In the matter	of the Resource Management Act 1991
And	
In the matter	a resource consent application by Queenstown Lakes District Council to discharge treated wastewater to land for the purpose of disposing of wastewater from Kingston Township

Statement of evidence of Timothy Court-Patience

23 December 2021

MC.

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Statement of evidence of Timothy Court-Patience

1 Executive summary

1.1 Kingston has been identified as an area that can be used to develop critical housing infrastructure for the growing Queenstown Lakes District. The existing township, located at the southern end of Lake Wakatipu, has approximately 230 existing dwellings occupied by both permanent and semi-permanent residents.

1.2 Zoning for Kingston was revised under Plan Change 25 – Kingston Village Special Zone (KVSZ) to enable suitably coordinated residential development. However, any development is limited due to the lack of supporting three waters infrastructure (wastewater, potable water and stormwater).

1.3 Most existing dwellings within Kingston source water individually via roof catchments and shallow bores, while wastewater is managed via individual septic tank and on-site disposal systems. These arrangements are not sustainable and will not be accepted solutions for large-scale housing developments. Therefore, to unlock developable land and mitigate public health risks, new community schemes for wastewater, potable water and stormwater are required.

1.4 QLDC is to deliver a communal wastewater and potable water scheme that supports housing within the new development (~750 dwellings); whilst also allowing for the future connection of new (~200) and existing (~230) houses within the Kingston Township (~1,200 dwellings in total). Detailed design and the Notice of Requirement for the water scheme (treatment plant and storage) is 95% complete; while the wastewater scheme developed design is complete and the Notice of Requirement application has been submitted.

1.5 As part of the delivery of the wastewater scheme, QLDC seeks to obtain a discharge consent for wastewater dispersal into land, which is the subject of this application. Affected Party Approvals (APAs) have been obtained from Te Ao Marama Inc and Aukaha on behalf on the rūnanga whose takiwā includes the site the application is within. APAs have also been received from Fish and Game and Land Information New Zealand (LINZ).

1.6 Funding for these significant public works has been enabled through the New Zealand Government's Housing Infrastructure Fund (HIF). This fund provides interest-free loans to high-growth councils for core infrastructure to support residential land development. A Detailed Business Case was completed in March 2018 to support QLDC's application for the HIF loan; as well as to demonstrate alignment with QLDC's infrastructure development objectives for wastewater and potable water within its network.

1.7 A development agreement has been established between QLDC and a developer (Kingston Village Ltd, KVL) that sets out the requirements of each party in working towards providing approximately 750 new residential dwellings in Kingston.

2 Qualifications and experience

2.1 My full name is Timothy Court-Patience. I am a civil engineer and hold a Bachelor of Engineering (BE (Hons) Civil) and a Master of Engineering Studies from the University of Canterbury. I have 14 years' experience as an engineer working in New Zealand and I am a member of Engineering New Zealand.

2.2 I have been an employee of Pinnacles Civil Limited, a civil engineering consultancy company for twenty months. Prior to that I was previously employed by AECOM for 5 years in a similar project management role delivering civil infrastructure.

3 Role in the project and scope of evidence

Role in the project

3.1 I was engaged by the QLDC Project Management Office in 2018 in the role of Project Manager. I am responsible for the delivery of the Kingston 3 Waters Scheme including the water treatment plant and reservoirs; stormwater trunk mains; and proposed wastewater treatment plant and dispersal area (including the associated discharge consent, which is the subject of this application).

3.2 I became involved in the Project following the approval of the detailed business case and the interest free loan facility secured through the HIF.

3.3 My role includes coordinating the technical inputs required to obtain the discharge consent for discharge of treated domestic effluent to land from the Otago Regional Council. I have been responsible for engaging and briefing the expert team who have provided the technical input into this discharge consent application. My role also includes engagement with the Kingston community and stakeholder groups who have an interest in this proposal.

3.4 I am generally familiar with 3 waters projects in the District having acted as Project Manager for various water and wastewater pipeline and pumpstation projects in Wanaka, as well as the Project Pure wastewater treatment plant expansion.

Purpose and scope of evidence

3.5 The purpose of my evidence is to describe the locality and Project, summarise QLDC's rationale for seeking to provide infrastructure in Kingston, and to respond to matters raised by the submitters and the ORC reporting planner.

3.6 My evidence is set out as follows:

(a) Description of the existing environment.

(b) Need for 3 waters infrastructure in Kingston.

(c) Planned 3 waters infrastructure for Kingston.

(d) Wastewater Project Description.

(e) Connection of the existing Kingston Township.

(f) QLDC's consultation and engagement with stakeholders.

(g) Comments on the submissions received relevant to my evidence.

(h) Comments of matters raised in the s 42A report relevant to my evidence.

(i) Conclusion.

4 Existing environment

Kingston Township

4.1 The township of Kingston is located at the southern shores of Lake Wakatipu approximately 46 kilometres from Queenstown. The existing township is predominantly residential in character, with commercial activities limited to a petrol station, cafes and a camping ground. There are 228 existing dwellings in Kingston.[1] The existing township currently has an estimated permanent population of 348[2] and a peak day population of 796.

4.2 Historically, the population of Kingston has been characterised by a small number of permanent residents and holiday makers; however, in recent years there has been an increasing shift towards a greater occupation by permanent residents.

Existing 3 waters infrastructure in Kingston

4.3 The existing Kingston Township is not serviced by public water or wastewater infrastructure.

4.4 For potable water, most houses in Kingston rely on individual rainwater collection and storage tanks, although some properties obtain water through shallow domestic bores.

4.5 For wastewater collection and disposal, most property owners already have or are permitted to establish on-site wastewater systems (individual septic tanks and disposal fields) under the Regional Plan: Water for Otago. ORC (rather than QLDC) regulates these discharges.

4.6 Public health concerns have been raised about the discharges from older septic tanks in Kingston. Specifically, those older systems that provide limited treatment (no disinfection) of wastewater prior to discharge into relatively shallow groundwater near Lake Wakatipu and source bores. These domestic septic systems range in age from less than six months to more than 30 years old; with the older ones likely contaminating water supplies with bacteria and nutrients.

1 https://www.stats.govt.nz/tools/2018-census-place-summaries/kingston

2 https://www.stats.govt.nz/tools/2018-census-place-summaries/kingston

5 Need for 3 Waters Infrastructure in Kingston

Planning for growth in Kingston

5.1 Queenstown Lakes District is experiencing significant growth and the local supply chain is struggling to satisfy the demand for more houses.

5.2 The shortage of houses in Frankton and Queenstown has led to soaring prices, which cause many people to live in nearby satellite communities and commute to work in Queenstown.

5.3 Due to the physical constraints of lakes and mountains, much of the land between the commuting areas and Queenstown is undevelopable and there are few locations remaining that are suitable for residential development. Kingston is one of these towns that is suitable for further development; and is already seeing an increase in permanent residents who commute around the District for work.

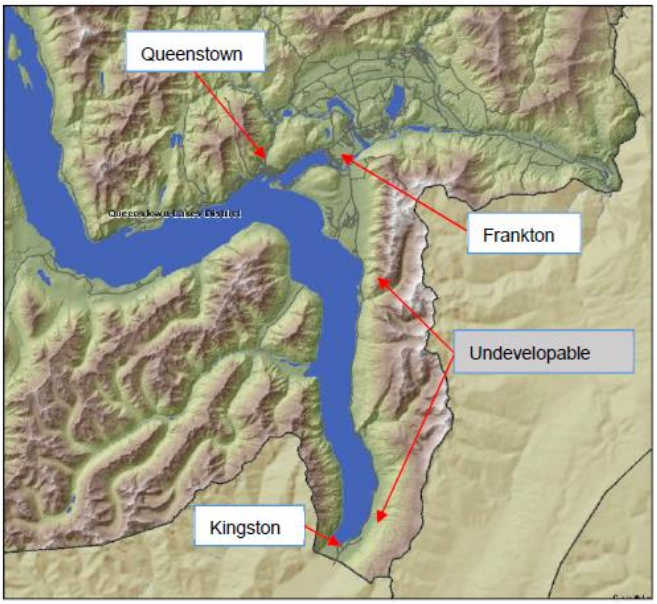

Figure 1. Showing location of Kingston in respect to Queenstown

5.4 While Kingston Township has appropriately zoned land for development (Plan Change 25 - Kingston Village Special Zone, KVSZ) and provides a more affordable housing market for commuters to Queenstown, further development in Kingston is currently limited by the lack of supporting 3 Waters infrastructure (water supply, wastewater and stormwater).

5.5 In Kingston, all properties currently run on-site water supply and wastewater disposal systems and there is no stormwater system in place. There are significant environmental and public health risks associated with continuing with the status quo, as well as the limitations it has on growth.

5.6 Therefore, for Kingston to grow and meet housing affordability and supply objectives, in addition to improving the health and wellbeing of the current population, QLDC must deliver 3 Waters infrastructure. [3]

[3] Detailed Business Case – Kingston, Housing Infrastructure Fund, 11 April 2018

5.7 In 2003 QLDC and the Kingston community developed Kingston 2020[4] to guide the long-term planning for Kingston over the following 20 years. Two of the key community outcomes identified in Kingston 2020 were to protect and enhance the quality of the Lake Wakatipu and to provide the cost-effective reticulation of sewerage and water for the Township of Kingston.

5.8 The Queenstown Lakes District Council Growth Management Strategy – Final - April 2007 includes:

A) Principle 1: Growth is located in the right places; and,

B) Strategy 1d: Growth of the smaller outer lying towns (such as Hawea, Hawea Flat, Luggate, Glenorchy, Kingston, Makarora, and Cardrona) is to be encouraged to a point where critical mass for affordable servicing is reached and an appropriate range of local services and employment can be supported.

5.9 The provision of a communal water and wastewater services was identified as perhaps the most important issue facing growth for Kingston in the next 20 years. Kingston has experienced increased rates of housing development on vacant land within the existing Township within the last 5 years. These sites are generally (and will continue to be) serviced by individual on-site wastewater treatment and disposal systems as this is permitted by ORC. However, this will be limited as the subdivision within the KVSZ (approximately 750 dwellings) is required to connect to communal water and wastewater services. Therefore, there is an interdependency between enabling growth and improving the economy of scale for delivering 3 Waters infrastructure in Kington.

Kingston Village Special Zone and developer agreement

5.10 Following the direction of Kingston 2020, QLDC worked with the owners of Glen Nevis Station to zone additional residential land in Kingston. Plan Change 25 to the ODP introduced the Kingston Village Special Zone, which is located adjacent to the southern boundary of the existing Kingston Township (Figure 2).

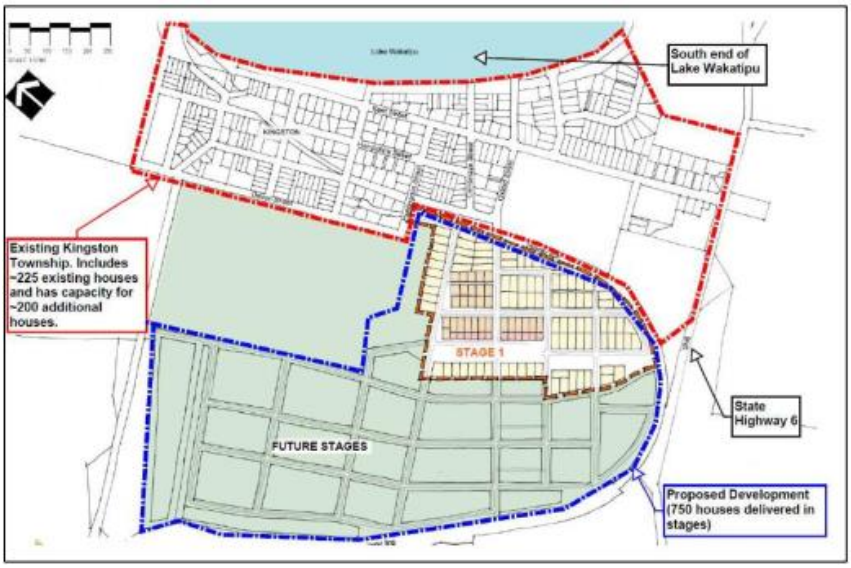

Figure 2. Showing the delineation between the existing Kingston Township and the Kingston Village Special Zone (KVSZ)

[4] Queenstown Lakes District Council, Kingston 2020 Community Plan, November 2003.

5.11 The Kingston Village Special zone provides for an additional 750 sections (approximate) to be developed in Kingston. It enables a comprehensively designed urban form with densities aimed at providing more affordable housing. Those urban densities will require the provision of communal water and wastewater services to support the development of a wider community scheme for the whole of Kingston.

5.12 QLDC and Kingston Village Limited entered into a development agreement in May 2019 to provide community infrastructure for the new part of Kingston. The agreement records milestone dates for QLDC to deliver various infrastructure including the wastewater scheme. There are no reverse dependencies where QLDC would only need to start constructing infrastructure once a certain number of houses have been built. Rather, the agreement provides for practical completion for stage 1 of the wastewater scheme in March 2021. That has been delayed for various reasons largely due to challenges during design development, consenting, and increases in cost estimates, which now need to be resolved through new funding models. The agreement also requires KVL to deliver and connect a certain number of houses within one year of practical completion of the wastewater scheme.

5.13 QLDC has funding allocated for water supply and wastewater infrastructure schemes at Kingston under its Long Term Plan.[5] QLDC also has central Government financing available from the Housing Infrastructure Fund, which was approved in 2018.[6] HIF financing only contributes to new development so while it does not contribute to the existing township it does assist in making the whole scheme serving both existing and new development more affordable due to the economy of scale.

5.14 Accordingly, given that the land has a live urban zoning and funding is in place, QLDC consenting and providing the required infrastructure is the hold point to enabling housing development at Kingston.

6 Planned infrastructure for Kingston

6.1 This current discharge consent application is part of a wider 3 Waters infrastructure masterplan for Kingston; ultimately providing for both the existing Township and new KVL development up to ~1,200 dwelling. To provide context, key components of current design the wastewater and water scheme include (also refer to Figure 2):

5 Queenstown Lakes District Council Long Term Plan 2021-2031, pages 91-96 and 102-107.

6 The HIF fund provides interest free loan to QLDC, which can currently be drawn down on up to 2027. This allows QLDC to raise its debt ceiling to enable the Kingston water supply and wastewater schemes to proceed now. The loan is to be repaid from development contributions and targeted rates.

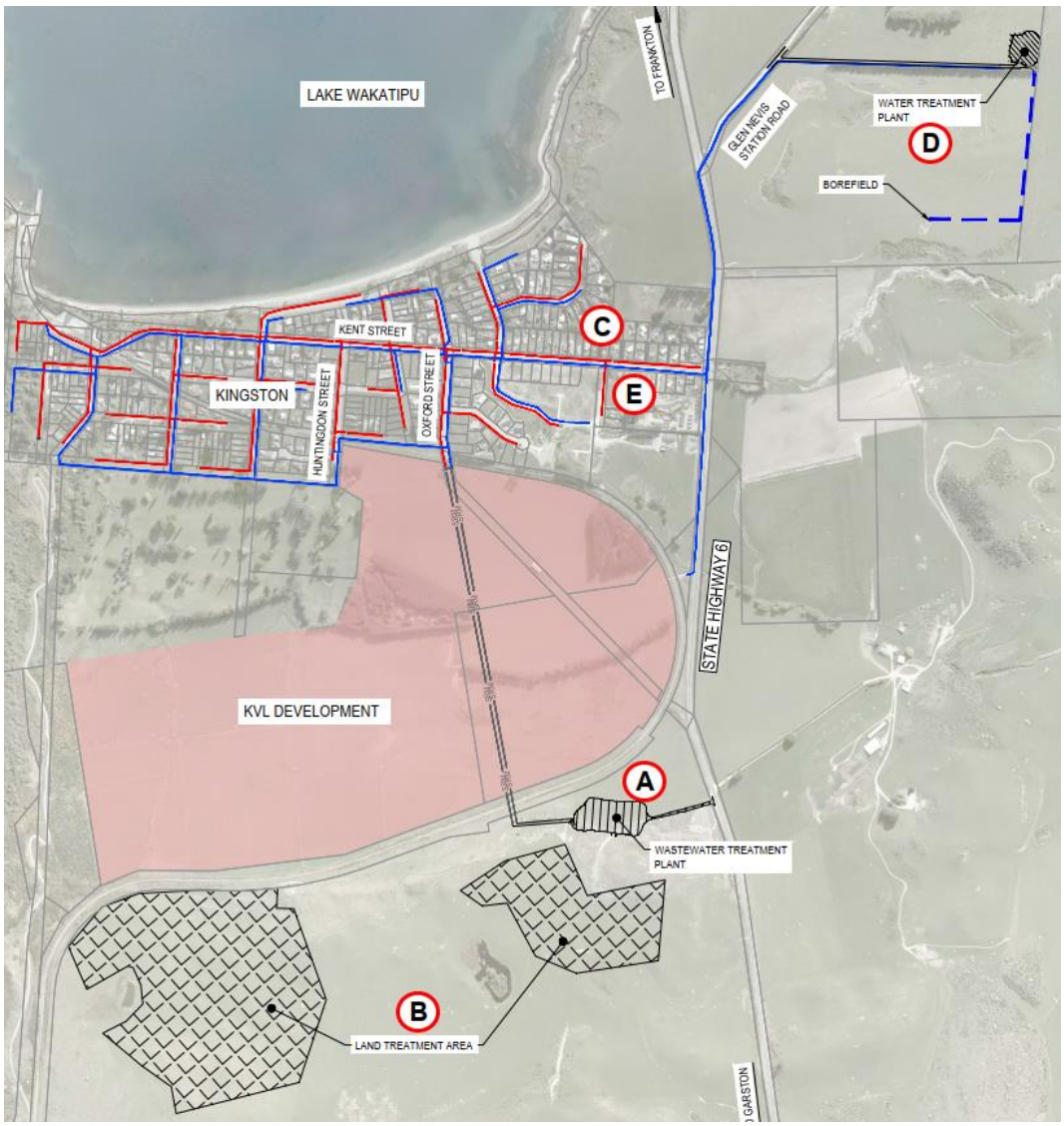

Figure 3. High level schematic of the Kingston Water and Wastewater Scheme

A) Wastewater treatment plant (WWTP): including associated pond, buildings, equipment, and site facilities. Wastewater will be pumped to the WWTP from the existing Township and the KVL development for treatment. Initially, treatment is proposed to be via inlet screening, oxidation pond (main biological step), filtration, UV disinfection and land treatment. Ultimate treatment is proposed to be via inlet screening, sequential batch reactors (SBRs, main biological step), filtration, UV disinfection and land treatment. Developed design of the WWTP is complete and the Notice of Requirement has been submitted to QLDC.

B) Land Treatment Area (LTA): this is where the treated effluent from the WWTP gets discharged to continue the treatment process. This further treatment occurs through the additional uptake of nutrients (nitrogen and phosphorus) from crops that are planted and harvested for use elsewhere. This is known as a "cut and carry" regime. The LTA is proposed to be established in stages and be between 15 and 25 hectares (at full development). Discharge will be via sub-surface drip irrigation throughout to ensure an even load application.

C) Wastewater Reticulation: this component of the scheme is the infrastructure required to collect and convey on the wastewater to the treatment plant. A pressure sewer solution has been favoured over a gravity solution for the

existing Township to avoid the need for large pump stations near the lakefront and due to the shallow ground water levels (among other things). Developed design of the reticulation for the existing Township is complete while the reticulation within the KVL development is the responsibility of KVL (with approval by QLDC to ensure alignment with the rest of the scheme).

D) Water Treatment Plant and Borefield: this is where the water source (previously consented) is located and conveyed to the plant for treatment to comply with New Zealand drinking water standards before being stored in the reservoir(s). A water take for the ultimate demand from 1,200 dwellings has been obtained while the Notice of Requirement was non-notified and is subject to finalisation. The detailed design of the component has been completed.

E) Water Reticulation: this component of the scheme is the infrastructure required to convey the water from the reservoir(s) to each dwelling within Kingston. Detailed design of the reticulation for the existing Township is complete while the reticulation within the KVL development is the responsibility of KVL (with approval by QLDC to ensure alignment with the rest of the scheme).

7 Wastewater Project description

Wastewater Treatment Train and Staging

7.1 The proposed WWTP and LTA will ultimately have the capacity to treat wastewater from both the proposed subdivision and the existing township (approximately 1,200 dwellings).

7.2 The current design (subject to detailed design stage) includes a hybrid gravity (KVL subdivision) / pressure sewer (existing Township) collection system that will convey raw wastewater to the treatment plant at the south of the proposed KVL subdivision; before pumping the treated effluent to the LTA to the south and west. The location of the WWTP and LTA was considered appropriate due to:

- Proximity from existing and planned development: separation from residents, yet not too far to cause unviable capital and operation costs or present increased opportunities for overflows from the network.
- Land availability: QLDC does not own any land appropriate for the scale of the proposed scheme and the farmer (and leaseholder) of the proposed site was willing to negotiate land-use options in return for irrigation (treated effluent from WWTP).
- Proximity from potable water source: the proposed location is downstream of the water scheme treatment facility and situated on the other side of Kingston.

7.3 The WWTP will always provide primary, secondary and tertiary treatment.

7.4 Capacity increases will be delivered in a staged manner as the number of connections to the scheme grows. There are currently four capacity stages of WWTP proposed.

7.5 The first stage of the WWTP is proposed to be a more passive treatment type using an oxidation pond as the main biological treatment step. This stage is

required due to the uncertainty in the rate of the development of the KVL subdivision, and the timing for the connection of the existing Township. This means there is a period (could be several years) where the number of connections is low (less than 200), making mechanical treatment unviable.

7.6 The subsequent capacity increases will be built in advance of demand requirements and will include a mechanical treatment step (currently sequential batch reactors), while the oxidation pond is decommissioning and turned into and calamity basin for emergencies.

7.7 Along with the staging of the WWTP, the LTA will also likely be expanded at each stage to ensure compliance with the proposed nutrient loading and dry matter take off conditions. It is proposed that there will be no less than 5ha constructed to cater for demand from the initial stage of development; while the area required at full development is a minimum of 15 ha within the full 25 ha command area that is available. The LTA is proposed to be managed as a cut and carry system, meaning the grass or lucerne grown takes up nutrient from the discharge; reducing the amount of nutrients leached into the environment.

Importance of flexibility

7.8 Flexibility in the design solution, operation and staging of the proposed treatment plant is required due to:

a) Uncertainty in the speed of development, that is, how fast the KVL subdivision is built.

b) Uncertainty in timing for the existing township reticulation project and the rate of uptake once service is provided.

c) Uncertainty in dwelling occupancy (how many people per dwelling) and influent characteristics (strength of influent).

7.9 These uncertainties result in various scenarios that could eventuate as presented in Mr. Ellwood's evidence[7] and that must be carefully considered when designing the WWTP and LTA and considering the environmental effects.

7.10 The purpose of this application is to obtain consent to discharge a maximum of 1,800 m3/day of treated domestic effluent from Kingston Township and surrounding subdivisions into the LTAs. Condition 16 (treated effluent quality at WWTP) and 18 (nutrient loading kgN/Ha/year) provide QLDC with confidence it can manage the uncertainties described whilst also providing assurance that adverse effects on the environment are adequately avoided, remedied or mitigated.

Alternatives

7.11 The wastewater scheme for Kingston requires significant investment from QLDC over what could be the next 20 plus years due to the uncertainties described.

7.12 When considering all the wastewater treatment train options, QLDC always considered discharge would be to land. Discharge to the lake (regardless of the level of treatment at the WWTP) was discounted early on as it did not align with

[7] Brian Ellwood's evidence

QLDC's strategic objectives and would be unacceptable to Iwi. Land dispersal/irrigation is the preferred method for wastewater discharge from an environmental effects perspective as the discharge is not directly to surface water.

7.13 Land irrigation is also the most cost-effective solution. A land treatment area, which includes a cut and carry harvesting regime, was chosen over a direct to land/ground discharge because of the mutual benefit to the farmer operator (free irrigation and fertilisation) and QLDC (as QLDC does not have to purchase land for the treatment area, and can use the assimilative capacity of soil and plants instead of using more energy and creating additional waste at the WWTP).

7.14 Other WWTPs within QLDC, such as the Shotover (Queenstown) and Project Pure (Wanaka) are required to remove more nitrogen than proposed for the Kingston WWTP itself. However, these facilities discharge into the ground without managed cut and carry regimes.

7.15 Conditions such as those proposed in the s 42A report that prescribe the treatment technology required (condition 3) and/or further limited the WWTP effluent quality (condition 16); would result in unnecessary capital investment (in both the short and long term). I consider this investment unnecessary as these requirements would ignore the assimilative capacity of the soil and uptake by the plants; and result in additional wastage and energy use at the treatment plant itself.

7.16 Alternative treatment technology for the wastewater treatment plant itself were considered in the detailed business case; including a package plant and membrane bioreactor. The former was considered too small for the ultimate development size of Kingston and the latter was considered less able to cope with anticipated flow variations as the number connections grow.

7.17 Therefore, Sequential Batch Reactor (SBR) technology was preferred as it is more easily adaptable to growth and it can more easily be modified to improve treatment in the future if required. The initial pond stage came into the solution through the development of the design as it became clear SBR technology requires a minimum amount of flow before it can operative effectively. The alternative was to construct a small package plant for early period of low flow; however, the pond was able to cope with more uncertainty (as described in 7.8) and had the added benefit of being converted to a calamity basin once mechanical treatment is switch on.

7.18 As described in section 7.12 of my evidence, land discharge was the preferred solution. However, alternatives for the location of the WWTP and discharge area were considered including:

a) The Kingston Golf Course (irrigation and grow grass).

b) Glen Nevis Station of east side of State Highway 6 (similar cut and carry regime).

7.19 The Kingston Station was chosen because:

a) The Kingston Golf Course did not want the irrigation benefit and the cost to construct the LTA and repair the golf course (along with underutilisation

during construction) was significant. Also, the WWTP would be within a residential subdivision area.

b) Glen Nevis Station on the east side of the State Highway is the locating of the potable water source and treatment plant, which should not be co-located. The elevation is also greater (requiring more pumping effort) and the visual impact to the landscape (an Outstanding Natural Landscape) would be greater.

7.20 Any other alternative locations for the LTA in the catchment are impractical due to topography, land availability, regional boundaries, and proximity to existing bores.

8 Connecting the existing Kingston township

8.1 My understanding is that one of the key concerns of ORC and the community is the ability to connect the existing township to the new scheme to realise the full environmental benefit of decommissioning the existing septic tanks.

8.2 The goal for QLDC is to have the existing community connected to both the new reticulated water and wastewater schemes.

8.3 However, the timing for the connection of the existing Township is currently outside of QLDC's current Ten Year Plan (2021-31). This is largely due to cost increases in the existing township components of the scheme and the difficulty associated with QLDC's ability to compel existing homeowners to connect to new water services.

8.4 The new development at Kingston and revenue from development contributions and targeted rates, will make the wastewater and water scheme more affordable, however, it is still a costly project even with 1,200 homes contributing; hence a staged approach is required.

8.5 Some properties in Kingston (developed in the past 5-10 years) have conditions recorded on their titles requiring property owners to connect to community wastewater and water infrastructure within six months of QLDC's reticulated network being available outside their property. However, older properties in Kingston are not subject to these requirements. However, QLDC understands there may be ability to compel existing homeowners to connect through the LGA 1974; which provides some assurance that existing homeowners can be required to connect in certain circumstances.

8.6 Regardless of the title conditions, LGA 1974 and desire of the existing Township, QLDC is provisioning (design and consenting) to provide the existing Township treatment capacity at the WWTP and LTA.

8.7 Generally, the local community and the wider QLDC community place high value on recreational assets such as their lakes and their rivers and like to see these in as close to a pristine environmental state as possible.

8.8 This is reflected in QLDC's Long Term Plans and strategic infrastructure planning where there is a clear emphasis on improving waterways and reducing risk to waterways (be it through removing septic tanks or pump stations from lake edges or near creeks). So this project aligns well with those strategic objectives.

8.9 My understanding is that the community is well aware septic tanks, particularly the older systems, are contributing to degrading the current environment and being connected to a new scheme for wastewater as well as water supply has majority support from the permanent population in the existing township. That said, naturally the community has questions about costs and timing.

8.10 Given the community's views about improving water quality and the value the community places on protecting its lakes and waterways, QLDC is hopeful that the ability to improve water quality by connecting to the new scheme and will provide a strong incentive to property owners to connect.

8.11 QLDC is not offering financial incentives to join at this stage but is looking to limit the costs of the scheme such that a property owner would not pay any more to join than it what it cost to replace or build a new septic tank and water collection facility on site.

8.12 ORC is also an important entity in the connection of the existing Township. ORC can introduce new Regional Plan requirements to monitor existing on-site treatment and groundwater collection or rainwater collection, such that it would likely be more expensive to maintain and monitor and rebuild those on-site systems so connecting to a township supply may be a more desirable option. ORC could also make onsite systems in this location a prohibited activity, which would effectively compel existing property owners to join the new scheme. This is not something that is within QLDC's control.

8.13 Condition 23[8] provides assurance that the environment effects are avoided/mitigated by restricting development beyond a certain point (1,050 kg N/year) before properties within the existing township must start to be connected to enable additional development within the KVL subdivision.

9 Consultation

Affected Party Approvals

9.1 Consultation has been undertaken with Iwi through Aukaha and Te Ao Marama Incorporated (TAMI). The strong preference from Iwi is for land-based disposal of wastewater and this was a significant factor in deciding the type of treatment and disposal system to be adopted in Kingston. Both Aukaha and Te Ao Marama Incorporated (TAMI) have been supportive of the proposal and have provided their unconditional written approval.

9.2 QLDC sought affected party approval from the Otago Fish and Game Council in relation to the potential effects of the discharge on surface water and have provided unconditional written approval to the proposal prior to notification.

9.3 LINZ have provided an APA as the land owner.

9.4 Kingston Station (lease holder and farm operator) and Kingston Village Limited (developer) are partners with QLDC for this Project; and hence agreement with this proposed Kingston discharge consent is implied. Note that neither of these parties submitted during the public notification period.

[8] Proposed consent conditions Mr. Henderson evidence App 2

10 Section 42A report

10.1 There are three aspects of the Section 42A report that I wish to comment on:

a) With respect to baseline sampling frequency in Condition 9, my experience is that the availability of expert resource in Queenstown would make monthly sampling difficult to achieve. Therefore, a frequency of once every two months is proposed based on the advice from QLDC's experts that this frequency will still provide adequate baseline sampling data.

b) With respect to Condition 36, there are low probability but high consequence risks for this project associated with funding and timing uncertainty. Therefore, a 10-year lapse period is required to give effect to this consent.

c) QLDC considers that the time to develop t the wastewater scheme to the ultimate development stage (1,200 connections) and the life of wastewater scheme beyond full development, is likely to be well over 25 years. Therefore, a consent duration less than this would potentially result in a duration that does not see the full development of the wastewater scheme. This can create challenges with investment decisions and planning for QLDC assets.

11 Submissions

11.1 Following notification submissions were received from Public Health South and from Kingston Community Association.

11.2 QLDC has engaged with submitters to discuss their concerns.

Public Health South (PHS)

11.3 PHS raised initially concerns related to the monitoring conditions, however, after discussing our proposed monitoring conditions and sites it transpired that PHS had not seen these conditions and that PHS is satisfied with the monitoring conditions.

11.4 PHS also raised a concern regarding the connection of the existing township and how the AEE appeared to read as though QLDC was not proposing for some existing dwellings within the township near the lake shore to be able to connect to the reticulated system. After clarifying those properties would be serviced when the township reticulation is constructed, PHS was happy with that aspect of the proposal. A copy of correspondence clarifying PHS's position in relation to the connection of the existing township is attached in **Appendix One**.

11.5 PHS has now have amended its submission and now fully supports the application, no longer wishing to be heard.

Kingston Community Association (KCA)

11.6 KCA's key concern in its submission related to the short-term effects of nitrogen and nutrients. KCA is acutely aware that the existing environment is perhaps degrading and impacted by septic tanks and discharges and that in the short

term the discharge consent proposes to offset the existing discharges rather than improve the environment. In that context, KCA's concerns are that in the short term QLDC cannot control or compel the existing township to connect and that QLDC does not have the ability to fund those connections.

11.7 I (along with Mr Ellwood and Mr Henderson) met with representatives of the KCA on 24th November 2021 to discuss their submission. We discussed that there are proposed conditions (condition 23) that limit how much QLDC can develop before QLDC must bring on the existing township to the scheme. Thus, preventing a scenario where there are more nutrients than currently exist. I also explained the many uncertainties associated with QLDC being able to commit timing for connection of the existing township.

11.8 Following these discussions KCA amended its submission and has advised that it no longer wishes to be heard, however, it had advised of outstanding concerns in its letter to ORC dated 9 December 2021. I comment:

a) KCA appears to assume that QLDC will operate outside our consent conditions before being able to initiate mitigation measures. QLDC is required to comply with consent conditions and consents are granted on the assumption of compliance. Any non-compliance is an enforcement and monitoring matter.

b) KCA is also concerned regarding the condition of the existing environment and the timing of the connection of the existing Township. Of which, the earlier the connection of the existing Township to the wastewater scheme, the earlier the full benefits to the environmental and community would be realised

    a. QLDC absolutely agree and acknowledge this and are aware of the current concerns with bacteria and nutrients leaching into the natural environment in Kingston due to septic tanks; and the associated health risks with using that environment for recreational use and water take.

    b. However, many other factors need to be considered when implementing a new community wastewater scheme including but not limited to, the role of QLDC and ORC to regulate discharges, and the ability to fund infrastructure all at once.

    c. QLDC have gone as far to provision for the existing community in the design and consents, and absolutely intend to connect the existing community in the future. Furthermore, QLDC have offered Condition 23, which effectively limits the amount of development that can occur to ensure adequate protection of the environment.

    d. KCA's desire to limit development to 217 lots before connecting the existing Township is inappropriate as the trigger is a nitrogen take off amount of 1,050 kg n/year, rather than the number of lots developed.

    e. The number of lots this equates to depends on a number of other variables as described in Mr. Ellwoods RFI #2 response Table .3[9]This

[9] Mr. Ellwood response to RFI #2 dated 11 June 2021.

consent would allow us to make a start now whilst protecting the environment in the shorter term and improving the environment in the long term. Conditioning an immediate connection of the existing Township would certainly defer the project and potentially make it unviable.

12 Conclusions

12.1 The Kingston discharge consent is a critical component of the proposed wastewater scheme that is necessary to enable growth in the District and to address health concerns of the status quo.

12.2 The proposed discharge and the associated conditions are considered appropriate to avoid, remedy or mitigate any potential adverse effects on the environment, whilst providing QLDC with confidence in being able to deliver the other social and economic outcomes associated with the wider project.

12.3 QLDC seek that ORC grant the discharge consent on the terms and conditions set out in Appendix 2 to Mr Henderson's evidence.

Tim Court-Patience

23 December 2021