FII Holdings Limited has sought that 25.7 ha of land be rezoned from MDR to BMUZ/ Industrial. It has been estimated that this could yield 698 less residential lots if the zoning is Industrial. However, BMUZ could yield more residential lots than a MDR zoning. The area is located at 145 Frankton - Ladies Mile Hwy north of the Hawthorne Drive roundabout and across from the Frankton Flats Special Zone.
- 5.8** Council GIS records show that most of these sites are not currently serviced by QLDC water and wastewater schemes. There are trunk water mains on the opposite side of the highway and no wastewater. Connections to water and wastewater for new developments on this side of the highway are currently at the

Hawthorne Road roundabout, there is a further water connection across from Hardware Lane. The notified zoning for the sites is Rural and MDR. The surrounding land is a mix of Rural, Quail Rise Special Zone and Frankton Flats Special Zone. The sites are within the water and wastewater scheme boundaries.

- 5.9** No details have been provided with the submission about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. It is assumed that the firefighting requirements will increase from FW2 to FW3 which will be similar to the other developments taking place in the area. Modelling shows low pressures and low firefighting capacity are anticipated in the near future. The Council proposes to install a new reservoir at Quail Rise and new bulk mains in the future that will improve water supply in this area. This is programmed in the LTP. However, as the surrounding land is zoned residential the higher firefighting capacity requirements for this different zoning may require upgrades to the network. Water pressure should be within the normal level of service; the highest elevation is 395 m at the back of one of the lots, the existing Quail Rise reservoirs top water level is 434.5m (according to the Operations and Maintenance).
- 5.10** In relation to wastewater, it is assumed that the site will connect to the QLDC wastewater scheme and the quantities will be similar to the surrounding land. Parts of the land is low lying and it may be difficult to provide a gravity connection to the existing network from these parts of the site, however this may be overcome during development.
- 5.11** I do not oppose the rezoning to LDR/ MDR/ HDR/ LSCZ/ BMU/ Industrial as outlined in the above submissions, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. The developers will however, need to show that it is feasible to connect to the Council network and it will be at the developer's cost. I note that some developments may need a private pump station to service wastewater at the site. If

this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP project/s.

- 5.12** I do not oppose the deletion or amendments of Rules 8.5.3.1(a) & (b) and Rule 8.5.3.2, from an infrastructure perspective, because it is assumed that this does not affect 3 waters infrastructure requirements.

Spence Farms Ltd – 698

- 5.13** Spence Farms Ltd has sought the following change to provisions:

Amend as follows:

Building Height

a) For the Local Shopping Centre Zone located at Albert Town, Arrowtown, Fernhill, Hawea, Sunshine Bay and Wanaka the maximum building height shall be 7m.

b) For the Located Shopping Centre Zone located at 1 Hansen Road (being the land located between Hansen Road and Frankton Cemetery) the maximum height shall be 10 m except for buildings or parts of buildings 55m of further from the State High boundary, in which case the maximum height shall be 15 m.

~~c)~~ For all other areas in the Local Shopping Centre Zone the maximum building height shall be 10m.

- 5.14** The area is located at 1 Hansen Road in Frankton. This is across Hansen Road, from the group of submissions considered directly above. QLDC has capacity to provide FW3 to the boundary. The developer will need to ensure that adequate firefighting provisions are made for the development at their cost, which could entail booster pumps if the building is particularly tall.

- 5.15** I do not oppose the change to rules for building heights, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the notified PDP. All connections and any boosters would be at the developer's cost.

Barbara Williams – 141

- 5.16** Barbara Williams has sought that 1.6 ha of land be rezoned from LDR to LSCZ / BMUZ / Airport Mixed Use.

- 5.17** The area is located at 58 - 106 McBride Street in Frankton. It is situated within the Queenstown Airport Air Noise Boundary at the western end of the airport runway. The area is currently serviced by QLDC water and wastewater infrastructure. It is an existing residential area within the scheme boundaries.
- 5.18** No details have been provided about how the anticipated increased flows/demands from the change away from residential would be serviced. It is assumed that the site would remain connected to the existing water and wastewater networks. It is understood a BMUZ would anticipate FW3 commercial firefighting demand. This is greater than the LDR zoning level of service demand. The modelling results show FW3 demands can be provided in this area now and in the future through to the 2055 scenario, although the pipe head losses are very high by 2055. Local trunk main upgrades are planned to be remediated in the LTP.
- 5.19** I do not oppose the rezoning to LSCZ/ BMUZ / Airport Mixed Use, from an infrastructure perspective, because it is expected this area is able to be serviced with planned upgrades. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Brett Giddens – 828

- 5.20** Brett Giddens has sought that 1.8 ha of land be rezoned from LDR to LSCZ.
- 5.21** The area is located between McBride Street and Kawarau Road, between Birse and Grey Streets in Frankton. It is situated within the Queenstown Airport Outer Control Boundary. The area is currently serviced by QLDC water and wastewater infrastructure. It is an existing residential area within the scheme boundaries. It is adjacent to land zoned Local Shopping Area and Low Density Residential.
- 5.22** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is

understood LSCZ would anticipate FW3 commercial firefighting demand. This is greater than the LDR zoning level of service demand. The modelling results show FW3 demands can be provided in this area now and in through to the 2055 scenario, although the pipe head losses are very high by 2055. Planned upgrades to the network in this area should resolve this issue.

- 5.23** I do not oppose the rezoning to LSCZ, from an infrastructure perspective, because it is expected this area is able to be serviced with planned upgrades. All connections would be at the developer's cost.

C & S Hansen – 840

- 5.24** C & S Hansen has sought that 2.4 ha of land be rezoned from LDR to LSCZ.

- 5.25** The area is located at 16-20 McBride street near Grey Street in Frankton. It is situated within the Queenstown Airport Outer Control Boundary. The area is currently serviced by QLDC water and wastewater infrastructure. It is an existing residential area within the scheme boundaries. It is adjacent to land zoned LSCZ and LDR.

- 5.26** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is understood LSCZ would anticipate FW3 commercial firefighting demand. This is greater than the LDR zoning level of service demand. The modelling results show FW3 demands can be provided in this area now and in through to the 2055 scenario, although the pipe head losses are very high by 2055. Planned upgrades to the network in this area should resolve this issue.

- 5.27** I do not oppose the rezoning to LSCZ, from an infrastructure perspective, because it is expected this area is able to be serviced with planned upgrades. All connections would be at the developer's cost.

ds ee properties Ltd – 16

Kenneth Muir – 125

- 5.28** ds ee properties Ltd has sought that 3.5 ha of land be rezoned from LDR to LSCZ / BMUZ. It has been estimated that the notified LDRZ yield is approximately 53 fewer residential lots, by comparison with the 206 lots that could be enabled if the site was zoned BMU. The potential yield from the LSCZ is more difficult to quantify, but would be less than the BMUZ.
- 5.29** In relation to the same area of land, Kenneth Muir has sought BMUZ.
- 5.30** The area is located on Sugar Lane, the Lake side of Frankton Road opposite Marina Drive. It is adjacent to Frankton Marina. The area is currently serviced. The current development in the area is predominantly commercial rather than residential. It is an existing residential zoned area within the scheme boundaries. It is adjacent to land zoned LDR and Rural, and to Lake Wakatipu. It is also adjacent to land designated for Frankton Marina Local Purpose Reserve.
- 5.31** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that firefighting requirements would increase from FW2 to FW3. Current modelling shows that FW3 is currently available but by 2055 it will not be available at the end of the lane without network upgrades. Future upgrades for the proposed marina will resolve these issues.
- 5.32** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will not increase wastewater discharges. The wastewater model shows constraints in the Frankton Road trunk main, however they are identified to be remediated in the LTP and therefore they do not cause me to oppose the rezoning.

5.33 I therefore do not oppose the rezoning to LCSZ / BMUZ, from an infrastructure perspective, because this would be a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project(s).

Z Energy Limited – 312

5.34 Z Energy Limited has sought that approximately 3,700 m² of land be rezoned from LDR to either LSCZ or MDR or HDR. I address the LSCZ relief in the section below. It has been estimated that MDR could yield 4 additional residential lots and the HDR could yield 13 additional residential lots.

5.35 The area is located at 846 Frankton Road, on the corner of Marina Drive (near Sugar Lane). The area is currently serviced and has a petrol station on the site. It is adjacent to land zoned LDR, however development on the opposite side of the road is predominantly commercial. Also on the opposite side of Frankton Road is land designated for Frankton Marina Local Purpose Reserve.

5.36 I do not oppose the rezoning to MDR, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost.

5.37 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Changing the zoning to HDR will increase the anticipated firefighting demand to FW3. The model shows that FW3 can be provided in this area right through to 2055.

5.38 The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be an increase in wastewater

discharge. The wastewater model shows constraints in this vicinity which are identified to be remediated in the LTP.

- 5.39** I do not oppose the rezoning to HDR, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Local Shopping Centre

- 5.40** Z Energy Limited has sought that approximately 3,700 m² of land be rezoned from LDR to LSCZ or MDR or HDR.

- 5.41** The description is the same as above.

- 5.42** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. This area is notified as LDR. Changing the zoning to LSCZ will increase the anticipated firefighting demand to FW3. The model shows that FW3 can be provided in this area right through to 2055. This is the same or lower level of service for HRD or MDR so these zoning could also be serviced by the water network.

- 5.43** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be only a minor increase in wastewater discharge. The wastewater model shows constraints in this vicinity which are identified to be remediated in the LTP.

- 5.44** I do not oppose the rezoning to LSCZ or MDR or HDR, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Schist Holdings Limited and Bnzl Properties Limited – 488

- 5.45** Schist Holdings Limited and Bnzl Properties Limited have sought that 1.2 ha of land be rezoned from part notified Rural and part Industrial A (Operative) to BMUZ. It has been estimated that this could yield 68 additional residential lots.
- 5.46** The area is located at the end of Glenda Drive on the eastern side. It is partially zoned Rural in Stage 1 and partially Industrial A (Operative). The area is currently serviced and is within the QLDC scheme boundaries. It is surrounded by Rural on three sides and Industrial A (Operative) on the northern side. It is close to the Frankton Flats Special Zone and the Queenstown Airport runway. It will be on the corner of the EAR once it is complete.
- 5.47** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Modelling shows that the area is currently capable of supplying FW3. With proposed upgrades this will improve to FW3 for a period and then return to FW2 by 2055. However local proposed network upgrades in the LTP will resolve this issue.
- 5.48** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be only a minor increase in wastewater discharge. The wastewater model shows constraints in this vicinity which are identified to be remediated in the LTP.
- 5.49** I do not oppose the rezoning to BMUZ, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Aviemore Corporation Limited – 418

- 5.50** Aviemore Corporation Limited have sought that 0.5 ha of land be rezoned from Rural to Industrial A.

- 5.51** The area is located at the end of Glenda Drive on the south western side. The area is currently serviced and is within the QLDC scheme boundaries. It is surrounded by Rural. Although most of Glenda Drive is currently zoned Industrial A, it is close to the (ODP) Frankton Flats Special Zone and the Queenstown Airport runway. It will be on the corner of the Eastern Access Road once it is complete.
- 5.52** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Modelling shows that the area is currently capable of supplying FW3. With proposed upgrades this will improve to FW3 for a period and then return to FW2 by 2055 due to growth. However local proposed network upgrades in the LTP will resolve this issue.
- 5.53** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be only a minor increase in wastewater discharge. The wastewater model shows constraints in this vicinity that are identified to be remediated in the LTP.
- 5.54** I do not oppose the rezoning to Industrial, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Fletcher Distribution Ltd and Mico New Zealand Ltd – 344

- 5.55** Fletcher Distribution Ltd and Mico New Zealand Ltd have sought that 2441 m² of land be rezoned from Rural to Industrial A (an ODP zone). I note that the industrial zones of the PDP have not yet been reviewed and are due to be reviewed in Stage 2.
- 5.56** The area is located on the eastern corner of Frankton-Ladies Mile Highway and Hardware Lane. The area is currently serviced and is within the QLDC scheme boundaries. It is surrounded by Industrial

A (operative) and Rural zonings. On the opposite side of Hardware Lane the land is Frankton Flats Special Zone.

- 5.57** No details have been provided in the submission about how the anticipated increased flows/demands from this rezoning would be serviced. Modelling shows that the area is currently capable of supplying FW3, however the firefighting level of service will decrease to less than FW2 by 2055. Localised networks upgrades are planned in the LTP to remediate these constraints.
- 5.58** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be only a minor increase in wastewater discharge. The wastewater model shows constraints downstream of the site which are identified to be remediated in the LTP.
- 5.59** I do not oppose the rezoning to Industrial A, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Reavers NZ Limited – 720

- 5.60** Reavers NZ Limited has sought that 0.6 ha of land be rezoned from Rural to Industrial A (an ODP zone). I note again that the Industrial Zones are due to be reviewed in Stage 2.
- 5.61** The area is located on the eastern corner of Frankton-Ladies Mile Highway and Hardware Lane. It extends as a narrow strip 350m along the highway. The area is currently serviced and is within the QLDC scheme boundaries. It is surrounded by Industrial A (operative) and Rural zonings. On the opposite side of Hardware Lane the land is Frankton Flats Special Zone.
- 5.62** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Modelling

shows that the area is currently capable of supplying FW3, however the firefighting level of service will decrease to less than FW2 by 2055. Localised networks upgrades are planned in the LTP to remediate these constraints.

5.63 The area is currently connected to the QLDC wastewater network. It is assumed based on the size of the rezoning that there will be only a minor increase in wastewater discharge. The wastewater model shows constraints downstream of the site which are identified to be remediated in the LTP.

5.64 I do not oppose the rezoning to Industrial A, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Taco Medic – 291

1876 Bar & Restaurant – 250

Finz Queenstown Limited – 832

Barry Ellis – 357

5.65 These submitters have sought that the Town Centre Entertainment Precinct be extended in various areas in the Town Centre.

5.66 I understand an entertainment precinct will not change the infrastructure requirements for these areas compared to the notified version of the PDP, and therefore I do not oppose the submissions.

Queenstown Wharves GP Limited – 766

5.67 Queenstown Wharves GP Limited has sought amendments to PDP Map 35.

5.68 The area is located on St Omar Park, Lake Esplanade, to the west of the Queenstown town centre. This area is currently serviced.

5.69 I understand changing these mapping details and the extent of the Town Centre Waterfront Zone will not change the infrastructure requirements for this area.

5.70 I do not oppose the map changes, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP.

Remarkables Park Limited – 807

5.71 Remarkables Park Limited has sought that maps 35 and 36 are amended to provide better clarity around the extent of the Town Centre waterfront zone.

5.72 I understand the Town Centre waterfront zone will not change the infrastructure requirement for this area.

5.73 I do not oppose the map amendments, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP.

Skyline Enterprises Limited – 574

5.74 Skyline Enterprises Limited has sought that a Commercial Tourism and Recreation Sub-Zone be added to 8.3 ha of Rural land.

5.75 As described in Ms Ruth's s42A evidence, the subject site is zoned a mix of Queenstown Town Centre and Rural in the PDP.

5.76 The submitter operates the Skyline Gondola, restaurant and commercial recreation activities on Bobs Peak and seeks a new Commercial Tourism and Recreation Sub-Zone and associated provisions as outlined in the submission and attachments.

5.77 In summary, the submitter has sought the new sub-zone is located over facilities operated by Skyline including the Gondola cableway corridor and the lower terminal building site and car parking area at the northern end of Brecon Street. They have also sought that the

proposed sub-zone also expands over a number of other areas currently outside of the Skyline lease areas (sourced from the submission). These areas have been identified by the submitter for various purposes described in the submission including existing walkways, the AJ Hackett Bungy site, the existing access road, fire-fighting water supply and potential for new activities of infrastructure, future upgrading of the Gondola, tree clearing, redevelopment of the lower terminal and access, and car parking.

5.78 The areas connected to the Queenstown water and wastewater networks include the lower terminal building site with associated commercial activity, and the upper terminal building (Bobs Peak site) with restaurant and associated commercial activity. GIS shows the upper terminal is connected with private water and wastewater infrastructure from Lomond Crescent and this private infrastructure is used to attain the required level of service. The submission comments on using some of the subject land for additional provision of water supply, sewage treatment and disposal etc. The lower terminal area is serviced and within the scheme boundary (approximately 0.7 ha) and the Bob Peak area is outside the current water and wastewater scheme boundaries (approximately 1.6 ha). This Bobs Peak area is surrounded by the notified Rural zone and the base building is surrounded by Town Centre Zone.

5.79 No details have been provided with the submission about how the anticipated increased flows/demands from this rezoning would be serviced. Currently water is boosted to the Bobs Peak site through a private pump station and associated private infrastructure. I understand private storage is located onsite for firefighting provisions and assume that this arrangement would continue. It is anticipated this rezoning may create an increase in demand from the network. The Water Model shows similar pressures are available to the private pump station over time. A 100 mm main currently feeds the lower terminal building on Brecon Street. It is assumed the firefighting requirements for the base building will not change from its existing requirements.

5.80 The lower terminal building and Bobs Peak development are currently connected to the QLDC wastewater network. No details have been provided about how the potential increased flows from this rezoning would be serviced. It is assumed that both sites will continue to connect to the QLDC network. It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints around Marine Parade and Frankton Road which are identified to be remediated in the LTP.

5.81 I do not oppose a new Commercial Tourism and Recreation Sub-Zone in this area, from an infrastructure perspective, because, for Bob's Peak the developer has made allowance for private infrastructure on site for the additional provision of water and wastewater servicing requirements. It is assumed the base building will maintain similar loads/demands. All Connections would be at the developers cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Skyline Enterprises Limited – 556

5.82 Skyline Enterprises Limited has sought confirmation of the notified BMUZ on the submitter's land at 16 Hylton Place, Lot 8 DP 19259, subject to the modifications to provisions sought in the submission. This submission is supporting the notified zone and therefore there is no change from the notified zone.

5.83 The properties are sandwiched between Warren Park to the north and the Freshchoice Supermarket to the east.

5.84 This submission wishes to confirm HDR zoning, which the area is zoned. It is anticipated this rezoning would connect to the Council water network.

5.85 I do not oppose the submission, from an infrastructure perspective, because the proposal doesn't affect infrastructure requirements from what is anticipated under the PDP. All Connections would be at the developers cost.

Queenstown Wharves GP Limited – 766

Remarkables Park Limited - 807

5.86 These submitters have sought amendments to the boundaries of the Town Centre Waterfront Sub Zone.

5.87 The area is located on St Omar Park, Lake Esplanade, to the west of the Queenstown town centre. This area is currently serviced.

5.88 I understand changing these mapping details and the extent of the Sub Zone will not change the infrastructure requirements for this area.

5.89 I therefore do not oppose the map changes, from an infrastructure perspective, because the proposal does not affect infrastructure.

6. REQUESTS FOR REZONINGS – QUEENSTOWN URBAN – FRANKTON AND SOUTH (1B)

Summary of rezonings between Hansen Road and Quail Rise, Frankton.

6.1 Repeating my comment in section 5.1, overall I support intensification in the Hansen Road to Quail Rise area currently zoned MDR and Rural in the PDP. This area is close to both the water supply source and the wastewater treatment plant making it an efficient area to service from an infrastructure point of view.

6.2 There are planned upgrades to water and wastewater infrastructure in the LTP that will ensure network capacity is available to this area. If this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP project/s.

6.3 In this section of my evidence, I address the portion of the site that was notified MDR (the component notified Rural have been addressed in Section 5 above). I note that I have opposed some of the specific rezoning submissions within this area, but only where

Rural or LDR zoning is sought and one low-lying site which requires evidence that it can be service at the developers cost.

Stephen Spence – 8

- 6.4** Stephen Spence has sought that 22.5 ha of land be rezoned from notified MDR to Rural. It has been estimated that this could yield 607 less residential lots.
- 6.5** The area is located on the northern side of Frankton - Ladies Mile Hwy from east of the Frankton Substation (near Grant Road) to the end of Ferry Hill Drive. The land is notified as MDR and some Rural in the south west corner. The surrounding land is a mix of Rural, Quail Rise Special Zone and Frankton Flats Special Zone.
- 6.6** In summary, I oppose the rezoning to Rural, from an infrastructure perspective, because this site is close to the water source, wastewater treatment plant and associated trunk mains and is hence an efficient location for future development.

Sean & Jane McLeod – 391

MDR to LDR – Hansen Road/ Quail Rise vicinity

- 6.7** Sean & Jane McLeod have sought that 25.8 ha of land be rezoned from MDR to LDR. It has been estimated that this could yield 312 less residential lots.
- 6.8** The area is located on the northern side of Frankton - Ladies Mile Highway from east of the Frankton Substation (near Grant Road) to the end of Ferry Hill Drive. The land is currently zoned MDR with some Rural in the south west corner. Surrounding land is a mix of Rural, Quail Rise Special Zone and Frankton Flats Special Zone.
- 6.9** In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because this site is close to the water source, wastewater treatment plant and associated trunk mains and is hence an efficient location for future development.

LDR to MDR – Fernhill and Frankton Road in vicinity of Frankton Arm

- 6.10** Sean & Jane McLeod have also sought that 125 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 1,516 additional residential lots.
- 6.11** The area is located to include most of Fernhill and Sunshine Bay on the lower slopes within 4-500 m of Fernhill Road, including Arawhata Terrace, Watts Rd and Avalon Crescent. It also extended all the way along Frankton Road from the existing High Density areas to include Panorama Terrace, Larchwood Heights, Andrews Park, Goldfields, Battery Hill, Marina Heights and everything in between. The area is currently serviced, and is within the water and wastewater scheme boundary and UGB. The surrounding land is notified LDR and HDR.
- 6.12** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. This is a large area with various levels of service for the water supply, and is all within elevations that are currently serviced. This area is currently notified as residential zoning and increasing the housing density will not change the firefighting requirements.
- 6.13** Modelling of some of the areas, including Goldfield Heights, show that there are low pressures in the future and therefore there is not the capacity for the increased density proposed. This would increase the flows and could further reduce the pressures to below the current level of service. Other areas like the Frankton Road trunk main show high head loss in future scenarios. Consequently, increasing density along Frankton Road and connected side streets would further reduce the efficiency of the network to provide water without major upgrades.
- 6.14** It is also anticipated this rezoning will create an increase in wastewater discharges. However, the Wastewater Model shows downstream constraints along Frankton Road, which is identified to

be remediated in the LTP. If this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP project/s.

- 6.15** In summary, I oppose the rezoning to MDR, from an infrastructure perspective, because unplanned water main upgrades may be required to service this area, which is not an efficient solution. If a detailed infrastructure assessment was provided that supports the rezoning, and upgrades shown where necessary could be budgeted for in the LTP, I would reassess the submission.

W & M Grant – 455

- 6.16** W & M Grant have sought that 2.6 ha of land be rezoned from notified Rural to either:

(a) MDR with Visitor Accommodation overlay. It has been estimated that this could yield 70 additional residential lots.

or

(b) LSCZ/ BMUZ / Airport Mixed Use. It has been estimated that this could yield 153 additional residential lots.

- 6.17** The triangular shaped site is bound by Hansen Road, SH6 and the Frankton Substation. It is across the highway from the Queenstown Event Centre. The site is currently serviced by water, but not wastewater. The closest wastewater pipe is across the road on Hansen Lane. Based on the details available on Council's GIS it is assumed to be a private rising main. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified Rural and LDR zoning.

- 6.18** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the firefighting requirements will be FW3 for both options due to the Visitor Accommodation activity requested. Modelling shows low pressures and low firefighting capacity are anticipated in the near future. It is proposed to install a new reservoir at Quail Rise and new bulk mains in the future that will improve water supply in this area.

However, as the surrounding land is zoned residential, the higher firefighting capacity requirements for this different zoning may require upgrades to the network.

- 6.19** The submitter does not indicate how they intend to service the land for wastewater. It is assumed that the site will connect to the QLDC wastewater scheme and the requirements will be similar to the surrounding land. Parts of the land is low lying and it may be difficult to provide a gravity connection to the existing network from these parts of the site, however this may be overcome during development.
- 6.20** In summary, I oppose the proposed rezonings, from an infrastructure perspective, because it is unclear as to whether this low lying section of land can be serviced by gravity for wastewater. The firefighting level of service for non-residential zoning would require further analysis to confirm any upgrades required. If further information is provided to show that connections are feasible at the developer's cost, then rezoning to any of the proposed zonings sought could be feasible.

Otago Foundation Trust Board – 408

- 6.21** Otago Foundation Trust Board has sought that 1.4 ha of land be rezoned from MDR / Rural to MDR. It has been estimated that this could yield 39 additional residential lots.
- 6.22** The area is located on Frankton - Ladies Mile Hwy west of the Hawthorne Drive roundabout and across from the Frankton Flats Special Zone. Council's GIS records show that the site is not currently connected to QLDC water and wastewater schemes. Connections to water and wastewater for new developments on this side of the highway are currently at the Hawthorne Drive roundabout. It is surrounded by the same MDR and Rural zonings except for the opposite side of the highway which is Frankton Flats Special Zone. The site is within the water and wastewater scheme boundaries.

- 6.23** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. It is assumed that the firefighting requirements will remain FW2 for the MDR zoning. Modelling shows low pressures and low firefighting capacity are anticipated in the near future. It is proposed to install a new reservoir at Quail Rise and new bulk mains in the future that will improve water supply in this area. This is programmed for in the LTP.
- 6.24** The submitter does not indicate how they intend to service the land in relation to wastewater. It is assumed that the site will connect to the QLDC wastewater scheme and the requirements will be similar to the surrounding land. The land is flat and low lying. However, it is close to the existing network connection point so gravity should be feasible.
- 6.25** I do not oppose the rezoning to MDR, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP. All connections would be at the developer's cost. If this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP project/s.

Woodlot Properties Limited – 501

UGB

- 6.26** Woodlot Properties Limited has sought that the UGB be expanded.
- 6.27** The specific example provided is land south and adjacent to Jacks Point, to the west of the highway. This area is currently serviced by a private supply. The area is currently zoned Rural Residential and is outside the UGB. It is surrounded by notified Rural zoning. It is outside the water and wastewater scheme boundary.
- 6.28** No details have been provided about how the anticipated increased flows/demands from including this land within the UGB would be

serviced (noting that moving the UGB wouldn't allow development *per se*, without a change in zoning as well, but the development would then be anticipated). The example provided is not currently connected to the QLDC infrastructure network. There would be poor infrastructure efficiency connecting this area to the network as it is well beyond the extent of current infrastructure.

- 6.29** In summary, I oppose the expansion of the UGB in this location, from an infrastructure perspective, because it is assumed that urban development within the UGB would be serviced by a Council network. Extension of the network should be focused in areas that can most efficiently be serviced from an infrastructure perspective. The example provided is on the far side of privately serviced Jack's Point and therefore it would not be efficient to connect this area to the Queenstown network. Unless detailed infrastructure assessment can be provided that supports the rezoning and shows an upgrade of existing infrastructure upgrade is not required.

Middleton Family Trust – 338

- 6.30** Middleton Family Trust has sought that 76 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 1,148 additional residential lots.
- 6.31** The area is located between Lake Johnson and the Shotover River. This area is not serviced and is outside scheme boundaries as well as the UGB. It is surrounded by notified Rural land.
- 6.32** No details have been provided about how the anticipated increased water flows/demands from this rezoning would be serviced. LDR zoning however, assumes connection to the QLDC water network. This site is between approximately 400 m - 480 m elevation. Quail Rise reservoir is approximately 420 m elevation and therefore this area cannot be serviced without boosting the water and possibly an additional reservoir. The network would need to be extended with substantial upgrades to service this area.

- 6.33** It is not clear how the area would connect to the wastewater network but with such a substantial increased load anticipated, the downstream network would require upgrading. The network would need to be extended with substantial upgrades to service this area.
- 6.34** In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because no details have been provided about how this area will be serviced. Substantial upgrading and works will be required to service this site, if it was connected to the QLDC networks. The submission would be reassessed if a detailed infrastructure assessment was provided that supports the rezoning and demonstrates an upgrade of existing infrastructure is not required.

James Canning Muspratt – 396

- 6.35** James Canning Muspratt has sought that 1.2 ha of land be rezoned from Rural to Rural Residential. It has been estimated that this could yield 2 additional residential lots.
- 6.36** The property is located near the northern end of Hansen Road on Lot 1 and 2 DP 486552. The site is the north-western corner of the property in the portion outside the ONL boundary. Lot 1 DP 486556, which is outside the ONL boundary, is within the water and wastewater scheme boundaries but it is approximately 1 km from the UGB. It is surrounded by notified Rural, Rural Lifestyle, Rural Residential and the Ferry Hill Rural Residential subzone.
- 6.37** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. My preference is for Rural Residential zoning adjacent to the scheme boundary to connect to the Queenstown water and wastewater networks. This site is at the edge of the scheme and within a restricted water supply area. The water model shows firefighting supply cannot be provided in the future.

- 6.38** The 2025 Wastewater Model results show capacity constraints downstream and a rezoning with increased density will increase the pressure on these constraints.
- 6.39** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, because this will only have a minor effect on the networks. There may be provision for firefighting storage to be provided privately onsite. All connections will be at the developer's cost.

Keith Hindle & Dayle Wright – 476

- 6.40** Keith Hindle & Dayle Wright have sought that 3 ha of land on Tucker Beach Road (including 117 Tucker Beach Road) be rezoned from Rural to Rural Residential. It has been estimated that this could yield 5 additional residential lots.
- 6.41** A water main runs along Tucker Beach Road. This area is currently serviced by private onsite wastewater pump stations. It is within the scheme boundaries and outside the UGB. This area is surrounded by notified Rural Lifestyle and Quail Rise Special zoning.
- 6.42** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. My preference is for Rural Residential zoning adjacent to the scheme boundary to connect to the Queenstown water and wastewater supplies. The Water Model shows firefighting supply cannot be provided in the future.
- 6.43** The 2025 Wastewater Model results show capacity constraints downstream and rezoning with increased density will increase the pressure on these constraints.
- 6.44** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, because this is a minor increase in load/demand and can be serviced by the water and wastewater networks without a significant impact. There may be a requirement

for firefighting storage to be provided privately onsite. All connections would be at the developer's cost.

NZIA Southern and Architecture + Women Southern – 238

LDR to MDR

- 6.45** NZIA Southern and Architecture + Women Southern have sought that 31 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 374 additional residential lots.
- 6.46** The area is located in the existing LDR areas on the lake side of Frankton Road and Kawarau Road between Perkins Road and the Kawarau Bridge. This area is currently serviced. The surrounding area is generally LDR, Rural and Airport zonings, with some LSCZ.
- 6.47** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Because the use would remain residential, there would be no change to the firefighting requirements.
- 6.48** The area is currently connected to the QLDC wastewater network. The rezoning will increase the wastewater discharge. The wastewater model shows constraints downstream of the site which are identified to be remediated in the LTP.
- 6.49** I do not oppose the rezoning to MDR, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost.

NZIA Southern and Architecture + Women Southern – 238

HDR to BMUZ

- 6.50** NZIA Southern and Architecture + Women Southern has sought that 14 ha of land be rezoned from HDRZ to BMUZ.

- 6.51** The area is located to both sides of Gorge Road and Stanley Street through to Frankton Road, using the natural boundary with Horne Creek, putting mixed use zoning on main roads. This area is currently serviced. The surrounding area is generally notified HDR zoning.
- 6.52** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. It is understood BMUZ would anticipate FW3 commercial firefighting demand. This is the same as the HDR zoning level of service demand. Therefore, the anticipated firefighting demand will not be changing. The modelling results show FW3 demands can be provided in this area now and in through to the 2055 scenario.
- 6.53** It is anticipated this rezoning will not significantly change the wastewater discharges from what is currently planned. The wastewater model shows downstream constraints around Marine Parade and Frankton Road which is identified to be remediated in the LTP.
- 6.54** I do not oppose the rezoning to BMUZ, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Russell Marsh – 128

- 6.55** Russell Marsh has sought that 6 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 73 additional residential lots.
- 6.56** The area is located in Frankton and includes parts of Stewart Street, Lake Avenue, Burse Street and McBride Street. This area is currently serviced. The surrounding area is generally LDR, Rural and Airport Zonings, with some LSCZ.

- 6.57** No details have been provided about how the anticipated increased water flows/demands from this rezoning would be serviced. There would be no change to the firefighting requirements.
- 6.58** The area is currently connected to the QLDC wastewater network. It is assumed that the rezoning will be only a minor increase in wastewater discharge. The wastewater model shows constraints downstream of the site which are identified to be remediated in the LTP.
- 6.59** I do not oppose the rezoning to MDR, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Ian & Dorothy Williamson – 140

- 6.60** It is understood that Ian & Dorothy Williamson have sought that 22.8 ha of land be retained as LDR zoning.
- 6.61** The area of land to which the submission relates is unclear. It is assumed to be in the vicinity of the submitters' property at 971 Frankton Road; that is, the area located on the lake side of Frankton Road between McBride and Frankton Marina..
- 6.62** This area is currently serviced. The surrounding area is generally LDR, Rural and Airport zonings, with some LSCZ.
- 6.63** The submitter is seeking no change compared to the current development on the land. This will not require more infrastructure. However, by not encouraging growth in this area it will need to occur elsewhere. It is more efficient from an infrastructure perspective to increase the density of existing urban areas where capacity allows and within the UGBs, rather than expanding the urban limits.

- 6.64** Overall, I do not oppose maintaining the zoning of LDR, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP.

J D Familton and Sons Trust – 586

- 6.65** J D Familton and Sons Trust has sought that 807 m² of land be rezoned from LDR to MDR. It has been estimated that this could yield 1 additional residential lot.
- 6.66** The property is located at 17 Stewart Street in Frankton. This area is currently serviced. The surrounding area is LDR. However, a number of submitters have requested that MDR is considered for the area.
- 6.67** There would be no change to the firefighting requirements.
- 6.68** I do not oppose the rezoning to MDR, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost.

Queenstown Lakes District Council – 790

- 6.69** Queenstown Lakes District Council has sought that 800 m² of land be rezoned from Rural to LDR. It has been estimated that this could yield 1 additional residential lot.
- 6.70** The site is located at 13 Boyes Road, Frankton. This area is currently serviced. The area is within the water and wastewater scheme boundary and the UGB. The surrounding land is notified Rural and LDR.
- 6.71** It is assumed that the water and wastewater would connect to the QLDC network located in the road, and that one additional residential lot will not adversely affect the network.

6.72 I do not oppose the rezoning to LDR, from an infrastructure perspective, because this is a minor increase in load/demand and can be serviced by water and wastewater network without a significant impact. All connections would be at the developer's cost.

Queenstown Lakes District Council – 790

6.73 Queenstown Lakes District Council has sought that 1.9 ha of land be rezoned from Rural to MDR. It has been estimated that this could yield 51 additional residential lots.

6.74 The area is known as Commonage Sports Reserve and is located above Vancouver Drive. Water and wastewater extend to the end of Vancouver Drive. The water is fed from Queenstown Hill #2 Reservoir. The area is within the scheme boundaries and outside and adjacent to the UGB. It is surrounded by notified MDR and Rural zone. This is an approximate 20% increase to the existing proposed MDR zone on this site.

6.75 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. Most of the site is above the existing reservoir elevation and the bulk of the site is within 30 m below the reservoir base, so it cannot be serviced adequately without a booster pump and infrastructure upgrades which may be significant (e.g. reservoirs etc.). The PDP map shows the adjacent area is MDR which will require major upgrades to service, this additional rezoning will spread the cost of these upgrades over more lots and it will therefore be more efficient to provide fund the upgrades.

6.76 The site is above elevations currently serviced and therefore can drain under gravity to the wastewater network. It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP

- 6.77** I do not oppose the rezoning to MDR, from an infrastructure perspective, because this is increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP MDR zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Queenstown Lakes District Council – 790

- 6.78** Queenstown Lakes District Council has sought Lot 602 Deposited Plan 306902 located on Kerry Drive be rezoned from Rural to Low Density Residential. It has been estimated that this could yield 6 additional residential lots.
- 6.79** The area is a Local Purpose Reserve in Queenstown. A wastewater main runs through part of the area and water mains are located in the adjacent roads. The area is partially within the scheme boundaries. The surrounded zoning is notified Rural, LDR and HDR, and existing residential development that is currently serviced.
- 6.80** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. The area is not connected to water, but it could be connected by extending a main from Malaghan Street. The site is within elevations currently serviced. The water model shows residential FW2 firefighting demand can be provided to the existing network in the future. .
- 6.81** The site is not connected to wastewater but it could connect into the existing main that runs through part of the area. The site is within elevations currently serviced. It is anticipated this rezoning will create an increase in wastewater discharges. There are constraints in the downstream wastewater network, behind Shotover St and Athol St. The current Master Plan work will address these identified issues and incorporate into the LTP as required. This site is efficient to connect to as an existing main runs through the site and minimal work is required to connect to it.

6.82 I do not oppose the rezoning to LDR, from an infrastructure perspective, because this will provide a more efficient connection to the QLDC network with a minor increase in load. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Bruce Grant – 434

6.83 Bruce Grant has sought that 0.55 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 8 additional residential lots.

6.84 The area is located on the north side of Frankton Road to the East of Marina Dr Frankton. The sites are currently connected to the water and wastewater supply. Outside and adjacent to the water and wastewater scheme boundary and UGB and LDR. The remaining surrounding land is notified Rural.

6.85 No details have been provided about how the anticipated increased water flows/demands from this rezoning would be serviced. This area is currently notified as residential zoning, and increasing the housing density will not change the firefighting requirements. These are currently modelled as sufficient. This site is efficient to connect to as an existing main runs adjacent to the site.

6.86 It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP. This site is efficient to connect to as an existing main runs adjacent to the site and minimal work is required to connect to it.

6.87 I do not oppose the rezoning to LDR, from an infrastructure perspective, because this is a relatively minor increase in load/demand and can be serviced by water and wastewater network without a significant impact. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Winton Partners Funds Management No. 2 Limited – 533

- 6.88** Winton Partners Funds Management No. 2 Limited has sought that 6.6 ha of land be rezoned from Rural to HDR, or a combination of HDR and BMUZ. It has been estimated that this could yield 391 additional residential lots.
- 6.89** The area is located to the south of the existing Kawarau Falls Bridge, between Kingston Road and Peninsula Road. The land slopes down from Peninsula Road towards Kingston Road. A 100 mm watermain extends along Peninsula Road, part way down the proposed area being rezoned. The closest wastewater network is a low pressure network and pump station on the lake edge. This area is inside the proposed UGB and outside and adjacent to the water and wastewater scheme boundaries. The surrounding land is notified HDR, Rural and LDR.
- 6.90** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. The site is within elevations currently serviced. The modelling results show FW3 cannot currently be provided at the end of this 100 mm main. This main would require upgrading to enable development at this site at the developer's cost. Modelling also shows that the end of this water main is nearing minimum level of service pressure. There are proposed network upgrades in the vicinity which will resolve existing known issues and allow for the additional capacity.
- 6.91** It is unclear whether this site can drain to the wastewater network under gravity. However, the developer can build a pipeline at their cost to connect to the QLDC wastewater network.
- 6.92** I do not oppose the rezoning to HDR, BMUZ or a combination of these zones, from an infrastructure perspective, because proposed network upgrades in Kelvin Heights will ensure the required level of service is available to this site. All connections would be at the

developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Winton Partners Funds Management No. 2 Limited – 533

- 6.93** Winton Partners Funds Management No. 2 Limited has sought that 6.6 ha of land be rezoned from Rural to MDR or LDR. It has been estimated that this could yield 99-179 additional residential lots.
- 6.94** The area is located to the south of the existing Kawarau Falls Bridge, between Kingston Road and Peninsula Road. The land slopes down from Peninsula Road towards Kingston Road. A 100 mm watermain extends along Peninsula Road, part way down the proposed area being rezoned. The closest wastewater network is a low pressure network and pump station on the lake edge. This area is inside the notified UGB and outside and adjacent to 3 waters scheme boundaries. The surrounding land is notified HDR, Rural zone and LDR.
- 6.95** The water analysis is the same as above with the exception that the firefighting level of service required will be FW2. Modelling currently shows that FW2 is not available in the existing pipe and that the end of this water main is nearing minimum level of service pressure. There are proposed network upgrades in the area that will enable servicing at this site.
- 6.96** It is unclear whether this site can drain to the wastewater network under gravity. However, the developer can build a pipeline at their cost to connect to the QLDC network.
- 6.97** I do not oppose the rezoning to MDR or LDR, from an infrastructure perspective, because most of this area is opposite notified LDR which has a similar level of service requirements to MDR. All connections would be at the developer's cost.

Land Information New Zealand – 661

- 6.98** Land Information New Zealand has sought that 6.6 ha of land be rezoned from Rural to LDR.
- 6.99** The area is located to the south of the existing Kawarau Falls Bridge, between Kingston Road and Peninsula Road. The land slopes down from Peninsula Road towards Kingston Road. A 100mm main extends along Peninsula Road, part way down the proposed area being rezoned. This area is outside and adjacent to the notified UGB and scheme boundaries. The surrounding land is notified HDR, Rural zone and some of the adjacent land is zoned LDR.
- 6.100** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. The site is within elevations currently serviced. Modelling currently shows that FW2 is not available in the existing pipe and that the end of this water main is nearing minimum level of service pressure. There are proposed network upgrades in the area that will enable servicing at this site.
- 6.101** It is unclear whether this site can drain to the wastewater network under gravity. However, the developer can build a pipeline at their cost to connect to the QLDC network.
- 6.102** I do not oppose the rezoning to LDR, from an infrastructure perspective, because most of this area is opposite notified LDR zoning and therefore would have a relatively minor effect on the network. All connections would be at the developer's cost.

Kerr Ritchie Architects – 48

- 6.103** Kerr Ritchie Architects has sought that 1 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 15 additional residential lots.

- 6.104** The area is located at 48 and 50 Peninsula Road, Kelvin Heights close to Kingston Road on the south side. The sites are currently connected to the water supply. The nearest wastewater available for connection is approximately 420m away. Adjacent and located outside the UGB, the surrounding land is notified LDR and Rural zoning. The site is also outside the scheme boundary.
- 6.105** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks. The adjacent site is notified with the same LDR zoning and will be serviced for appropriate firefighting level of service. The submission area will be able to be serviced to the same level of service without substantial changes to the infrastructure.
- 6.106** It is unclear whether this site can drain to the network under gravity.
- 6.107** I do not oppose the rezoning to LDR, from an infrastructure perspective, because this is adjacent to notified LDR residential zoning and would result in a relatively minor increase in potential lots compared to the LDR area being rezoned. Private onsite wastewater servicing may be required. All connections would be at the developer's cost.

Bonisch Consultants – 425

LDR to MDR

- 6.108** Bonisch Consultants has sought that 4.3 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 51 additional residential lots.
- 6.109** There are two reasonably equal sized sites located at Kelvin Heights. One site is at the end of Balmoral Drive through to Oregon Drive. The other site is on the southern side of Peninsula Road, opposite Mincher Road. There is currently water and wastewater supply to the boundary of the Balmoral Road site and on the

northern side on Peninsula Road. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is LDR zoning and there is a submission seeking LSCZ adjacent to one site and close by to the other.

- 6.110** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. The site is within elevations currently serviced. Firefighting requirements would be the same as the surrounding areas and existing zonings, FW2. Modelling shows that FW2 level of service is not available in the vicinity (except for the eastern end of the Peninsula Road development). Modelling also shows there are high head losses and low pressure issues in the local network. However, proposed network upgrades including a new higher reservoir will mitigate these issues.
- 6.111** It is assumed that the rezoned portions of land will connect to the QLDC wastewater scheme. It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along the lake side, however these are identified to be remediated in the LTP.
- 6.112** I do not oppose the rezoning to MDR, from an infrastructure perspective, because proposed network upgrades in Kelvin Heights will ensure the required level of service is available to this site. This area is surrounded by LDR zoning which has a similar level of service requirements to MDR. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Rural to LDR

- 6.113** Bonisch Consultants has sought that 18 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 273 additional residential lots.
- 6.114** The area is located at Kevin Heights on the hill above Jardine Park, and comes close to the Jacks Point Zone. This area is not serviced

and is outside, but adjacent to, scheme boundaries and the UGB. It adjoins notified LDR zoning and is otherwise surrounded by Rural zoned land.

- 6.115** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. The site is elevated above surrounding residentially zoned land, with levels between 380 and 470 masl. There is a proposed new water reservoir in the LTP that has a RL of 444m, most of the area covered in this submission is higher than this and would hence require boosters to service. Servicing the wastewater from the site should be feasible by gravity, however modelling may be required to locate the most suitable connection point. The Wastewater Model shows downstream constraints along the lake side, however these are identified to be remediated in the LTP.
- 6.116** In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because there is not sufficient information submitted to demonstrate how the area will be serviced. It is currently some distance from the existing council networks. I may not oppose this if it can be demonstrated this area can be adequately serviced. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

LDR to LCSZ

- 6.117** Bonisch Consultants has sought that 0.8 ha of land be rezoned from LDR to LSCZ.
- 6.118** The area is located in Kevin Heights on the southern side of Peninsula Road, across from Lewis Road. There is currently water and wastewater supply on the northern side on Peninsula Road and close to the southern boundary. The area is currently within the water and wastewater scheme boundary and the UGB. The surrounding land is LDR zoning and there is a submission seeking MDR on an adjacent site.

- 6.119** No details have been provided about how the anticipated increase flows/demands from this rezoning would be serviced. The site is within elevations currently serviced. It is assumed that the firefighting requirements will be FW3. Modelling shows low pressures and low firefighting capacity are anticipated in the near future. It is proposed to install a new reservoir at Kelvin Heights that will improve water supply in this area.
- 6.120** The submitter does not indicate how they intend to service the land. It is assumed that the site will connect to the QLDC wastewater scheme and the quantities will be similar to the surrounding land.
- 6.121** I do not oppose the rezoning to LSCZ, from an infrastructure perspective, because proposed network upgrades in Kelvin Heights will ensure the required level of service is available to this site. All connections would be at the developer's cost.

F.S Mee Developments Co Ltd – 429

- 6.122** F.S Mee Developments Co Ltd has sought that 3.5 ha of land be rezoned from LDR to HDR. It has been estimated that this could yield 154 additional residential lots.
- 6.123** The area is located on Peninsula Road, Kelvin Heights, approximately 1 km west of the intersection of Peninsula Road and Kingston Road. There is currently water supply on the northern side on Peninsula Road and wastewater in the developments north of Peninsula Road. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is LDR zoning and Rural. On the opposite side of Peninsula Road is HDR.
- 6.124** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. The site is higher than the currently serviced area. High points are 20-35m higher than the road. It is assumed that the firefighting requirements will be FW3. Modelling shows that FW3 is available in Peninsula Road now and until 2055. Pipe head losses and pressure become

issues in the future. Proposed upgrades at Kelvin Heights (including a higher reservoir) will ensure that the water supply will be adequate.

- 6.125** It is assumed that the rezoned portions of land will connect to the QLDC wastewater scheme. It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along the lake side in Frankton, however these are currently identified to be remediated in the LTP.
- 6.126** I do not oppose the rezoning to HDR, from an infrastructure perspective, because proposed network upgrades in Kelvin Heights will ensure the required level of service is available to this site. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Jardine Family Trust and Remarkables Station Limited – 715

- 6.127** Jardine Family Trust and Remarkables Station Limited have sought that approximately 163 ha of land be rezoned from Rural to Jacks Point Zone. Related to the rezoning submission is a submission seeking changes to the notified Structure Plan, which would allow for intensification of the Homestead Bay part of the notified Jacks Point Zone. Together, it has been estimated that these changes could, together, yield 541 additional residential lots.
- 6.128** The rezoning area is located south and adjacent to Jacks Point, to the west of the highway. This area and the adjoining Jack Point zone is currently serviced by a private supply. Under the notified PDP, the area is zoned Rural Residential on one boundary, Rural on another, and Jacks Point Zone on the remaining two, and is outside the UGB. This area is outside the Council's water and wastewater scheme boundaries.
- 6.129** No details have been provided in the submission about how the anticipated increased flows/demands from this rezoning or from the increased intensification, would be serviced. Additional

correspondence has indicated the developer wishes to develop private wastewater treatment and water supply schemes and this may be intended to be vested with Council in the future.

6.130 This area cannot be serviced by the currently planned Council reticulated services (or at least not without significant works) as:

- (a) there is no spare capacity in the Council's wastewater scheme, noting that this is being brought as far south as Jacks Point village and has been designed for approximately 1,800 units at Hanley Downs and 1,000 at Jacks Point village; and
- (b) Council's water scheme only extends as far south as Hanley Downs, which is a considerable distance away from, and has not been designed for this additional development.

6.131 As per the recommended Reply Policy 41.2.1.26, which Ms Jones recommends amending through her evidence, I support encouraging integrated servicing whereby new, separate private schemes are avoided unless they can be delivered more efficiently and/ or can provide a higher quality service than would be possible by utilising existing schemes.

6.132 In summary, I therefore oppose the rezoning to Jacks Point Zone, from an infrastructure perspective, as well as the additional intensification within the notified Structure Plan, other than a small zone extension to increase the OSR Activity Area and some minor intensification within the notified because there is not sufficient information submitted to demonstrate how the area will be serviced.

6.133 It is currently too far to connect to the existing Council networks. I will revisit this view if it can be demonstrated this area can be adequately serviced and I encourage the submitter to liaise with Council on possible options. If it was serviced privately, it is Council's preference that this area is connected to the Jack's Point infrastructure networks, to reduce the proliferation of private schemes.

Extension to UGB

- 6.134** Jardine Family Trust and Remarkables Station Limited have sought an extension of the UGB to include the entire area depicted on the plans contained in Attachment [B] to their submission (ie so that it is located around the area sought to be rezoned to the Jacks Point Zone).
- 6.135** For the same reasons as set out above, I oppose changing the UGB, from an infrastructure perspective other than to include the small area of additional OSR land, because there is not sufficient information submitted to demonstrate how the area will be serviced. Again, if satisfactory information can be provided by the submitter, I will revisit this view through rebuttal.

Changes to Structure Plan and provisions

- 6.136** Jardine Family Trust and Remarkables Station Limited have sought changes to the provisions of the Jacks Point Zone (**JPZ**), that would enable the rezoning and intensification discussed above.
- 6.137** The changes sought to the provisions themselves are assumed to have a negligible effect on infrastructure, however, at this stage the rezoning as a whole is opposed on the basis that no information on servicing had been provided.
- 6.138** If the rezoning below was accepted, I do not oppose the proposed amendments to the provisions, from an infrastructure perspective, because it is assumed the provisions do not change the infrastructure requirements.

Wild Grass Partnership, Wild Grass Investments No 1 Limited & Horizons Investment Trust – 567

- 6.139** Within the Jacks Point Zone, Wild Grass Partnership, Wild Grass Investments No 1 Limited & Horizons Investment Trust support the continued exclusion of the Lodge Activity Areas from being located

within an Outstanding Natural Landscape as illustrated on Planning Map 13.

- 6.140** The area is located west of State Highway 6, within Jacks Point, south of Queenstown. This area is currently serviced by private infrastructure.
- 6.141** The submission proposes no increase in the water/wastewater demands/loads and therefore no change to the infrastructure requirements for this area.
- 6.142** I do not oppose the submission, from an infrastructure perspective, because the proposal will not increase the infrastructure requirements from what is anticipated under the PDP.

7. REQUESTS FOR REZONINGS – QUEENSTOWN URBAN – CENTRAL, WEST AND ARTHURS POINT (1C)

Remarkable Heights Ltd – 347

- 7.1** Remarkable Heights Ltd has sought amendment to the UGB to match the property boundaries of Lot 102 DP411971. They have also sought that 1.5 ha of land be rezoned from Rural to LDR to align with property boundaries. It has been estimated that this could yield 24 additional residential lots.
- 7.2** The area is located on Queenstown Hill above Frankton Road and Perkins Road. The adjoining area below the site is currently serviced with public and private infrastructure. The Middleton Reservoir is located on the site and additional reservoir at a higher level is currently planned. The Rural parts of this site are currently outside the water and wastewater scheme boundary and UGB. The surrounding land is notified LDR and Rural zoning.
- 7.3** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. The site is above the existing reservoir but future growth models show an additional reservoir is planned above the site in the near future. The

areas currently zoned Rural are no higher or lower than the adjacent areas within the scheme boundaries. The rest of the site is currently notified as residential zoning and the minor increase in housing numbers will not change the firefighting requirements. GIS shows this area is generally serviced with 150 mm and 100 mm mains. The modelling results show head losses in the vicinity are low and pressures are generally satisfactory until the 2055 scenario, when pressure in the vicinity of Middleton Road and Perkins Road begins to get too low. Increasing the density of this area without pipes upgrades could worsen these results. The new area of residential land could provide a future link to infrastructure in Marina Drive, which currently has low firefighting capacity.

- 7.4** It is assumed that the rezoned portions of land will connect to the QLDC wastewater scheme. It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road, although these are identified to be remediated in the LTP.
- 7.5** I do not oppose the rezoning to LDR and realigning the water and wastewater scheme boundaries to match the property boundaries, from an infrastructure perspective, because the models indicate this area can be serviced by water and wastewater network without a significant impact and is adjacent to other LDR zoning with the same requirements. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Middleton Family Trust – 336

- 7.6** Middleton Family Trust has sought that 38.6 ha of land be rezoned from LDR (Queenstown Heights) to LDR. It has been estimated that this could yield 408 additional residential lots.
- 7.7** The area is located on Lot 2 DP 409336, a 39 hectare piece of land located on Queenstown Hill above Goldfield Heights. The adjoining area below the site is currently serviced with public and private infrastructure. The area is currently within the water and wastewater

scheme boundary and UGB. The surrounding land is notified LDR and Rural zoning.

- 7.8** No details have been provided about how the anticipated increased water flows/demands from this rezoning would be serviced. The site is above the original reservoir, however QLDC has just connected to a new higher tank that may enable this site to be serviced. This area is currently notified as residential zoning and increasing the housing density will not change the firefighting requirements. Below the site these are currently modelled as only just sufficient. GIS shows this area below is generally serviced with 100 mm and 50 mm mains. There is a 180mm diameter main through the eastern end of the site. The modelling results show below the western end there are some areas of higher head loss and low pressures. The recent connection to the new and higher tank will resolve the existing issues.
- 7.9** The wastewater model results show there is no spare capacity in parts of the downstream network as the main falls to Frankton Road and along Frankton Road. Proposed network upgrades will alleviate any problems in this area.
- 7.10** I do not oppose the rezoning to LDR, from an infrastructure perspective, because the proposal may have a minor increase on the infrastructure requirements from what is anticipated under the PDP (because the change in zoning ultimately relates to a change in building heights) and can be serviced by water and wastewater network without a significant impact. All connections would be at the developer's cost.

Mount Crystal Limited – 150

Medium Density Residential

- 7.11** Mount Crystal Limited has sought that 1.24 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 15 additional residential lots.

- 7.12** The area is located on 634 Frankton Road, to the east of Goldrush Way. Specifically, the northern part of the site comprising 1.24 ha approximately. Water and wastewater mains run along Frankton Road although this area is not currently serviced. The area is currently within the water and wastewater scheme boundaries and UGB. The surrounding land is notified LDR and HDRZ.
- 7.13** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. This area is currently notified as residential zoning and therefore increasing the housing density will not change the firefighting requirements. Water supply is currently modelled as only just sufficient, although the New Middleton Reservoir should be able to feed the site to provide adequate pressure and flows.
- 7.14** I do not oppose the rezoning to MDR, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost.

High Density Residential

- 7.15** Mount Crystal Limited has also sought that 1.49 ha of land be rezoned from LDR to HDR. It has been estimated that this could yield 65 additional residential lots.
- 7.16** The site details are the same as the submission above but relates specifically to the southern part comprising of approximately 1.49 ha.
- 7.17** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Connection to QLDC water supply may be available from the west, although this area is not currently serviced. The area is currently within the water and wastewater scheme boundaries and the UGB. This area is currently notified as residential zoning, however changing the zoning to HDR will increase the anticipated firefighting demand from FW2 to FW3. The modelling results show the surrounding area can

provide a range of firefighting demands, but the model doesn't show what can be specifically provided for this site. The 2055 scenario shows FW3 isn't provided by adjacent areas of similar elevation. There is no adjacent area where FW3 level of service is anticipated under the PDP.

- 7.18** The Wastewater Model results show there is no spare capacity in the downstream network as the main falls to Frankton Road. There is no project to resolve this in the LTP. This development should be able to connect downstream of this capacity constraint.
- 7.19** In summary, I oppose the rezoning to HDR, from an infrastructure perspective, because there is not adequate infrastructure planned in the LTP to service FW3 firefighting supply. I support this if detailed reporting can be provided that shows an upgrade of existing infrastructure upgrade is not required.

Body Corporate 22362 – 389

- 7.20** Body Corporate 22362 has sought that 10.8 ha of land be rezoned from LDR to MDR. It has been estimated that this could yield 130 additional residential lots.
- 7.21** The area is located on Goldfields Heights and also includes Gold-leaf Hill, Stone Ridge Place, Woodland Close and Miners Lane. This area is currently serviced with public and private infrastructure. Some parts of the current site are already developed to MDR densities. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified LDR and Rural zoning.
- 7.22** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. For water servicing this area is currently notified as residential zoning and increasing the housing density will not change the firefighting requirements. These mains are currently modelled as only just sufficient. GIS shows this area is generally serviced with 100 mm and 50 mm mains. The modelling results show there are some

areas of higher head loss and low pressures. Increasing the density of this area without pipes upgrades could worsen these results.

7.23 The Wastewater Model results show there is no spare capacity in the downstream network as the main falls to Frankton Road. There is no project to resolve this in the LTP.

7.24 In summary, I oppose the rezoning to MDR, from an infrastructure perspective, because there is not sufficient capacity in the existing network to take increased flows both for water and wastewater. Therefore upgrades would be required that is not an efficient solution.

Grant Keeley – 1359

7.25 Grant Keeley has sought that 4,054 m² of land be rezoned from HDR to LDR. It has been estimated that this could yield 17 less residential lots.

7.26 The area is located on 37 - 51 Kent Street on the north end. This area is currently serviced.

7.27 Changing the zoning will reduce the housing density and therefore the infrastructure demand in this area.

7.28 I do not oppose the rezoning to LDR, from an infrastructure perspective, because the proposal reduces infrastructure load and therefore will not have an adverse effect on the network.

P J & G H Hensman & Southern Lakes Holdings Limited – 543

7.29 P J & G H Hensman & Southern Lakes Holdings Limited have sought that 8 ha of land be rezoned from LDR to HDR. It has been estimated that this could yield 358 additional residential lots.

7.30 The area is located on Lot 13 DP 27397, an 8 hectare piece of land that is located on Queenstown Hill. This area is north of Edinburgh Drive and extending east beyond Windsor Place. Water and

wastewater mains run along the nearby roads, Edinburgh Drive and Windsor Place. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified LDR, MDR and Rural.

- 7.31** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. The top elevation on this site is approximately 505 m. Queenstown Hill #2 reservoir is at approximately 530 m. This area is currently notified as residential zoning, but changing the zoning to HDR will increase the anticipated firefighting demand to FW3. The results show the growth scenarios can provide FW3 in this area, and therefore there is sufficient firefighting capacity.
- 7.32** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road although this is identified to be remediated in the LTP.
- 7.33** For these reasons I do not oppose the rezoning to HDR, from an infrastructure perspective. All connections would be at the developer's cost.. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Allium Trustees Limited – 718

- 7.34** Allium Trustees Limited has sought that 8,385 m² of land be rezoned from LDR to HDR. It has been estimated that this could yield 37 additional residential lots.
- 7.35** The area is located on the north side of Manchester Place, Queenstown Hill. The area is currently serviced. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified LDR, MDR and Rural zoning.
- 7.36** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is

anticipated this rezoning would connect to the QLDC water network. This area is currently notified as residential zoning. Changing the zoning to High Density Residential will increase the anticipated firefighting demand to FW3. The results show the growth scenarios can provide FW3 in this area, therefore there is sufficient firefighting capacity. This area is within the Larchwood water zone and is boosted from Queenstown Hill #1 Reservoir. Manchester Place is currently ring mained with a 150 mm pipe. The model shows minor head loss along this main.

7.37 It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road, although this is identified to be remediated in the LTP.

7.38 I do not oppose the rezoning to HDR, from an infrastructure perspective, because the models indicate this area can be serviced by the water and wastewater networks without a significant impact and is adjacent to other HDR zoning with the same requirements. All connections would be at the developer's cost.. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Mulwood Investments Limited – 731, Garth Makowski – 686, Belfast Corporation Limited – 727

7.39 Mulwood Investments Limited, Garth Makowski and Belfast Corporation Limited have sought that 2.8 ha of land be rezoned from MDR to HDRZ. It has been estimated that this could yield 89 additional residential lots.

7.40 The area includes 22 - 45 Belfast Terrace and Limerick Lane. The area is currently serviced. The area is currently within the water and wastewater scheme boundaries and the UGB. The surrounding land is notified LDR, MDR and Rural.

7.41 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed

that the development will continue to connect to the QLDC water and wastewater networks. This area is currently notified as residential zoning, but changing the zoning to HDR will increase the anticipated firefighting demand to FW3. The results show the growth scenarios can provide FW3 in this area, and therefore there is sufficient firefighting capacity. This area is within the Larchwood water pressure zone and is boosted from Queenstown Hill #1 Reservoir. The properties on the northern side of Belfast and the portion of Limerick Lane are feed with a 50mm rider mains. A 150 mm and 100 mm main feed the remaining areas. The model shows minor head loss along this main. Minor upgrades may be required to the existing mains to service this increased density.

- 7.42** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP.
- 7.43** I do not oppose the rezoning to HDR, from an infrastructure perspective, because the models indicate this area can be serviced by water and wastewater network without a significant impact and is adjacent to other HDR zoning with the same requirements. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Sue Knowles – 7

- 7.44** Sue Knowles has sought that 4,828 m² of land be rezoned from HDR to LDR. It has been estimated that this could yield 21 fewer residential lots.
- 7.45** The area is located on the York Street, including numbers 1, 3, 9, and 11. This area is currently serviced. The surrounding area is HDR and LDR zoning.
- 7.46** The submission proposes to reduce the residential density and therefore the infrastructure requirements for this area.

7.47 I do not oppose the rezoning to LDR, from an infrastructure perspective, because the proposal will reduce the infrastructure requirements from what is anticipated under the PDP.

DJ and EJ Cassells, The Bulling Family, The Bennett Family, M Lynch – 503

7.48 DJ and EJ Cassells, The Bulling Family, The Bennett Family, M Lynch have sought that 4.65 ha of land be rezoned from MDR to HDR (Operative District Plan) or or be replaced with the provisions that have the same effect as Arrowtown Residential Historic Management Zone. It has been estimated that this could yield 56-87 fewer plan enabled residential lots.

7.49 The area located in Queenstown is bounded by Park St and Hobart Street. This area is currently serviced.

7.50 I do not oppose the rezoning to HDR (Operative District Plan) or or a replacement zone that has the same effect as the provisions of the Arrowtown Residential Historic Management Zone, from an infrastructure perspective, because the proposal will reduce the infrastructure requirements from what is anticipated under the PDP.

Janice Kinealy – 821

7.51 Janice Kinealy has sought that land be rezoned from HDR to MDR.

7.52 The area is located at Brisbane Street, Queenstown. This area is currently serviced. The surrounding area is HDR and LDR.

7.53 The submission proposes to reduce the residential density and therefore the infrastructure requirements for this area.

7.54 I do not oppose the rezoning to MDR, from an infrastructure perspective, because the proposal will reduce the infrastructure requirements from what is anticipated under the PDP.

Aws Trustees No 31 Limited – 641

- 7.55** Aws Trustees No 31 Limited has sought that the HDR Sub-Zone B be removed from 6,704 m² of land and that it just be HDR. This submission is technically incorrect because there is no HDR Sub-Zone B. The submitter is supporting the notified zoning of the site.
- 7.56** The area is located on 53, 57, 61 and 65 Frankton Road, opposite Dublin Street.
- 7.57** I do not oppose the rezoning to High Density Residential, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP. All connections would be at the developer's cost.

Millennium & Copthorne Hotels New Zealand Limited – 679

- 7.58** Millennium & Copthorne Hotels New Zealand Limited has sought that 1.9 ha of land be rezoned from MDR to HDR. It has been estimated that this could yield 59 additional residential lots.
- 7.59** The area is the site of the Copthorne Hotel located within Frankton Road, Adelaide Street and Hobart Street. This area is currently serviced and the site contains a 240 room/suite hotel. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified MDR and HDR zoning.
- 7.60** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. This area is currently notified as residential zoning. Changing the zoning to HDR will increase the anticipated firefighting demand to FW3. Modelling results show the growth scenarios can provide FW3 in this area and are therefore sufficient. The model shows there is minor head loss <5 m/km in the existing mains, indicating there is additional capacity available.

- 7.61** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road, although this is identified to be remediated in the LTP.
- 7.62** I do not oppose the rezoning to HDR, from an infrastructure perspective, because this area may be able to be serviced with minimal upgrades required. All connections would be at the developer's cost. . If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Dato Tan Chin Nam – 61

- 7.63** Dato Tan Chin Nam has sought that 2 ha of land be rezoned from MDR to HDR. It has been estimated that this could yield 64 additional residential lots.
- 7.64** The area is located within Frankton Road (SH6A), Adelaide Street and Suburb Street This area is currently serviced. The area is generally notified MDR and HDR, with the surrounding zoning also including LDR.
- 7.65** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. This area is currently notified as residential zoning, but changing the zoning to High Density Residential will increase the anticipated firefighting demand to FW3. Modelling results show the growth scenarios can provide FW3 in this area and are therefore sufficient. The model shows the lower portion of Adelaide St has higher head losses (5 - 10 m/km), through the existing mains, increasing the density will increase the demand flow and therefore increase the head loss and decrease the pipe efficiency. This is only for a small portion which GIS shows only has 4 lots connected to it.
- 7.66** It is anticipated this rezoning will create an increase in wastewater discharges. The Wastewater Model shows downstream constraints

along Frankton Road, although this is identified to be remediated in the LTP.

- 7.67** I do not oppose the rezoning to HDR, from an infrastructure perspective, because this area may be able to be serviced with minimal upgrades required. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Neville Mahon – 628

- 7.68** Neville Mahon has sought that 7,524 m² of land be rezoned from MDR to HDR. It has been estimated that this could yield 24 additional residential lots.

- 7.69** The area is located on 12, 18, 20 and 24 Park St and 9 Brisbane St, opposite the Queenstown Gardens. This area is currently serviced. The area is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified MDR and Rural zoning.

- 7.70** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. This area is currently notified as residential zoning. Changing the zoning to HDR will increase the anticipated firefighting demand to FW3. Modelling results show the growth scenarios can provide FW3 in this area and are therefore sufficient. The model shows there is minor head loss <2 m/km in the existing mains, indicating there is additional capacity available.

- 7.71** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP

- 7.72** I do not oppose the rezoning to HDR, from an infrastructure perspective, because this area may be able to be serviced with minimal upgrades required. All connections would be at the

developer's cost. . If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Mr Trevor William Oliver – 479

- 7.73** Mr Trevor William Oliver has sought that 1 ha of land be rezoned from MDR to LDR. It has been estimated that this could yield 13 less residential lots.
- 7.74** The area is located between Wynyard Crescent and Fernhill Road. This area is currently serviced. The surrounding area is MDR and LDR.
- 7.75** The submission proposes to reduce the residential density and therefore the infrastructure requirements for this area.
- 7.76** I do not oppose the rezoning to LDR, from an infrastructure perspective, because the proposal will reduce the infrastructure requirements from what is anticipated under the PDP.

Reddy Group Limited – 699

- 7.77** Reddy Group Limited has sought that 7,447 m² of land be rezoned from LDR to MDR.
- 7.78** The area is located at 139 Fernhill Road on the corner of Richards Park Road. This area is currently serviced.
- 7.79** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. The firefighting level of service does not change between LDR and MDR. Modelling results from the 2055 scenario shows FW2 can be provided. If fed from Fernhill Road this has low head loss, (2- 5 m/km).
- 7.80** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints

along Frankton Road, although these are identified to be remediated in the LTP

- 7.81** I do not oppose the rezoning to MDR, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Reddy Group Limited – 699

- 7.82** Reddy Group Limited has sought that 2,317 m² of land be rezoned from LDR to MDR. It has been estimated that this could yield 2 additional residential lots.
- 7.83** The area is located on 10, 12, 14 and 16 Richards Park Lane of Fernhill Road, in Fernhill. This area is currently serviced. This area is surrounded by MDR and LDR.
- 7.84** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. The firefighting level of service does not change between LDR and MDR. Modelling results from the 2055 scenario shows FW2 can be provided. The model shows this area has high head loss, >10 m/km. Increasing the demand will further increase the head loss which may result in pipe upgrades.
- 7.85** It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP
- .
- 7.86** I do not oppose the rezoning to MDR, from an infrastructure perspective, because this is a minor increase in load/demand and can efficiently be incorporated into upgrades required to service the PDP zoning adjacent to this area. All connections would be at the

developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Hurtell Proprietary Limited, Landeena Holdings Limited, Shellmint Proprietary Limited – 97

7.87 Hurtell Proprietary Limited, Landeena Holdings Limited, Shellmint Proprietary Limited have sought that 1.5 ha of land be rezoned from LDR to HDR. It has been estimated that this could yield 67 additional residential lots.

7.88 The area is located on Lot 1 DP 21182, within Wynyard Cr and Greenstone Place. There is water and wastewater available on the adjoining streets. The surrounding area is LDR.

7.89 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. This area is currently notified as residential zoning, but changing the zoning to HDR will increase the anticipated firefighting demand to FW3. The results show the growth scenarios cannot provide FW3 firefighting demand where the site adjoins Wynyard Cres. The area is part of the Upper Fernhill zone feed from Fernhill #3 reservoir. The model shows this area has high head loss, >10 m/km. Increasing the demand will further increase the head loss which may result in pipe upgrades.

7.90 It is anticipated this rezoning will create an increase in wastewater discharges. The wastewater model shows downstream constraints along Frankton Road which is identified to be remediated in the LTP. If this area is rezoned, the timeframe when it will be serviceable will depend on the timing of the related LTP projects.

7.91 In summary, I oppose the rezoning to HDR, from an infrastructure perspective, because the existing model shows FW3 firefighting demand is not available in the future growth scenarios without upgrades which are not currently planned for. If the submitter can provide satisfactory detailed modelling that supports the rezoning

and shows an upgrade of existing infrastructure upgrade is not required, I will of course consider this through rebuttal evidence.

Jeff Aldridge – 86

7.92 Jeff Aldridge has sought that the HDR in Gorge Road be considered as a worker accommodation area.

7.93 I do not oppose worker accommodation in the HDR, from an infrastructure perspective, because the proposal does not affect infrastructure requirements from what is anticipated under the PDP.

Westwood Group – 70

7.94 Westwood Group has sought that 4,593 m² of land be rezoned from HDR to BMUZ.

7.95 The area is located from Boundary Street to Robins Road, along Gorge Road. This area is currently serviced. The surrounding area is generally notified HDR.

7.96 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. It is understood BMUZ would anticipate FW3 commercial firefighting demand. This is the same as the HDR level of service demand. Therefore, the anticipated firefighting demand will not be changing. The modelling results show FW3 demands can be provided in this area now and in through to the 2055 scenario.

7.97 It is anticipated this rezoning will not significantly change the wastewater discharges from what is currently planned. The wastewater model shows downstream constraints around Marine Parade and Frankton Road, although these are identified to be remediated in the LTP

7.98 I do not oppose the rezoning to BMUZ, from an infrastructure perspective, because it is expected this area is able to be serviced

with minimal upgrades. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

PR Queenstown Ltd – 102

7.99 PR Queenstown Ltd has sought that 4,593 m² of land be rezoned from HDR to BMUZ.

7.100 The area is located on 5 adjoining sites at 30-46 Gorge Road. North of Boundary Street. This area is currently serviced. The surrounding area is generally notified HDR.

7.101 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is anticipated this rezoning would connect to the QLDC water network. It is understood BMUZ would anticipate FW3 commercial firefighting demand. As this is the same as the HDR zoning level of service demand, the anticipated firefighting demand will not be changing. The modelling results show FW3 demands can be provided in this area currently and in the 2025 and 2055 scenarios.

7.102 It is anticipated this rezoning will not significantly change the wastewater discharges from what is currently planned. The wastewater model shows downstream constraints around Marine Parade and Frankton Road which is identified to be remediated in the LTP.

7.103 I do not oppose the rezoning to BMUZ, from an infrastructure perspective, because it is expected this area is able to be serviced with minimal upgrades. All connections would be at the developer's cost. If this area is rezoned, the timeframe of when it could be developed will depend on the related LTP project/s.

Ngāi Tahu Tourism Ltd – 716

7.104 Ngāi Tahu Tourism Ltd has sought that 11 ha of land be rezoned from Rural to Rural Visitor. The Rural Visitor zone is an operative

zone that hasn't been reviewed yet. Based on the ODP version, it has been estimated that this could yield the equivalent of 338 additional residential lots based on analysis of a Rural Visitor development in the zone which has been constructed at Cardrona.

7.105 This area of land is to the north of Arthurs Point Road close to the Arthurs Point bridge bounded by the Shotover River. There is currently water and wastewater supply to part of the submission area. The area is outside and adjacent to the UGB. It is adjacent to notified LDR and Rural zoning. It is within the water and wastewater scheme boundaries.

7.106 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. Some of this area is connected to the QLDC water network. For sites outside and adjacent to the UGB it is Council's preference that the area anticipates connection to the Council infrastructure network. The site is below the water network so will have adequate pressure. The water pressure may be too great and pressure reducing devices will need to be fitted. The (operative) Rural Visitor zone allows for commercial development and therefore FW3 level of service firefighting demand. Currently a 100 mm main feeds this area, this may require upgrading to service the increased demand. The water model is currently being built for Arthurs Point. Currently there is no pipe redundancy for the trunk main that feeds from the south of the Edith Cavell Bridge to Mathias Terrace to the North. The zoned area may be able to be serviced with a looped water main to Red Fern Terrace to allow for some redundancy on the northern portion of this main.

7.107 This site is below the existing trunk main so wastewater would need a wastewater pump station facility. I would prefer development to occur in areas where additional facilities are not required as they become a maintenance burden. Because of the size of the area and the proposed zoning, this could lead to a substantial increase in wastewater discharge. It is unclear whether the existing downstream pump station could accommodate the increased flow. Future scenarios show the wastewater main over Edith Cavell bridge is

nearing capacity. The zoning would reduce the capacity further. Although a wastewater pump station and new infrastructure would be required to service this area at a cost, the potential density of this type of zoning would improve the efficiency of servicing it.

- 7.108** In summary, I oppose the rezoning to Rural Visitor, from an infrastructure perspective, because this is a substantial increase in load/flow which may require an upgrade of the existing wastewater infrastructure and the need to build an additional facility will create an ongoing maintenance burden. I may support this if detailed reporting can be provided that supports the rezoning and shows an upgrade of existing infrastructure upgrade is not required.

Sam Strain – 349

- 7.109** Sam Strain has sought that 6,047 m² of land be rezoned from Rural to LDR. It has been estimated that this could yield 9 additional residential lots.

- 7.110** The area is located to the north of Arthurs Point Road, on the north side of the Edith Cavell bridge. Water and Wastewater runs past the boundary on Arthurs Point Road. The area is within the scheme boundary and outside and adjacent to the notified UGB and LDR zones. The remainder of the surrounding land is notified Rural.

- 7.111** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks. The site is within elevations currently serviced. The water model is currently being built for Arthurs Point. This site is efficient to connect to as an existing main runs adjacent to the site and minimal work is required to connect to it.

- 7.112** The site is above elevations currently serviced and therefore can drain under gravity to the network. Model growth results show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further.

7.113 I do not oppose the rezoning to LDR, from an infrastructure perspective, because this is a minor increase in load/demand and can be serviced by water and wastewater network without a significant impact. All connections would be at the developer's cost.

Michael Swan – 494

7.114 Michael Swan has sought that 2.36 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 35 additional residential lots.

7.115 The area is 111 Atley Road, Arthurs Point, located on the north side of the Shotover River and the south side of the township. The site is some distance from Council owned infrastructure. The area is outside and adjacent to the scheme boundary, the UGB and LDR. The remaining surrounding land is notified Rural.

7.116 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks and it is not clear on GIS how this area would connect through to the existing reticulation. GIS shows the site is located between 410 m and 456 m elevation. This is within serviceable water pressures. As this site is not adjacent to adequate connections the cost of servicing will be higher and therefore not as efficient.

7.117 The lower elevations may not be able to drain under gravity to the network and therefore may require a pump station. I would prefer development to occur in areas where additional facilities are not required as they become a maintenance burden. Future scenarios show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further. If a wastewater pump station facility is required to service this area, this efficiency would be reduced because of this additional cost.

7.118 In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because this is a substantial increase in load that may

require an upgrade of the existing wastewater infrastructure and the need to build an additional facility will have an ongoing maintenance burden. I may support this if detailed reporting can be provided that supports the rezoning and shows an upgrade of existing infrastructure upgrade is not required

Larchmont Developments Limited – 527

7.119 Larchmont Developments Limited has sought that 5.9 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 89 additional residential lots.

7.120 The area is at 111 Atley Road, Arthurs Point, located on the north side of the Shotover River and the south side of the township. The site is some distance from Council owned infrastructure. The area is outside and adjacent to the scheme boundary, the notified UGB and LDR. The remaining surrounding land is notified Rural zone.

7.121 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks and it is not clear on GIS how this area would connect through to the existing reticulation. GIS shows the site is located between 392 m and 456 m elevation. This is within serviceable water pressures. As this site is not adjacent to adequate connections the cost of servicing will be higher and therefore not as efficient.

7.122 The lower elevations may not be able to drain under gravity to the network and therefore may require a pump station. I would prefer development to occur in areas where additional facilities are not required as they become a maintenance burden. Future scenarios show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further. If a wastewater pump station facility is required to service this area, this efficiency would be reduced because of this additional cost.

7.123 In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because this is a significant increase in load which may require an upgrade of the existing wastewater infrastructure and the need to build an additional facility will have an ongoing maintenance burden. I may support this if detailed reporting can be provided that supports the rezoning and shows an upgrade of existing infrastructure upgrade is not required.

Alpine Estate Ltd – 450

7.124 Alpine Estate Ltd has sought that 1.9 ha of land be rezoned from LDR to HDR. It has been estimated that this could yield 83 additional residential lots.

7.125 The area is located on Lot 1 DP 12913, 153 Arthurs Point Road on the north side of the road. HDR is sought on the lower half of the parcel. A 200 mm diameter water main and wastewater mains run along Arthurs Point Road. The lower half of the site sought to be rezoned is currently within the water and wastewater scheme boundary and UGB. The surrounding land is notified Rural Visitor (operative), LDR and Rural.

7.126 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks. The site is within but at the upper limit of elevations currently zoned for servicing. Water modelling for Arthurs Point is currently being built. FW3 level of service is anticipated for HDR zoning. This site is efficient to connect to as an existing main runs adjacent to the site and minimal work is required to connect to it.

7.127 The site is not connected to wastewater but it could gravity feed into the existing main that runs along the road. Future scenarios show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further. This site is efficient to connect to as an existing main runs through the site and minimal work is required to connect to it.

7.128 In summary, I oppose the rezoning to HDR, from an infrastructure perspective, because this is a substantial increase in load which may require an upgrade of the existing wastewater infrastructure. I may support this if detailed reporting can be provided that supports the rezoning and shows an upgrade of existing infrastructure upgrade is not required.

Darryl Sampson & Louise Cooper – 495

7.129 Darryl Sampson & Louise Cooper have sought that 1.6 ha of land be rezoned from Rural to Rural Visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet. .

7.130 The area is located at ot 2 DP 24233, 182D Arthurs Point Road. This is to the north end of Arthurs Point township, close to Malaghans Road and Littles Road, on the south side of the road. The south edge of the site falls away quite steeply toward the Shotover River. Water and wastewater mains run along Arthurs Point Road. This area is outside and adjacent to the notified UGB and Rural Visitor zoning (which the rest of the site is zoned). The remaining land surrounding is notified Rural zone and within the scheme boundary.

7.131 No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks. The site is within elevations currently serviced. The adjacent site is (operative) Rural Visitor zoning and will be serviced for appropriate firefighting level of service. The submission area will be able to be serviced to the same level of service without substantial changes to the infrastructure. If upgrades are required to service the proposed zoning, this submission will also utilise the upgraded facilities and therefore improve the cost per dwelling of the upgrades required.

7.132 The area is lower than the main on Arthurs Point Road and therefore may require a wastewater pump station. The site between

Arthurs Point Road and this area is (operative) Rural Visitor and will require a pump station to be serviced. This additional rezoning will not significantly change this requirement. Future scenarios show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further. Upgrades will be required to service the proposed zoning, and any development under the proposed zoning will also utilise the upgraded facilities and therefore improve the cost per dwelling of the upgrades required.

- 7.133** I do not oppose the rezoning to (operative) Rural Visitor, from an infrastructure perspective, because this is a relatively small increase in the Rural Visitor zoning compared to what is currently zoned adjacent to this area. All connections would be at the developer's cost.

Mandalea Properties – 642

- 7.134** Mandalea Properties has sought that 6,445 m² of land be rezoned from Rural to Rural Visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet.

- 7.135** The area is located at lot 1 DP 20925, 164 Arthurs Point Road. This is to the north end of Arthurs Point township, close to Malaghans Road and Littles Road, on the south side of the road. The south edge of the site falls away quite steeply toward the Shotover River. Water and wastewater mains run along Arthurs Point Road. This area is outside and adjacent to the notified UGB and (operative) Rural Visitor zoning (which the rest of the site is zoned). The remaining land surrounding is notified Rural zone and within the scheme boundary.

- 7.136** No details have been provided about how the anticipated increased flows/demands from this rezoning would be serviced. It is assumed that the development will connect to the QLDC water and wastewater networks. The site is within elevations currently serviced. The adjacent site is (operative) Rural Visitor zoning and will be serviced for appropriate firefighting level of service. The submission area will be able to be serviced to the same level of

service without substantial changes to the infrastructure. If upgrades are required to service the proposed zoning, this submission will also utilise the upgraded facilities and therefore improve the cost per dwelling of the upgrades required.

7.137 The area is lower the main on Arthurs Point Road and therefore may require a wastewater pump station. The site between Arthurs Point Road and this area is (operative) Rural Visitor zoning and will require a pump station to be serviced. This additional rezoning will not significantly change this requirement. Future scenarios show the wastewater main over Edith Cavell bridge is nearing capacity. The zoning would reduce the capacity further. Upgrades will be required to service the proposed zoning, any development will also utilise the upgraded facilities and therefore improve the cost per dwelling of the upgrades required.

7.138 I do not oppose the rezoning to (operative) Rural Visitor, from an infrastructure perspective, because this is a relatively minor increase in load/demand and can be serviced by water and wastewater network without a significant impact. All connections would be at the developer's cost.

8. REQUESTS FOR REZONINGS – RURAL (2)

Remarkables Park Limited – 807

8.1 Remarkables Park Limited has sought that the ONL line near the Remarkables Park Zone be moved to the foot of the slopes of the northern face of the Remarkables.

8.2 I do not oppose moving the ONL line, from an infrastructure perspective, because it does not impact the Council's infrastructure network.

Mount Christina Limited – 764

- 8.3** Mount Christina Limited has sought that 14.88 ha of land be rezoned from Rural to Rural Residential. It has been estimated that this could yield 25 additional residential lots.
- 8.4** The site is located 12 km north of Glenorchy Township, alongside the Glenorchy - Paradise Road, between Diamond Lake and Rees River. The site is currently a mix of Rural and Rural Residential zones and the applicant wishes to make the entire site Rural Residential. The surrounding land is zoned Rural. The area is not connected to a Council water and wastewater supply. The site is outside the UGB and not anticipated to be serviced by Council infrastructure. 3 waters infrastructure servicing would be required onsite at the developer's cost.
- 8.5** The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural development would need to use advance treatment system to treat wastewater.
- 8.6** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, because if the zone continues to be serviced by private infrastructure at the developer's cost then there is no increase in the Council's infrastructure requirements.

Garry Strange – 168

- 8.7** Garry Strange has sought that the Council address the different rural zonings of Wilson Bay and remove the ONL. The submission is unclear as to the size of the area or the proposed final zoning.
- 8.8** Wilson Bay is located on the edge of Lake Wakatipu, on the road to Glenorchy. It is approximately 5 kms from the edge of the Queenstown water and wastewater scheme boundaries. The surrounding areas are a mix of rural zonings. GIS shows that there are a few private water schemes in the vicinity. The ORC Otago

Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural residential development would need to use advance treatment system to treat wastewater.

- 8.9** It is assumed that all rural zones outside the scheme boundary will be serviced privately onsite.
- 8.10** I do not oppose this submission, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Nick Clark – 298

- 8.11** Nick Clark has sought that 19 ha of land be rezoned from Rural Lifestyle to Rural Residential. It has been estimated that this could yield 25 additional residential lots.
- 8.12** The site is located at Closeburn which is located on the edge of Lake Wakatipu, on the road to Glenorchy. It is approximately 4 kms from the edge of the Queenstown water and wastewater scheme boundaries. The properties are currently zoned a mix of rural lifestyle and other rural zones and have a building restriction line through the middle of the existing lots. The surrounding areas are a mix of rural zonings. GIS shows that there are a few private water schemes nearby. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural residential development would need to use advance treatment system to treat wastewater.
- 8.13** It is assumed that Rural Residential outside the scheme boundary will be serviced privately onsite.
- 8.14** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC

infrastructure requirements as the water and wastewater will be serviced onsite.

- 8.15** I note that the suitability of the land for development has not been assessed and it is assumed that at the time of subdivision that the developer would need to show that the lots can be serviced for three waters onsite.

Garry Strange – 168

- 8.16** Garry Strange has sought that 92 ha of land be rezoned from Rural Lifestyle to Rural Residential. It has been estimated that this could yield 125 additional residential lots.

- 8.17** Wilson Bay is located on the edge of Lake Wakatipu, on the road to Glenorchy. It is approximately 5 kms from the edge of the Queenstown water and wastewater scheme boundaries. The surrounding areas are a mix of rural zonings. GIS shows that there are a few private water schemes in the vicinity. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural residential development would need to use advance treatment system to treat wastewater.

- 8.18** It is assumed that Rural Residential outside the scheme boundary will be serviced privately onsite.

- 8.19** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, because if the site is serviced privately at the developer's cost then there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite. Advanced wastewater treatment will be required to protect Queenstown's water supply.

Glentui Heights Ltd – 694

- 8.20** Glentui Heights Ltd has sought that 87.7 ha of land be rezoned from Rural Residential (Bobs Cove) to Rural Residential. The change in zone will not yield additional residential lots.
- 8.21** Bobs Cove is located on the edge of Lake Wakatipu, on the road to Glenorchy. It is approximately 8 kms from the edge of the Queenstown water and wastewater scheme boundaries. The surrounding areas are a mix of rural and rural residential zonings. GIS shows that there are a few private water schemes in the vicinity. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural residential development would need to use advance treatment system to treat wastewater.
- 8.22** It is assumed that Rural Residential outside the scheme boundary will be serviced privately onsite.
- 8.23** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Bobs Cove Developments Limited – 712

Rural to Rural Residential

- 8.24** Bobs Cove Developments Limited has sought that 3400 m² of land be rezoned from Rural, to Rural Residential. The change in zone could yield 1 additional residential lot.
- 8.25** The area is at Bobs Cove which is located on the edge of Lake Wakatipu, on the road to Glenorchy. It is approximately 8 kms from the edge of the Queenstown water and wastewater scheme boundaries. The piece of land adjoins the Bobs Cove Rural

Residential subzone on the south-western corner. The surrounding areas are a mix of rural and rural residential zonings. GIS shows that there are a few private water schemes in the vicinity. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any rural residential development would need to use an advance treatment system to treat wastewater.

- 8.26** It is assumed that Rural Residential outside the scheme boundary will be serviced privately onsite.
- 8.27** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Rural Residential (Bobs Cove) to Rural Residential

- 8.28** Bobs Cove Developments Limited has sought that the Rural Residential (Bobs Cove) zone be deleted and changed to Rural Residential.
- 8.29** The area is at Bobs Cove which is located on the edge of Lake Wakatipu, on the road to Glenorchy, approximately 8 kms from the edge of the Queenstown water and wastewater scheme boundaries. Removing the subzone will not change the density of residential development and 3 waters infrastructure will continue to be managed privately.
- 8.30** I do not oppose the rezoning to Rural Residential, from an infrastructure perspective, if the zone continues to be serviced by private infrastructure at the developer's cost because there is no increase in the Council's infrastructure requirements.

M & C Wilson – 848

- 8.31** M & C Wilson have sought that 20 ha of land and the surrounds be rezoned from Rural to Large Lot Residential. The submission does not identify the extent of "the surrounds", but it has been estimated that the identified site could yield 34 additional residential lots.
- 8.32** The site is located at 84 Glen Nevis Station Road, approximately 1.5km northeast of Kingston township. The site is approximately 80m above State Highway 6 and Kingston Township. The surrounding area is zoned Rural. The area is not connected to a Council water and wastewater supply.
- 8.33** The submitter has not indicated how they intend to service the site. Currently in Kingston each property has individual, onsite, privately owned water and wastewater facilities. The Council plans to install a community water scheme in the future, however a wastewater scheme is not currently in the LTP and timeframes are uncertain. Due to the site's elevation it will not be able to connect to the future water scheme. However it could be serviceable by the future wastewater scheme. Given that the submitter has requested a residential zoning and depending on the extent of "the surrounds", it is assumed that in the future they would desire connection to the community wastewater scheme. If the site is developed before a community scheme is available the developer will need to service the lots privately. Rezoning the land may improve the efficiency of installing the community wastewater scheme, depending on the distance from the scheme and the number of dwellings.
- 8.34** The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater.
- 8.35** I do not oppose the rezoning to Large Lot Residential, from an infrastructure perspective. If the site is serviced privately at the developer's cost, then there is no increase in the QLDC

infrastructure requirements as the water and wastewater will be serviced on site. In time it may be possible for a connection to be made to the future wastewater scheme in Kingston at the developer's cost.

Kingston Lifestyle Family Trust – 689

8.36 Kingston Lifestyle Family Trust has sought that 3.9 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 59 additional residential lots.

8.37 The site is located adjacent to Kingston township. It is bound by the Kingston Flyer railway line, State Highway 6 and the camping ground. The adjacent zonings are Township, Kingston Village Special Zone and Rural. The area is not connected to a Council water and wastewater supply. Currently each property in Kingston has individual, onsite, privately owned water and wastewater facilities. The Council plans to install a community water scheme in the future, however a wastewater scheme is not in the LTP. Given that the site is generally level with the surrounding areas to be serviced and is immediately adjacent it is assumed that in the future it will be serviceable by the community schemes. If the sites are developed before community schemes are available the developer will need to service the lots privately. Rezoning the land will improve the efficiency of installing the community schemes.

8.38 The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater. I note that stormwater management will be required onsite to minimise downstream effects of the development.

8.39 In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because water and wastewater will need to be serviced privately and the lot size will be too small to accommodate this. I do not oppose changing the zoning to Kingston Township as the lot sizes will be large enough for private servicing. I note that it is

planned to provide community schemes in the future at which time all properties will need to connect.

Tim Taylor – 826

8.40 Tim Taylor has sought that 39 ha of land be rezoned from Rural to LDR. It has been estimated that this could yield 593 additional residential lots.

8.41 The site is located on the eastern side of State Highway 6 adjacent to Kingston. The surrounding area is zoned Rural on the same side of the highway and Township and Kingston Village Special Zone across the highway. The area is not connected to a Council water and wastewater supply. The submitter has not indicated how they intend to service the site. Currently in Kingston each property has individual, onsite, privately owned water and wastewater facilities. The Council plans to install a community water scheme in the future, however a wastewater scheme is not in the LTP. The top of the site is 80 m higher than Kingston Township. Given the site's elevation, parts of it may not be able to connect to the future water scheme, however it should be serviceable by the future wastewater scheme. If the sites are developed before community schemes are available the developer would need to service the lots privately. Rezoning the land could improve the efficiency of installing the community wastewater scheme.

8.42 The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater. I note that stormwater management will be required onsite to minimise downstream effects of the development.

8.43 In summary, I oppose the rezoning to LDR, from an infrastructure perspective, because there is no information about how the area will be serviced and the lot sizes will be too small for servicing onsite.

Noel Gutzewitz – 328

- 8.44** Noel Gutzewitz has sought that 10.7 ha of land be rezoned from Rural to Rural Lifestyle. It has been estimated that this could yield 3.5 additional residential lots.
- 8.45** The area is located on the southern side of the Kawarau River, at the end of Boyd Road. It is across the river from Remarkables Park. The land is outside the Queenstown three waters schemes and is surrounded by Rural zone. The area is not serviced by water or wastewater.
- 8.46** It is assumed that Rural Lifestyle outside the scheme boundary will be serviced privately onsite.
- 8.47** I do not oppose the rezoning to Rural Lifestyle, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Barbara Kipke – 431

- 8.48** Barbara Kipke has sought that 5.8 ha of land be rezoned from Rural to Rural Lifestyle, with a smaller lot size on the submitter's property. The smaller lot size will enable a yield of 3 additional residential lots. (I note that under the Rural Lifestyle zoning the land would yield 2 additional residential lots compared with the ODP).
- 8.49** The site is located at Wye Creek, between Vista Terrace and State Highway 6. The surrounding land is zoned Rural, however there are a number of 3000m² lots adjacent to the site. The land is outside the Queenstown three waters schemes. There is a private water scheme in the vicinity. The submitter has not indicated how they intend to service the site. The area is not serviced by water or wastewater.

8.50 It is assumed that Rural Lifestyle outside the scheme boundary will be serviced privately onsite.

8.51 I do not oppose the rezoning to Rural Lifestyle, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

The Station at Waitiri – 331

8.52 The Station at Waitiri has sought that 125.9 ha of land be rezoned from Rural (Gibbston Character) to Rural Lifestyle. It has been estimated that this could yield 42 additional residential lots.

8.53 The property is located in the Gibbston Valley on the northern side of the Kawarau River, bordering Central Otago District. The land is outside the Queenstown three waters schemes and is surrounded by Rural and Gibbston Character zones. The area is not serviced by water or wastewater.

8.54 It is assumed that Rural Lifestyle outside the scheme boundary will be serviced privately onsite.

8.55 I do not oppose the rezoning to Rural Lifestyle, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Gibbston Valley Station Ltd – 827

8.56 Gibbston Valley Station Ltd has sought that an area of land be rezoned from Rural (Gibbston Character) to Gibbston Character Zone.

8.57 The site is located at the Kawarau Bridge end of the Gibbston Valley on the Southern side of the Kawarau River. It is mostly zoned

Gibbston Character Zone with small parts of Rural and is surrounded by both zonings. The submission notes that the property can be serviced by local infrastructure including 3 waters. It is assumed that the submitter is referring to private infrastructure because the area is not serviced by any QLDC schemes.

8.58 It is assumed that developments outside the scheme boundary will be serviced privately onsite.

8.59 I do not oppose the rezoning to Gibbston Character Zone, from an infrastructure perspective, if the site is serviced privately at the developer's cost there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

Karen & Murray Scott, Loch Linnhe Station – 447

8.60 Karen & Murray Scott, Loch Linnhe Station has sought that 9 ha of land be rezoned from Rural to Rural Visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet.

8.61 The site is Loch Linnhe Station located south of Wye Creek and Drift Bay, and east of Lake Wakatipu with access off Kingston Road. The land is outside the Queenstown three waters schemes and is surrounded by Rural zone. The site is outside the UGB and not anticipated to be serviced by Council infrastructure. 3 waters infrastructure servicing would be required onsite at the developer's cost. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater.

8.62 It is assumed that developments outside the scheme boundary will be serviced privately onsite.

8.63 In summary, I oppose the rezoning to (operative) Rural Visitor, from an infrastructure perspective, because it potentially allows a large high density development in a rural area and it is unclear how servicing of this site is planned, and whether it is feasible given site

constraints. However, the submission has an alternative to Rural Visitor zoning and seeks a zoning that will enable the building of clusters of homesteads and farm buildings, similar to the concept developed through Plan Change 13 to the MacKenzie District Plan in the form of Farm Base Areas (**FBA**s). I do not oppose rezoning to allow development of FBAs as outlined in the submission, from an infrastructure perspective because there is no increase in the QLDC infrastructure requirements as the site will continue to be serviced privately at the owner's cost.

Lake Wakatipu Station Limited & Review Seventeen Limited – 478

- 8.64** Lake Wakatipu Station Limited & Review Seventeen Limited have sought that 32.5 ha of land be rezoned from Rural to Rural visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet.
- 8.65** The site is the flat land at Halfway Bay on the western shore line of the southern arm of Lake Wakatipu. The land is outside the Queenstown three waters schemes. The submitter has not indicated the proposed extent of development or how they intend to service the site.
- 8.66** It is unclear what the proposed development would be and how it is proposed to be serviced. The site is susceptible to liquefaction. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater.
- 8.67** In summary, I oppose the rezoning to (operative) Rural Visitor, from an infrastructure perspective, because it potentially allows a large high density development in a rural area and it is unclear how servicing of this site is planned, and whether it is feasible given site constraints.

Te Anau Developments Limited – 607

- 8.68** Te Anau Developments Limited has sought that 10 ha of land be rezoned from Rural to Rural Visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet.
- 8.69** The site is located at Beach Bay, Walter Peak. The land is adjacent to the Rural Visitor- Walters Peak zone. The area is not connected to a Council water and wastewater supply. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater.
- 8.70** I do not oppose the rezoning to Rural Visitor, from an infrastructure perspective, because there is no increase in the QLDC infrastructure requirements as the site will continue to be serviced privately at the owner's cost.

Amrta Land Ltd – 677

- 8.71** Amrta Land Ltd has sought that 851 ha of land be rezoned from Rural General to Rural Visitor. The Rural Visitor zone is an operative zone that hasn't been reviewed yet. The submitter does not provide enough information about the proposed development to assess the submission (under the operative version of the Rural Visitor zone).
- 8.72** The site is Woodbine Station; an approximately 800 ha station located generally along the true right bank of the Dart River and the north-west banks of Lake Wakatipu. The Station includes land within and surrounding Kinloch. The surrounding land is zoned Rural with the exception of the township of Kinloch. The area is not connected to a Council water and wastewater supply. The site is outside the UGB and not anticipated to be serviced by Council infrastructure. 3 waters infrastructure servicing would be required onsite at the developer's cost.

- 8.73** It is unclear what the proposed development would be and how it is proposed to be serviced. Large parts of the site are within the flood plain and/or are susceptible to liquefaction. The ORC Otago Water Plan Change 6A Maps identify the area as part of the nitrogen sensitive large lake catchment area. Any development would need to use advanced treatment systems to treat wastewater.
- 8.74** In summary, I oppose the rezoning to Rural Visitor, from an infrastructure perspective, because it potentially allows a large high density development in a rural area and it is unclear how servicing of this site is planned, and if it is feasible given site constraints. Not enough information has been provided in the submission to enable me to assess the rezoning.

Queenstown Park Limited – 806

- 8.75** Queenstown Park Limited has sought that 2061 ha of land be rezoned from Rural to Queenstown Park Special Zone. The application proposes to provide a multi-use zone for tourist, education, entertainment, residential, visitor accommodation, recreation, conservation and cultural activities. It is unclear as to the extent of development that is proposed.
- 8.76** The site is Queenstown Park which has 14km of river frontage along the Kawerau River and extends to approximately 1000 masl on the Northern face of The Remarkables Mountains, wrapping around to the western face. The land is outside the Queenstown three waters schemes and is surrounded by Rural zone. The site is outside the UGB and not anticipated to be serviced by Council infrastructure. 3 waters infrastructure servicing would be required onsite at the developer's cost.
- 8.77** I do not oppose the rezoning to Queenstown Park Special Zone, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the water and wastewater will be serviced onsite.

**Grant Hylton Hensman, Sharyn Hensman & Bruce Herbert Robertson,
Scope Resources Ltd, Granty Hylton Hensman & Noel Thomas van
Wichen, Trojan Holdings Ltd – 361**

- 8.78** Grant Hylton Hensman, Sharyn Hensman & Bruce Herbert Robertson, Scope Resources Ltd, Granty Hylton Hensman & Noel Thomas van Wichen, Trojan Holdings Ltd have sought that 63 ha of land be rezoned from Rural to Industrial. No Industrial zone has been notified into the PDP yet, and I therefore consider the operative Industrial zone.
- 8.79** The site is located on the lower slopes of the Remarkable Range, and approximately 3km south from the Kawarau Bridge on the eastern side of State Highway 6. The site is outside the Queenstown 3 waters schemes and the UGB. There is private water supply infrastructure on the site. The site is mainly surrounded by Rural zoning. Part of the site is across the highway from the Jacks Point Zone, which is included in the UGB.
- 8.80** The submitter has provided infrastructure reporting that shows that there are many options for providing 3 waters infrastructure to the site. At present the Council does not intend to service the site and the developer would need to provide this privately.
- 8.81** I do not oppose the rezoning to Industrial, from an infrastructure perspective, if the site is serviced privately at the developer's cost because there is no increase in the QLDC infrastructure requirements as the 3 waters will be serviced onsite.

Middleton Family Trust – 393

- 8.82** Middleton Family Trust has sought that 114 ha of land be rezoned from Rural to Airport Mixed Use.
- 8.83** The site is located on top of Queenstown Hill. Existing access is from Frankton Road or Tucker Beach Road. Potential future additional access has been identified off Gorge Road. The land is outside the Queenstown three waters schemes and the UGB. The

surrounding land is zoned Rural. The site is elevated and 2km from the Queenstown three waters schemes.

8.84 The applicant has not indicated how the land will be serviced or what land use rules would be included in the proposed new zoning (although I note there is an Airport Mixed Use zone in the PDP, and they may wish to use similar provisions). It is assumed that the intention would be to connect to the Council networks.

8.85 In summary, I oppose the rezoning to Airport Mixed Use, from an infrastructure perspective, because this is a substantial increase in load/demand which will require an upgrade of the existing infrastructure and the need to build additional facilities that will have an ongoing maintenance burden.



Ulrich Wilhelm Glasner

24 May 2017

Appendix 1

Extract from evidence of Mr Ulrich Wilhelm Glasner for QLDC for Upper Clutha Mapping Annotations and Rezoning Requests dated 20 March 2017

4. BACKGROUND

Assumptions

- 4.1** To assess the impacts of rezoning a property on the water and wastewater network, it is necessary to estimate the likely yield in terms of the number of residential lots.
- 4.2** Where a submission has included an estimate of the number of residential lots, I have generally relied on that information. Specifically, I have relied on the estimate in submissions if there is one and where robust information has been provided to support the estimate. Where no information was provided, or where in my opinion a greater number of lots could realistically be developed, I have estimated the number of lots and explained this in my assessment.
- 4.3** The minimum lot sizes for the different zones provide a guide for estimating the number of lots:
- (a) Low Density Residential – 450m²;
 - (b) Medium Density Residential – 250 m²;
 - (c) High Density Residential – 450 m²;
 - (d) Large Lot Residential A – 4,000 m²
 - (e) Large Lot Residential B – 2,000 m²;
 - (f) Rural Lifestyle 2 hectare average, with individual allotments up to 1 hectare; and
 - (g) Rural Residential – 4,000 m².
- 4.4** In addition the Visitor Accommodation activities have been assessed on the basis that they would cater for reasonably intensive resort style developments. There are not any Visitor Accommodation provisions in the PDP. However, the Operative District Plan provides for Visitor Accommodation within identified subzones in the Low Density Residential Zone as a controlled

activity on the basis the development did not breach the 7 metre height limit and the respective building set back from boundaries and roads.

- 4.5** Submissions that have sought Visitor Accommodation have not specified any nature and scale limitations; I have therefore based my assessment on the nature, scale and intensity of established visitor accommodation developments in the Operative Low Density Residential Zones. Examples include the Edgewater Resort² in Wanaka and the Sherwood Resort³ in Queenstown. Both of these are located within the Operative and PDP Low Density Residential Zone.
- 4.6** However, for larger sites, it is not just a simple matter of dividing the total lot size by the minimum lot size, because land is needed for other development requirements such as roading, reserves, stormwater etc. Therefore I have assumed that for any site the area that can be developed into residential lots is the total area of the site minus 32% to account for those other development requirements.
- 4.7** In my assessment I have assumed the maximum allowed development under the zone requested by the submitter.
- 4.8** In Wanaka the UGB does not fully align with the water and wastewater scheme boundary. Where the scheme boundary extends outside the UGB, infrastructure servicing needs to be carefully considered to ensure that Council is not left with an infrastructure network that is only servicing a small number of sites. This results in inefficiencies particularly on a cost per user ratio.
- 4.9** My opinions on wastewater and water are based on the Council's computer Water and Wastewater Models that were built in 2016. The water model was built by Charlotte Broadbent from Watershed Engineering Ltd and the wastewater model by Tracey Myers from CH2M Beca Ltd. The models give a mathematical representation of

2 Refer to <https://www.edgewater.co.nz/>

3 Refer to <http://sherwoodqueenstown.nz/>

the infrastructure networks (pipes, pumps, reservoirs and other assets) and the results produce information about pressure, flow and pipe capacity throughout the network.

- 4.10** The wastewater model (average recurrence interval (**ARI**)) 2 year design storm event results were used. The water model uses a peak day scenario and is calibrated to 28/12/15. Future growth scenarios (2025, 2055) have also been generated for the water model and 2055 for the wastewater models that include anticipated demand/ loads in accordance with the Operative District Plan (**ODP**) zonings. The models do not include identified Long Term Plan projects. In areas where the modelling results show that there may not be capacity or the required levels of service will not be met, I have checked if there are planned upgrades in the Long Term Plan that will mitigate the loss of service from growth.
- 4.11** Throughout my analysis, I have assumed that all servicing including connections and upgrades would be at the developer's cost, this may be through development contributions or directly where stated.

Impact of development within scheme boundaries that exceeds capacity

- 4.12** The impact of development within the scheme boundaries, which exceeds capacity, depends on the scale and location of the exceedance. For example if the development is a small development (up to 15 household equivalent), close to either the water intake or the final wastewater pump station before the treatment plant, the length of pipe upgrade required would be minimal. However, if the site is close to the edge of the network and is a large development, the impact could be large as a long length of network would be required to upgrading. This is because the wastewater would flow through this long length of existing network to reach the final wastewater pump-station, or a long length of water main to produce adequate flow/pressure from the reservoir/water source. Servicing development outside the scheme boundary would add to the scale of any upgrades required.

Funding for infrastructure installation and upgrading

- 4.13** The Council adopts a LTP every three years. An annual plan is prepared on the years in between to determine projects, resourcing and budgets for the year. This is a blueprint for how the district will be run over the next 10 years and includes infrastructure upgrade projects.
- 4.14** The cost of the growth portion of projects within the LTP is recovered through development contributions. The level of service and renewals portion of projects are funded from QLDC rates. Development contributions are calculated on a scheme wide basis, e.g. Wanaka scheme, and are paid by developers as they connect to the infrastructure networks.
- 4.15** The timing of growth projects within the LTP are based on Council's growth projections. This can create funding issues because Council cannot be certain as to when or where the growth will occur. In time, most of this expenditure will be recovered from developers through the charging of development contributions, but in the interim a large proportion of this cost must be borrowed.
- 4.16** It is the Council's intention to develop the growth related capital projects on a 'just in time' basis. This means that additional capacity will not be provided until the Council is satisfied that it is absolutely necessary to do so. The timing of these projects can be adjusted within the annual plan/LTP process with approval from Council, depending on the need. However, unplanned and uncoordinated growth puts the Council in a difficult position to find funding for network upgrades.

Integrated development

- 4.17** In a simple sense, I understand that integrated land use planning involves ensuring that land use planning is consistent with infrastructure and financial planning in terms of the statutory framework, as I have discussed above. There are obvious benefits, particularly in terms of efficiencies, more predictable outcomes, and

cost savings to the wider community from ensuring consistency between these processes.

- 4.18** In QLDC's case, an integrated approach has resulted in a strategy for a more compact urban form through use of UGBs, along with the encouragement of intensification of land use in identified areas within the UGBs. This strategic approach has implications for infrastructure considerations.
- 4.19** A compact and integrated urban form maximises the efficiency of existing infrastructure and its operation, because the surplus in the network can be utilised and the operation of the network can be managed efficiently. This results in cost savings for ratepayers and potentially for the developer. Reduced distance to destinations, and more efficient use of embedded infrastructure reduces the cost to the community as a whole.
- 4.20** By contrast, less certainty about the location and form of future urban growth has the potential to create patterns of development that are less efficient, more expensive, and less likely to result in integrated, comprehensive urban communities.
- 4.21** Unplanned or sporadic urban development can cause a range of issues and problems. This can include localised impacts of new development resulting in the of reduction in levels of service. It also impacts on QLDC's ability to plan and build effective infrastructure networks.
- 4.22** The need for a more consolidated urban form has been a clear message that has emerged from public consultation undertaken by QLDC in recent years. The strategic approach to urban development proposed in the PDP provides for a balance of continued greenfield growth at the periphery of urban areas, and the more efficient use of the existing urban areas through identified areas for consolidation and intensification.
- 4.23** More compact urban areas also result in more efficient use of existing infrastructure (particularly where there is available

capacity), and lower overall costs where upgrades or extensions of existing infrastructure are required (compared to the provision of entirely new infrastructure). In addition, having a less sprawling infrastructure network means that the network can generally be more easily and efficiently maintained, which will generally increase asset life and performance, and result in lower overall costs to the community. In addition, more efficient use of existing infrastructure networks is likely to have environmental benefits, in terms of an overall reduction in the effects of building and maintaining additional infrastructure.

Water supply

- 4.24** I have assessed the submissions using the Subdivision Code of Practice, which states:

6.3.5 Design Criteria

6.3.5.1 Hydraulic design; The diameter, material type(s), and class of the water main shall be selected to ensure that:

- (a) The main has sufficient capacity to meet peak demands while maintaining minimum pressure;*
- (b) All consumers connected to the main receive at all times an adequate water supply and pressure; and*
- (c) The appropriate firefighting flows and pressures can be achieved.*

6.3.5.6 Minimum water demand

...

(c) Firefighting demands as specified in SNZ PAS 4509;

6.3.5.10 Design pressure shall be between 300 kPa and 900 kPa.

- 4.25** Currently there is no defined level of service for QLDC providing firefighting supply. Appropriate firefighting flows have been defined through the proposed level of service that would be required under the zone being pursued. Firefighting supplies commercial, industrial and residential zoned areas are designed to provide 60% of annual

peak demand in addition to fire flow, on a zone by zone basis. "FW" is a fire water classification used in the New Zealand Fire Service Firefighting Water Supplies Code of Practice, and provides the required water supply, in terms of pressure and flow for either reticulated or non-reticulated water systems.⁴

- 4.26** At a minimum QLDC will provide FW2 for residential areas and FW3 for commercial/industrial areas. The FW classification number increases as the fire hazard increases. For example, FW3 requirement provides a greater firefighting flow compared to FW2. Gradings above FW3 need to be investigated, priced and approved by the General Manager Property and Infrastructure or Council.
- 4.27** For sites serviceable by the Wanaka network I have assessed the location of the area in terms of elevation compared to Beacon Point Reservoir at approximately 386 m top water level elevation. The LTP includes Hawthenden Reservoir project, which is also at the same elevation as Beacon Point Reservoir. To ensure there is adequate water pressure under gravity feed, development should be restricted to elevations below approximately 346 m. The model refines this assumption in areas within the modelled network.
- 4.28** The location of the site in relation to similar zoned land has also been assessed. Generally an area can be more easily serviced if the adjacent area is zoned for the same level of service for firefighting supply. The models used to assess capacity currently use the ODP zoning.
- 4.29** Finally, if the site is within the modelled network the current and future growth scenarios firefighting supply results have been compared to what would be anticipated under the level of service firefighting classification from the proposed zoning. If there are any capacity issues it is checked whether these are planned to be resolved under the LTP.

Wastewater

4 Please refer to Section 4.2 of the National Fire Standards (SNZ PAS 4509:2008).

- 4.30** Anticipated wastewater loads are to be maintained within the piped network, the design flows as defined in the Subdivision Code of Practice include peak day factors, and dilution infiltration factors for wet weather.
- 4.31** I have assessed the location of the areas in terms of elevation compared to the existing network to ensure it can be transported under gravity flow.
- 4.32** Finally if the site is within the modelled network the current and future growth scenarios supply results have been used to assess if there are any identified downstream wastewater capacity constraints. If there are any capacity issues it is checked whether these are planned to be resolved under the LTP.

Stormwater

- 4.33** Stormwater should be addressed through low impact design as per the Subdivision Code of Practice. My evidence assumes that any stormwater requirements would be complied with at the time of subdivision or development.