

**BEFORE THE INDEPENDENT HEARING PANEL  
FOR THE QUEENSTOWN LAKES PROPOSED DISTRICT PLAN**

**Under the** Resource Management Act 1991  
**In the matter** of the Urban Intensification Variation to the proposed  
Queenstown Lakes District Plan

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**STATEMENT OF EVIDENCE OF RICHARD ROBERT POWELL  
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**INFRASTRUCTURE – THREE WATERS**

**6 June 2025**

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## **1. QUALIFICATIONS AND EXPERIENCE**

**1.1** My full name is Richard Robert Powell. I hold a degree in Land planning and Development from the University of Otago. I have 17 years' experience in Civil Engineering, 15 of those years working within the Queenstown Lakes District. I am employed as the Infrastructure Development Engineering Manager at Queenstown Lakes District Council (the **Council** or **QLDC**) and have been employed by QLDC since 2019.

**1.2** My current role at QLDC involves assessing how proposed developments can be serviced. This requires a degree of knowledge around existing constraints within the networks as well as being aware of programmed upgrade works. This is similar to the assessments I have undertaken to produce this evidence.

**1.3** I assisted QLDC with Stage 2 of the Proposed District Plan (**PDP**) by providing expert evidence. I filed evidence, and appeared before the Independent Hearing Panel, in relation to infrastructure and three waters matters arising from a number of Stage 2 rezoning requests. I have also provided expert evidence in relation to the Middleton Family Trust Environment Court appeal, seeking a rezoning at Tuckers Beach.

## **2. INTRODUCTION**

**2.1** I have been asked by the Council to provide evidence on three waters infrastructure (Water, Wastewater and Stormwater) related issues raised in submissions on the Urban Intensification Variation (**UIV**). Evidence on transport infrastructure is not included in this statement. Where I refer to infrastructure in my evidence I am referring to three waters infrastructure.

**2.2** I will firstly provide an overview of the intensification proposed and the implications it will have for servicing it.

**2.3** I will then cover the relief sought by submissions, as it relates to three waters infrastructure. I have grouped my analysis of the matters raised in submissions into three topics as follows:

- (a) Increased intensification;
- (b) Rezoning requests; and
- (c) Less intensification.

**2.4** The key documents I have used, or referred to, while preparing this statement of evidence are:

- (a) Queenstown Lakes Operative District Plan (**ODP**);
- (b) Queenstown Lakes PDP;
- (c) National Policy Statement on Urban Development 2020 (**NPS-UD**);
- (d) Queenstown Lakes Spatial Plan 2021 – 2023 (**2021 Spatial Plan**);
- (e) QLDC Ten Year Plan 2021-2031 (**LTP**);
- (f) QLDC Annual Plan 2023-2024;
- (g) Land Development and Subdivision Code of Practice 2020, 2025.

**2.5** 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 2023 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. The Council, as my employer, has authorised that I give this evidence on its behalf.

### **3. EXECUTIVE SUMMARY**

**3.1** Increasing the density in the areas proposed in the UIV and as recommended to be amended by the S42A reports, will over time place additional pressure on the Council's existing three waters infrastructure. Many of the areas already have projects budgeted for and scheduled within the LTP. These upgrades are to accommodate future growth, and if the future growth rate is increased as a result of enabling increased intensification, these projects can be assessed to ensure they are sized and timed appropriately.

- 3.2** In respect of potable water and wastewater, if the capacity of the existing/planned projects is required to be increased due to increased development, the cost to achieve this should be offset by the increased revenue (Development Contributions) that will result from increased development.
- 3.3** While the need to advance many of these projects are low, based on the expected number of additional units the UIV would give opportunity to development in the short term, as set out in Ms Fairgray's evidence, there is a risk that the cumulative effect of additional growth that could result from the UIV could require these capacity increasing projects to be completed sooner, to keep up with the demand. The acceleration of a project may not always be possible as there is potential to hit resource and funding limits for the design and delivery of those projects, although I acknowledge that legislative change is underway in respect of water services, that may make funding more agile in the future).
- 3.4** To mitigate the effects of not being able to advance the timing of projects that will provide additional capacity within the headworks infrastructure and ensuring a development does not overwhelm the existing distribution/collection infrastructure, it is my view that the capacity of the infrastructure should be a matter of discretion for all land use consents. This is in addition to subdivision consents since it is already a necessary matter to be considered for any subdivision consent that would be processed under the UIV. This will give Council the opportunity to confirm capacity is available, or confirm it is not available through a resource consent application.
- 3.5** I therefore support the inclusion of the notified matters of discretion, for land use as notified in the LDSR, MDR and HDR zones, that reads as follows:
- “capacity of existing or planned infrastructure/servicing”*
- 3.6** No changes are in my view needed to the subdivision provisions, as the CoP already addresses infrastructure matters.

- 3.7** While the s32 report for the UIV, and my evidence acknowledges that there is not capacity within the current wastewater and water supply systems for all development that would be enabled by the UIV changes to the PDP (and up zonings made), it is important to consider this in the context that not all development opportunity will be taken up, and certainly won't be taken up in the next three years. As I set out in section 4 of this evidence, how the Council prioritises, provides and funds the required upgrades is dependent on the Council's LTP and budget, which gets updated every three years. Following the final decisions on the UIV, infrastructure planning and funding decisions for urban development will need to take the density enabled by the UIV into account going forward.
- 3.8** For stormwater, in accordance with the Council's Land Development and Subdivision Code of Practice 2025 (**CoP**), Council requires all developments to retain stormwater and release at pre-development flow rates or demonstrate how the stormwater infrastructure could or could not accommodate any additional flows.
- 3.9** The MoD mentioned above therefore appropriately cover stormwater as well.

#### **4. INTENSIFICATION PROPOSED THROUGH UIV**

##### **Intensification enabled by the UIV**

- 4.1** The UIV will enable intensification of development across urban zoned land identified within the PDP.
- 4.2** I understand that the UIV is enabling additional intensification in commercially zoned areas (within the Queenstown Town Centre Zone (**QTCZ**), Wānaka Town Centre Zone (**WTCZ**), Business Mixed Use Zone (**BMUZ**), and the Local Shopping Centre Zone (**LSCZ**)) and that unless subdivision is applied for, an applicant for land use consent will not be required to demonstrate whether there is three waters infrastructure capacity (apart from demonstrating how pre-development flows of stormwater run-off is retained). I understand that this is also currently the case under the existing PDP provisions. However, given that the locations of these zones

are known and concentrated in specific areas, the Council can plan for increased demand in these areas for Headworks infrastructure.

- 4.3** I understand that the notified UIV is enabling additional intensification within the residential zones, both through expanding the footprints of both the Medium (**MDRZ**) and High Density Residential Zones (**HDRZ**), and through enabling additional density within these zones. Also, of note is the removal of the land use maximum site density standard within the MDRZ (PDP MDRZ Standard 8.5.5). I also understand that the maximum density standard (notified LDSRZ Standard 7.5.9) within the Lower Density Suburban Residential Zone (**LDSRZ**) is to be 300m<sup>2</sup> calculated over an entire site. For the LDSRZ, while it could make infill development more likely to be taken up, there would be no change in how the Council would plan for infrastructure, as 1 dwelling unit per 300m<sup>2</sup> is already enabled in the PDP LDSRZ and anticipated by Council's demand projections (albeit as far as existing LDSRZ zoned land in the PDP). I also understand that in the three relevant residential zones (LDSRZ, MDRZ and HDRZ), a matter of discretion - *capacity of existing or planned infrastructure/servicing* – has been notified in the relevant land use rules.

#### **General impact of intensification on infrastructure**

- 4.4** Where further intensification is enabled, this will need to be supported by planning for, and providing, adequate infrastructure.
- 4.5** From a broader infrastructure network strategy point of view the intensification enabled by the UIV will, over time, place additional demand on the three waters infrastructure and will need to be accounted for in future planned upgrades to those networks.
- 4.6** Increases in intensification can be supported by upgrades (i.e., increasing capacity) to two categories of infrastructure:
- (a) **Headworks infrastructure** – which consists of water sources and treatment plants, wastewater treatment plants, and trunk transmission pipelines. Headworks infrastructure is infrastructure that needs to deal

with the increased flows from population growth wherever that growth occurs within the individual catchment; and

- (b) **Collection/distribution infrastructure<sup>1</sup>** – which is the more local infrastructure that collects and distributes 3 waters. The required upgrades to this type of infrastructure are more dependent on the location of where intensification occurs and when.

**4.7** Capacity within the Council’s infrastructure systems required for the rate of population growth is guided by the 30-year infrastructure strategy, which in turn is guided by the 2021 Spatial Plan, the District Plan, and is informed by projected demand. This allows the Council to plan to increase capacity within the Headworks Infrastructure for individual catchments based on the expected flows from the expected population growth. In cases where the Collection and distribution infrastructure serves an area where further development is expected to occur and there is a known capacity constraint, a project to remove that constraint can be proposed for the LTP through a point of entry process, which will then be considered, by Council, to be added to the LTP and allocated against a particular timeframe.

**4.8** How the Council prioritises, provides and funds the required upgrades is dependent on the Council’s LTP and budget, which gets updated every three years.

**4.9** To plan for and implement any required upgrades on the Headworks Infrastructure due to enabling additional intensification, the rate and location of the uptake of intensification must be sufficiently known/understood. If there is no overall increase to the expected demand the current planned upgrades to the Headworks infrastructure will suffice. If the uptake of enabled intensification increases the demand, it will mean that planned upgrades will need to happen sooner than currently planned or in extreme cases could change the way Council services a particular catchment.

**4.10** Funding of these potential upgrades to the Headworks infrastructure would be identified and programmed within the LTP, the cost of the projects within the LTP

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1 ‘Collection’ relates to collection of wastewater and ‘distribution’ relates to distributing water supply.

is debt funded with that debt being paid for over time through the collections of Development Contributions (DC). A limit on funding within the LTP could restrict Council's ability to provide the required upgrades when needed for each catchment.

**4.11** DCs are calculated by dividing the overall cost of providing infrastructure capacity for the past 10 years (debt funded projects) and the overall cost of providing infrastructure capacity for the next 10 years (LTP) (20 total years), divided by the total expected Lots created over that 20 year period. This equates to the DC dollar figure per lot. Increasing the cost of a capital project that also increases the Lot yield can generally be offset by the DC revenue from the additional Lots it creates. If not a perfect off set the DC figure could either go up or come down depending in the economies of scale that can be achieved by upsizing the project.

**4.12** For Collection/distribution infrastructure the requirement for upgrades is often more acute and triggered by the individual development. In these cases (and where there is no upgrade provisioned for within the LTP) it is the responsibility of the developer to pay for and construct those upgrades, which will be required as a condition of their resource consent. The individual developer has the option to make a submission on the LTP to include the upgrade as a project or negotiate with Council for a cost share agreement if there are wider benefits or if the upgrade provides further capacity for further development within the catchment.

**4.13** Irrespective of how the Council plans for and provides infrastructure, all subdivision consents or land use consents (where required for intensification) under the District Plan should demonstrate that there is capacity within the infrastructure to meet the minimum level of service to each of the lots or the land use. This includes modelling to identify any constraints and can include modelling of potential upgrades required to accommodate the proposed development as well as confirming there is a feasible method of attenuating stormwater within the site if needed. Increasing the permitted density through the UIV would allow higher levels of development to connect to services/infrastructure as of right that may not have been intended to meet the higher demand. It would also mean that the bar is raised for the level of density that would be subject to consent requirements that

includes matters of discretion related to servicing. Having servicing as a matter of discretion will allow Council to track the rate of development within certain catchments and programme upgrades accordingly.

**4.14** However, for land use consents within these areas I consider it necessary that servicing is a matter of discretion to ensure the Collection/distribution infrastructure as assessed and appropriately mitigated through consent conditions. The notified matter of discretion for land use consents, in each of the LDSRZ, MDRZ and HDRZ is therefore supported.

**4.15** Following the final decisions on the UIV, infrastructure planning and funding decisions for these zones will need to take the density enabled by the UIV into account going forward. I will discuss constraints for these areas (if any) in subsequent sections of my evidence.

**4.16** For stormwater, however, in accordance with the CoP 2025, Council requires all developments to retain stormwater and release at pre-development flow rates or demonstrate how the stormwater infrastructure could or could not accommodate any additional flows.

**4.17** For the MDRZ and HDRZ, there will need to be a change in the way the Council would plan for infrastructure, given the MDRZ land use density standard<sup>2</sup> is proposed to be removed, and the footprint of the HDRZ is proposed to be expanded, meaning intensification could occur without subdivision consent across a wider area. The ability to ensure that there is infrastructure capacity for the proposed development in both of these zones could therefore be compromised, unless a trigger for a capacity assessment is included for when intensification is proposed. Given the extent of these zones, and that in most cases redevelopment would be required to achieve the anticipated intensification, it is harder to service and plan for three waters infrastructure, without knowing where and when demand would eventuate. I therefore consider it important to retain the notified

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2 Via notified deletion of PDP Rule 8.5.5 which prescribes a maximum site density 1 residential unit per 250m<sup>2</sup> net site area. Noting that PDP Rule 8.4.6 and notified Rule 8.4.10 are still proposed to apply. Notified Rule 8.4.10 lists 'capacity of existing and planned infrastructure' as a matter of discretion when four or more units are proposed on a site (with a more stringent requirement applied to Arrowtown).

matters of discretion as outlined above for individual developments to consider infrastructure capacities and for them to be able to propose suitable upgrades if needed.

## **5. EXISTING AND PLANNED INFRASTRUCTURE IN THE DISTRICT**

### **Queenstown Town Centre and Surrounding catchment**

#### *Water Supply*

**5.1** The Queenstown Town Centre sits at a junction of a wider water supply network with a major reservoir and water source located to the South-west that supplies the Queenstown Town Centre as well as areas to the North (Gorge Rd), the East (Frankton Rd) and the South-west (Fernhill Sunshine Bay). As such the size of the distribution infrastructure within the Queenstown Town Centre is relatively large and could service both the notified, and the additional intensification proposed in response to submissions, in the s42A Reports.

**5.2** To allow for the increased demand that comes with population growth, an upgrade to the primary water source, being the Two Mile Water Intake, is programmed within the LTP for years 2033-2034, referred to as the Two Mile Supply Upgrades. This upgrade would provide additional capacity to cater for growth in this location, however, this upgrade may be required to be completed sooner if growth rates are greater than what was anticipated at the time the need for the Two Mile Supply Upgrade project was scheduled.

#### *Wastewater*

**5.3** The wastewater generated within the Queenstown Town Centre drains to a series of pumpstations that feed a trunk main that runs adjacent to the Frankton Track and then on to the Shotover Wastewater Treatment Plant. While the existing Frankton Track trunk main is near capacity, a project called CBD to Frankton Conveyance within the LTP, which is to install a second pipe along this alignment, is currently scheduled to be complete by 2028. This upgrade would provide significant additional capacity to cater for growth in this location.

### *Stormwater*

- 5.4** A natural water course (Horne Creek) is the primary stormwater drain for the Queenstown Town Centre.
- 5.5** Section 4.3.5 of the CoP requires development to maintain pre-development stormwater runoff rates (e.g, neutrality). This means that the flow rates entering Horne Creek should not increase from what it receives now as a result of development from either what is currently enabled in the PDP or development under the UIV, due to the inclusion of servicing of three waters is a matter of discretion for land use, in the relevant zones.
- 5.6** While increased density under the UIV would not necessarily increase stormwater run-off compared to what is already allowed, the above requirement will ensure that development of any density will not accumulatively add to Horne Creek increasing the risk of flooding during large events. This requirement is also for developments that drain stormwater to any of the number of (consented) stormwater discharge points at the lakes edge with the difference being that if attenuation within the development, used to maintain predevelopment flows, is not practical, then the developer has the opportunity (at its cost) to upgrade the network to ensure it has capacity to get the increased flows to the receiving water body.
- 5.7** There are currently no specific projects budgeted for within the LTP to provide for additional capacity within the stormwater networks within this area therefore there is a reliance on developments to mitigate against their own specific stormwater effects.

### **Frankton and Frankton Road**

#### *Water Supply*

- 5.8** Water supply for this area is provided from two directions, west from the Queenstown Town Centre and east from the Shotover Country Bore Field. Upgrades to support increased demand in this area include additional reservoir storage at the Quail Rise Reservoir site. This is a project (called Quail Rise Reservoir) already within the LTP and is programmed for construction in years 2029 – 2031.

This upgrade would provide additional capacity to cater for growth in this location. The need for the Quail Rise Reservoir project and its scheduled timing is driven by the need to increase reservoir storage for expected growth in the eastern and southern growth corridors identified within the Spatial Plan. The potential increased demand that the UIV could generate in this area, as detailed within Ms Fairgray's evidence is unlikely to need to accelerate this project.

#### *Wastewater*

- 5.9** The wastewater in this area drains to a number of pumpstations that in turn pump to the Shotover Wastewater Treatment Plant. The programmed CBD to Frankton Conveyance project will provide additional capacity within the existing Frankton Track Trunk Main that currently services Frankton Road by removing flows that come from the Queenstown Town Centre and surrounding catchment (as per above). A number of other upgrades are also planned and budgeted for within the LTP for Frankton Wastewater Network including upgrades to the Remarkables Park Pump Station (2030), increasing the conveyance capacity with the Frankton Beach to Shotover Conveyance project (2027-2030) and the Hawthorne Drive Capacity project (2029).
- 5.10** These upgrades will provide additional capacity to cater for growth in this location, however, a further increase in demand would mean that these upgrades will reach capacity sooner than currently expected and further investment into additional upgrades would be needed sooner.

#### *Stormwater*

- 5.11** Both the Frankton Road and Frankton Flats areas drain stormwater via a series of piped networks that discharge to either Lake Wakatipu or the Kawarau River. Section 4.3.5 of the CoP requires development to maintain pre-development stormwater runoff rates (e.g., neutrality), meaning the flow rates entering these networks will not increase from the flows they receive now. This requirement ensures that any development accounts for their own increase in stormwater runoff flow rates by either attenuating stormwater flows within their development or upgrading the downstream network. The cost of this would fall on the developer.

- 5.12** This requirement for neutrality (or upgrade at developers cost) will apply to any development needing a resource consent with the servicing of 3 waters as a matter of discretion. This therefore is engaged across all locations outlined below and I do not repeat each time but rather comment as necessary.

### **Wānaka Town Centre and Surrounding catchment**

#### *Water Supply*

- 5.13** This area is primarily supplied with water from an existing lake source and reservoir located immediately north of the Wānaka Town Centre and further supported by the Beacon Point reservoir located in North Wanaka.
- 5.14** To allow for the increased demand that comes with population growth, upgrades including additional water storage are planned and budgeted within the LTP for years 2029 –2031 under Wanaka Storage Upgrades as well as Beacon Point Supply Upgrades in years 2027 – 2030. These upgrades have been scheduled to ensure there is adequate supply and storage of potable water available as the increasing demand requires it. The potential increased demand that the UIV could generate as detailed within Ms Fairgray’s evidence is unlikely to need to accelerate these projects.

#### *Wastewater*

- 5.15** The Wānaka Town Centre drains wastewater to a number of pump stations which in turn sends the wastewater to a network located in Riverbank Road and then on to the Project Pure Treatment Plant.
- 5.16** Upgrades to the Southwest Wānaka Conveyance Scheme and the North Wānaka Conveyance Scheme, to provide additional conveyance capacity for the increasing demand from growth, are planned and budgeted for within the LTP for construction in years 2026 – 2028. As these projects are already scheduled in the short term it is unlikely that these project would need to be accelerated due to the UIV.

### *Stormwater*

**5.17** A natural water course (Bullock Creek) is the primary stormwater drain for the Wānaka Town Centre. As explained above in the Frankton and Frankton Road section, section 4.3.5 of the CoP ensures neutrality and flow rates entering Bullock Creek will not increase as a result of development enabled by the UIV. This requirement is also relevant for developments that drain stormwater to any of the number of stormwater discharge points at the lakes edge with the difference being that if attenuation within the development, used to maintain pre-development flows, is not practical, the development has the opportunity to upgrade the network to ensure it has capacity to get the increased flows to the receiving water body.

### **Fernhill and Sunshine Bay**

#### *Water Supply*

**5.18** Water for this area is supplied from the Fernhill Reservoir and is sourced from the 2 Mile water intake. The infrastructure is located at the northern end of this area. As this is an already developed area the current reticulation system is generally sized for the existing demand from existing properties and for what can be further developed under the PDP. Depending on where in this area increased intensification is taken up there could be upgrades required to the distribution network to supply parts of the Fernhill and Sunshine Bay area.

**5.19** An upgrade to the source, called Two Mile Supply Upgrades within the LTP, which is to be constructed between 2032-2034. This upgrade is to account for growth, not necessarily for this specific area but for the entire catchment it supplies. As the drivers for the timing of is project are from a much wider catchment it is unlikely the increased development through the UIV would require this project to be accelerated.

#### *Wastewater*

**5.20** Wastewater generated from the Fernhill and Sunshine Bay area drains and connects at a number of points to a collector main that runs along the Glenorchy – Queenstown Road. The reticulation feeding this collector main is typically sized for existing flows with some available capacity for growth under the current (PDP)

density rules. There are no upgrades to the reticulated wastewater infrastructure in this area programmed or budgeted for within the LTP. If this area were to support higher densities than currently allowed in the existing PDP, it would be down to the particular developer to ensure the reticulated wastewater infrastructure has sufficient capacity. Any upgrades to increase capacity within the downstream network may be needed sooner and potentially resized.

#### *Stormwater*

**5.21** The Fernhill and Sunshine Bay area has several natural depressions and channels where stormwater from the upper catchment flows. Generally, stormwater generated from the developed areas are piped to the nearest channel within the area. Section 4.3.5 of the CoP again ensures neutrality, as explained above in the Frankton and Frankton Road section of my evidence.

#### **Arrowtown**

##### *Water supply*

**5.22** Arrowtown is serviced with water from a series of water bores located adjacent to Bush Creek. The water from this source is then pumped up to a reservoir at the northern end of the township which is in turn distributed via gravity. Upgrades to the reservoir capacity and demand management measures are budgeted for and scheduled within the LTP for 2029 – 2031 and 2027 – 2031 respectively. These upgrades are not intended to increase the overall capacity of the network but rather to bring the network up to meet QLDC's minimum level of service when it comes to reservoir capacity. When it come to the distribution network any localised capacity constraints identified at the time of consent will be the responsibility of the developer to remove that constraint by undertaking any required upgrades.

##### *Wastewater*

**5.23** The wastewater infrastructure within Arrowtown is primarily a gravity system that drains to a series of pump stations. The wastewater from these pumpstations flow through a combination of pumped and gravity networks ending up at the Shotover Wastewater Treatment Plant. Upgrades to increase the capacity of the conveyance infrastructure from the township to the Shotover Wastewater Treatment Plant is budgeted for and scheduled within the LTP for 2031 – 2033. This will increase the

amount of wastewater that can leave Arrowtown however any localised capacity constraints identified within the collection network, at the time of consent, will be the responsibility of the developer to undertake the necessary upgrades to remove that constraint.

#### *Stormwater*

**5.24** Stormwater within Arrowtown is generated from a number of discrete catchments that generally flow towards the Arrow River. Section 4.3.5 of the SoP again ensures neutrality, as explained above in the Frankton and Frankton Road section of my evidence.

#### **Hāwea**

##### *Water supply*

**5.25** Hāwea is serviced with water from a series of water bores located at the edge of Lake Hāwea. The water from this source is then pumped to the west across the Lake Hāwea Control Structure (dam) up to a reservoir on the hillside west of the township which is in turn distributed via gravity to the individual properties. A series of upgrades to the Hāwea Water Supply Scheme are budgeted for and scheduled within the LTP from 2026 through to 2031. These projects are intended to allow for growth within the current scheme boundary, the spatial plan shows an area to the south of Hāwea to be developed that will require significant upgrades to the existing network or a new network to supply that area. As this is yet to be decided or sized it will be possible to incorporate any additional population that would be provided by the UIV through the detailed design of that project.

##### *Wastewater*

**5.26** Wastewater from within the Hāwea Township is generally collected via a gravity system that drains to a series of pump stations that direct the flows to the Hāwea Wastewater Treatment Plant located to the south-west of the township.

**5.27** The existing Hāwea Wastewater Treatment Plant is at capacity. A project is currently underway to provide a pipe to transport flows from Hāwea to Wānaka's centralised wastewater treatment plant located near the Wānaka Airport (Project Pure). This project will take all existing flows from the Hāwea Wastewater

Treatment Plant, with the Hāwea plant being decommissioned, as well as the expected flows from growth area identified within the Spatial Plan to the south of the existing township. This project is scheduled to be complete by 2029.

#### *Stormwater*

**5.28** Stormwater within Hāwea is generated from a number of discrete catchments that generally flow towards Lake Hāwea via a series of pipes and overland swales and a high reliance on on-site disposal options. Section 4.3.5 of the CoP again ensures neutrality, as explained above in the Frankton and Frankton Road section of my evidence.

#### **Kelvin Peninsula**

##### *Water supply*

**5.29** The Kelvin Peninsula is serviced with water sourced from the Shotover Country Bore Field. Water from this source is provided to the Kelvin Heights Reservoir and in turn distributed via gravity to individual properties. There are no budgeted or scheduled upgrades to the Kelvin Heights Water supply scheme however the last large tract of land to be developed in this area will need major upgrades to increase the water supply capacity, this includes a new reservoir. If that land owner decides to develop to the increased densities in this area, the already required upgrades can be designed to accommodate the higher expected population this will be a requirement of the developer to provide for unless there is a wider benefit that could be realised by QLDC funding additional capacity.

##### *Wastewater*

**5.30** Wastewater from within the Kelvin Peninsula is generally collected via a gravity system that drains to a series of pump stations that directs the flows east across the Kawarau River and on to the Shotover Wastewater Treatment Plant. Alike for Kelvin Peninsula water supply, there are no budgeted or scheduled upgrades to the Kelvin Heights Wastewater scheme and so if that land owner decides to develop to the increased densities in this area, upgrades will be the requirement of the developer to provide unless there is a wider benefit that could be realised by QLDC funding additional capacity.

### *Stormwater*

**5.31** Stormwater within the Kelvin Peninsula is generated from a number of discrete catchments that generally flow towards Lake Wakatipu via a series of pipes and overland swales. Section 4.3.5 of the CoP again ensures neutrality, as explained above in the Frankton and Frankton Road section of my evidence.

### **Arthurs point***Water supply*

**5.32** Arthurs Point is serviced with water from a water bore located adjacent to the Shotover River. The water from this source is then pumped up to a reservoir at the southern end of the area which is in turn distributed via gravity to the individual properties. Upgrades to the water supply system including increased reservoir storage is budgeted for and scheduled within the LTP for 2029 – 2031. This project relates more to providing additional resilience by having storage closer to where the demand is however this solution can be scaled to accommodate future growth either from what is allowed under the existing PDP or through the UIV.

### *Wastewater*

**5.33** The wastewater infrastructure within Arthurs Point is primarily a gravity system that drains to a pump station that moves the wastewater south down Gorge Road then through a series of pumpstations before reaching the Shotover Wastewater Treatment Plant. Recent modelling of this area has shown that the wastewater main within Arthurs Point Road is at capacity. Investigations within Council are underway to understand what upgrades are required however there is no budget for these upgrades. Because there is insufficient capacity for already zoned areas to develop, a solution is required. This solution can be sized to accommodate further intensification however as the capacity does not currently exist, infrastructure capacity needs to be a matter of discretion for land use consents within this area.

### *Stormwater*

**5.34** Stormwater within Arthurs Point is generated from a number of discrete catchments that generally flow towards the Shotover River via a series of pipes and overland swales. Section 4.3.5 of the CoP again ensures neutrality, as explained above in the Frankton and Frankton Road section of my evidence.

**5.35** With this in mind, I step through a number of submissions that have been received that support or oppose the intensification enabled by the notified UIV.

## **6. SUBMISSIONS SEEKING INCREASED INTENSIFICATION**

### **General**

**6.1** A number of submitters seek increased intensification compared to the notified UIV, including the following submissions:

- (a) Waka Kotahi/NZ Transport Agency (200.14 -19);
- (b) Ministry of Housing and Urban Development (**MHUD**) (800);
- (c) NZ Infrastructure Commission (1238); and
- (d) Canterbury Helicopters Ltd (1040.4).

**6.2** The above submissions are generally in support of further intensification with most of them requesting a more ambitious approach to density within town centres and other accessible areas.

**6.3** Allowing increases to density within existing town centres and other accessible areas will likely result in developments having to increase the localised collection and distribution networks as they will be connecting to infrastructure that was not intended to service demand from the increased population. Compared to greenfield developments, installing new or retrofitting larger infrastructure within already build up areas often comes with additional cost and risks. For this reason, I consider it essential that capacity within the three waters infrastructure should be a matter of discretion for land use consents if applied for under the proposed UIV. This will give Council the opportunity to confirm capacity is available or confirm it is not available, and if not, a consent may be able to be declined.

**6.4** With regard to the Headworks infrastructure, as detailed in the Existing and Planned Infrastructure section of my evidence above there are a number of upgrades that are already planned and budgeted for within the LTP to account for growth within the catchments they service. Depending on the uptake of higher densities these upgrades could be required to happen sooner, therefore in my view

the matter of discretion should be used to decline consent (or impose conditions) because of capacity at the headworks infrastructure.

## **7. SUBMISSIONS SEEKING INTENSIFICATION OF URBAN GREENFIELD LAND**

**7.1** A large number of submissions seek that instead of intensification in locations that are already developed, intensification should be focussed in greenfield areas that are already zoned for urban development, but not yet developed, or not yet fully developed. Their reasons include that:

- (a) Increased density can be more readily provided; and
- (b) Infrastructure can be provided more effectively by sizing infrastructure appropriately from the beginning rather than upgrading or retrofitting infrastructure to existing developed areas.

**7.2** I agree with the submissions in that the Collection and distribution infrastructure is most efficient when providing for areas of high density from the start, rather than retrofitting larger infrastructure at a later stage. From an infrastructure perspective, urban zoned greenfield sites should be prioritised over areas that are already developed as these areas would see a greater and more immediate use of the higher densities. The benefit of this on infrastructure is faster utilisation and payback through Development Contributions. However, where there is capacity within existing infrastructure, it is more efficient for that capacity to be taken up, before new infrastructure is funded, consented and built.

**7.3** I focus my analysis of these submissions on the broader currently urban zoned Greenfield areas where more intensification is sought, and on how much more intensification could or could not be serviced by three waters Headworks infrastructure, and the potential timing thereof.

### **Infrastructure at Remarkables Park and Frankton Flats (ODP zones)**

**7.4** While I am advised that submissions on the Frankton Flats (ODP) zone are outside of scope, they are in the general vicinity of Remarkables Park so I have considered the area collectively. For both potable water and wastewater infrastructure, planned and budgeted projects to increase capacity to meet the increasing

demands from growth are included within the current LTP. Specifically, this includes upgrades to the Wastewater Pump Stations and conveyance lines as well as increased water storage at the Quail Rise Reservoir. The drivers for the timing of these projects relate to growth within this area and outside of this area as they are part of a much wider network. The rate of growth within the areas that are supplied by these networks are monitored to ensure the timing of the upgrades meets the demand. Any increase in the growth rate due to the UIV would be identified through this monitoring and incorporated in the planning and scheduling of the projects.

### **Infrastructure at Three Parks**

#### *Water Supply*

- 7.5** This area is well connected to the wider water supply network as described in the Existing and Proposed Infrastructure in the District / General section above, and is primarily serviced by a trunk main that bisects this area through Sir Tim Wallace Drive. Ensuring the reticulation from this trunk main to the development area is sized appropriately for the enabled density through the UIV will be the responsibility of the developer to install at the time that development occurs. Some of this area already has water supply infrastructure installed, however, capacity within the existing infrastructure should not be assumed to be sized for the higher densities allowed through the UIV therefore three waters servicing for land use consents should be a matter of discretion.
- 7.6** There is a project budgeted within the LTP for increasing the storage capacity within the Wānaka water supply network, this is scheduled for construction 2029 – 2031. This upgrade is to account for growth within this area as well as the wider Wanaka area. As the drivers for the timing of this project are much larger than the expected increase from the UIV as projected within Ms Fairgrey’s evidence it is unlikely that this project would need to be completed sooner.

#### *Wastewater*

- 7.7** This area drains wastewater through a reticulated network to a collector/trunk main located along Riverbank Road. This main also drains wastewater from Western Wanaka and the Wanaka Town Centre. Upgrades to the conveyance

infrastructure and the Project Pure Treatment Plant are budgeted for within the LTP and scheduled for 2026 – 2028 and 2029 – 2030 respectively. As with water, the planned upgrades are to account for growth from this area as well as wider areas contributing to this network within these areas. Due to the scheduled timing of these upgrades, the expected increase from the UIV as projected within Ms Fairgrey’s evidence is unlikely to mean that this project would need to be completed sooner.

#### *Stormwater*

- 7.8** The already developed areas of Three Parks use a series of ground soakage devices as well as attenuation ponds prior to discharging to a large stormwater main (Cardrona Bypass Line) running through this area which discharges to the Cardrona River to the south. The CoP will ensure stormwater runoff neutrality.

#### **Infrastructure at Lake Hāwea – Local Shopping Centre Zone**

- 7.9** This is a very small area with approximately half of this zone already developed with a new (2024) supermarket. Due to the size, it is anticipated that the existing infrastructure, barring some localised upgrades, would be able to service increased intensification in this small zone for water and wastewater. The CoP again ensures stormwater runoff neutrality.

### **8. SUBMISSIONS SEEKING INTENSIFICATION OF RURAL GREENFIELD LAND**

- 8.1** A number of submissions seek that instead of intensification of already developed areas, intensification should be focussed in greenfield areas that are not currently zoned for urban development. I understand that the rezoning of rural zoned land for urban zoning is beyond the scope of the UIV, which is discussed by Ms Bowbyes in her evidence and will be addressed in legal submissions.

- 8.2** While not in scope of the UIV, I note that - as set out earlier in relation to urban greenfield sites - with regards to infrastructure - the argument has been made that intensifying greenfield sites will allow for greater uptake of the allowed densities and that more efficiencies can be achieved by providing for adequately sized

infrastructure from the beginning rather than retrofitting or upgrading infrastructure through existing developed areas. As set out above I agree with this.

- 8.3** However, I do not consider this argument applies to not yet zoned greenfield sites, *unless* the rural greenfield site is large enough to hit a critical mass where standalone (or site specific) services are economical. This is because the efficiencies achieved by allowing higher densities within greenfield sites are only possible when the site is located in close proximity to existing infrastructure where setting up new Headworks infrastructure can be avoided, and rather only be upgraded if necessary.

## **9. SUBMISSIONS SEEKING LESS INTENSIFICATION**

### **General**

- 9.1** Many submissions have sought that some areas be excluded from intensification due to infrastructure constraints. The key infrastructure related reasons for seeking a less intensive zone framework in specific areas, are that:

- (a) intensification should be directed to areas where infrastructure has been or can be easily upgraded to accommodate further intensified development;
- (b) density should be consistent with existing or planned capacity; and
- (c) further density should not be allowed where infrastructure is already at or close to capacity.

- 9.2** I am of the view that using capacity within existing infrastructure first (i.e., in urban areas) is an efficient way of servicing development and from an infrastructure efficiency perspective these areas should be prioritised. I consider that these areas are often naturally intensified first due to the infrastructure capacity available allowing for a smoother consenting process by having confirmation of capacity

readily available and no consent conditions requiring the completion of large scale infrastructure.

A handwritten signature in black ink, appearing to read 'R. Powell', written in a cursive style.

**Richard Powell**

**6 June 2025**