

Otago Regional Council
Private Bag 1954
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New Zealand

13 September 2019

Attention: Peter Christophers / Charles Horrell

Dear Peter / Charles

QLDC Wastewater Network Consent: Response to S92 Further Information

Thank you for your letter dated 28 August 2019 requesting further information pursuant to Section 92(1) of the Resource Management Act (the Act). This letter sets out our response.

1. Effects on Human Drinking Water

Section 5.4.1 of the Assessment of Environmental Effects (AEE) provides an assessment of effects on drinking water supplies. This assessment identifies 8 drinking water supplies, of which 2 abstract from surface water and the remainder from groundwater. The assessment considers that adverse effects will be less than minor due to the fact that drinking water supplies are required to meet New Zealand Drinking Water Standards. This assessment does not sufficiently quantify the effect. Details are provided of the level of treatment, however without outlining the potential concentrations of contaminants it is unclear if this level of treatment would be sufficient.

The assessment only considers 8 water drinking water supplies. However, a review of drinking water supplies that are recognised under the National Environmental Standard for Sources of Human Drinking Water (2007) indicates that there are 11 supplies in, or adjacent to receiving water bodies (see Appendix 1). In addition to this, there is no consideration for other lawful drinking water takes. Individuals are authorised to take potable water under either Section 14(3)(b)(ii) of the Act or Rule 12.1.2.1 of the Regional Plan Water for Otago. These takes are lawful and form part of the existing environment. The s92(1) request from the Otago Regional Council (ORC) states that this assessment does not sufficiently quantify the effect, and questions at what threshold the treatment required under the New Zealand Drinking Water Standards (DWSNZ) would not be sufficient to treat contaminated water.

The s92(1) request states 'Please provide an assessment of the effects on human drinking water supplies that may be affected by the activity. This should include an assessment of the worst case scenario (regardless of its likelihood) and at what threshold the treatment required under the New Zealand Drinking Water Standards would not be sufficient to treat contaminated water.'

A response to the further information requested is **attached** to this letter as Attachment 1.

2. Effects on Cultural Values

Section 5.6 of the Assessment of Environmental Effect provides an assessment of the effects on cultural values. Limited assessment of the effects on cultural values is provided and no conclusions are made. This was acknowledged through the following statement from Section 5.6 "Cultural Values Statement has not been received and thus there is limited ability for assessment of cultural effects". Now that the Cultural Values Statement is complete please provide this full assessment.

An assessment of the effects on cultural values is **attached** to this letter as Attachment 2.

We trust that the information provided responds to the questions raised by ORC. Please do not hesitate to contact me as soon as possible if you have any further matters of clarification.

Yours sincerely



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on behalf of

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Attachment 1 Human Drinking Water Supplies

Community Drinking Water Supplies

Queenstown Lakes District Council (QLDC) manages 10 community drinking water supplies consisting of 13 water intakes throughout the district. They are managed in accordance with the New Zealand Drinking Water Standards (DWSNZ) and the relevant provisions of the Health Act 1956. The DWSNZ are regulated by a Drinking Water Assessor from Public Health South.

Eight QLDC community water supplies were discussed in the AEE, however the s92(1) request identifies five further community supplies: Lake Hawea, Jacks Point, Walter Peak, Glendhu Bay Campground and Cardrona. We also note that the QLDC water supplies at Luggate, Wanaka Airport and Corbridge Downs were accidentally omitted from the application AEE. These are commented on below as well.

Lake Hawea supply

The Lake Hawea supply has been replaced by the Scott's Beach borefield adjacent to Lake Hawea and is no longer utilised.

Glendhu Bay Campground and Jacks Point

The other four additional supplies listed in the s92(1) request are privately run community supplies, though QLDC as the consent holder and landowner has direct involvement in the Glendhu Bay Campground water supply.

QLDC does not currently operate reticulated wastewater networks in Jacks Point. The water intake for Jacks Point is located in Homestead Bay, Lake Wakatipu, some 10km south (upstream of the lake outlet) from the nearest QLDC wastewater infrastructure at Kelvin Heights. The likelihood that this water intake would be affected by an overflow from the Kelvin Heights infrastructure is considered to be very low to nil.

In the event that QLDC operates a reticulated community wastewater system in the future near drinking water takes, the practices and requirements outlined below would be applied.

Walter Peak

Walter Peak is located approximately 10km across Lake Wakatipu from the nearest QLDC wastewater network at Sunshine Bay/Fernhill. The Walter Peak water intake from Lake Wakatipu is located on the north side of the Walter Peak site. Given this distance, the volume of water in Lake Wakatipu, and that the lake is fed from the Dart and Rees Rivers north of Walter Peak draining east of Walter Peak and Queenstown via the Kawarau River outlet, the likelihood of any wastewater overflow from the QLDC network reaching or affecting the Walter Peak water supply is considered to be very low or nil.

In the highly unlikely event that wastewater potentially crossed Lake Wakatipu then the notification to Walter Peak would occur through the practices outlined below in consultation with the Drinking Water Assessor.

Cardrona Township

QLDC does operate a small localised reticulated wastewater network in one part of the Cardrona township (servicing the hotel and a handful of adjacent houses) but does not operate a water supply. This is an uncommon situation, where an area is serviced by a reticulated wastewater network, but drinking water is accessed through private community or individual supplies. Response to an overflow in these situations is discussed further in the following sections.

Luggate

As per the information provided in the AEE about the QLDC community water supplies, the Luggate water supply is via a bore located near Dead Horse Creek off State highway 6 at the south eastern end of the urban area. The bore water is treated by chlorine. Because this bore is within the urban area there is the potential for it to be affected by a wastewater overflow. However, as a QLDC community water supply it is subject to the practices outlined below.

Wanaka Airport or Corbridge Downs

The Wanaka Airport and Corbridge Downs water supplies are both sourced from deep groundwater bores and treated with chlorine. While there is no community wastewater network servicing these areas at this time, there is a wastewater main running alongside both areas.

As per the comment for the Luggate supply above, these water supplies are also subject to the practices outlined below.

Other lawful drinking water takes

It is recognised that throughout the district, individuals may be accessing water privately for potable supply, as a permitted activity under the Regional Plan Water for Otago.

These private drinking water supplies are commonly located in less populous areas, where there is no reticulated wastewater network nearby. The separation distance between the private supplies and the QLDC wastewater network reduces the risk of being affected by an overflow. Private supplies will be sourced from rainfall (which will not be affected by an overflow), bore (which has little or no risk from an overflow provided the bore/well head is secure), or lake and river takes (which is not a secure supply and therefore potentially is at risk from an overflow). Private water takes from the lakes and rivers are typically untreated and therefore they are at risk of contamination even without a wastewater overflow occurring.

For those private water supplies at risk, a response similar to that below based on the NES section 12 is proposed. In the event of a wastewater overflow occurring that may have a significant adverse effect (i.e. unsafe to drink water or gather food from the water body) on nearby or downstream private drinking water supplies, such that the health quality criteria may not be met as per the NES section below, QLDC will notify these supply operators/owners (i.e. notices in public areas such as the pub, toilets, and café in

Cardrona, or door knocking and leaving a notice). In a significant contamination event¹, this may be communicated more widely via social or traditional media (QLDC extensively uses social media now to communicate key messages to the community). As is the case for any wastewater overflow event with a potential risk to public health, the Drinking Water Assessor is involved to ensure that the response is satisfactory to him or her.

In some cases, to ensure the continued provision of suitable drinking water, QLDC may be required, by the Drinking Water Assessor, to provide an alternative drinking water source, such as water tankers or bottles.

Compliance with Drinking Water Standards

The DWSNZ provide a comprehensive compliance framework within which to effectively manage risk from contamination and to ensure provision of safe drinking water. They are regulated by a Drinking Water Assessor from Public Health South. The management of each water supply is documented in a formalised Water Safety Plan (**WSP**), provided to the Drinking Water Assessor for his or her review.

Each WSP contains a risk assessment detailing the risks present throughout the entire supply process from the catchment, abstraction, treatment and distribution, and discusses preventative measures and corrective actions. The Water Safety Plans also contain a Contingency Plan, additional to the Response Plan mentioned below, outlining the required actions in response to specific events, including a significant contamination event which might result in microbiological contamination of source water. The Drinking Water Assessor reviews each WSP to ensure that the water supplier has considered all potential contamination situations and has adequate procedures in place to respond. In accordance with the DWSNZ, any response will be undertaken in consultation with the Drinking Water Assessor to ensure that he or she is satisfied that any potential adverse effects on public health are being managed appropriately.

More specifically, in the event of a wastewater overflow in a location where a community water supply has the potential to be affected, QLDC has a number of options available to manage the risk to public health. The appropriate level of response is determined in consultation with the DWA on a case by case basis, and may consist of one or more of the following:

- Shut off the intake (until such time as *E. coli* sampling shows that the water has returned to normal background levels as required by the DWSNZ – see below).
- Super chlorinate the reservoir and distribution system
- Issue a boil water notice
- Sample the intake water for *E.coli*
- Supply an alternative source of water, for example water tankers or bottles

The DWSNZ also requires monitoring of the quality of the water after the treatment process to ensure that *E.coli* remains at <1 per 100ml at all times. Each intake has its own water treatment plant, so the

¹ Whether an incident is considered a significant contamination event is determined in conjunction with the Drinking Water Assessor. Typically, an event the size of the recent Taupo event, and after sampling the receiving water for *E. coli* along with determining if the dilution is sufficient such that downstream supplies unlikely to be affected.

sampling occurs in relation to each intake and also at a number of points throughout the piped distribution system. This monitoring is ongoing as it is a standard requirement to ensure that the water is safe to drink.

National Environmental Standards for Sources of Human Drinking Water, 2007 (NES)

The NES governs activities that may occur upstream of a drinking water supply abstraction point, where the activity is likely to introduce or increase the concentration of any determinand in the drinking water, so that after existing treatment it no longer meets the health quality criteria.

Meeting the health quality criteria is defined as drinking water that is tested for determinands at the point where the drinking water leaves the treatment process but has not yet entered the distribution system. It is tested in accordance with the compliance monitoring requirements in the DWSNZ, and when analysed does not exceed any maximum acceptable values (MAVs) of the DWSNZ.

QLDC considers that the activity as applied for by this resource consent, is consistent with the NES. As discussed in the section above, existing treatment processes are not solely relied upon to ensure that the adverse effects on community drinking water supplies are negligible / de minimis. There is robust planning, risk assessment, monitoring, and response protocols in place to ensure that the DWSNZ continue to be met, even in the event of a nearby wastewater overflow.

QLDC community drinking water supplies are managed such that even in the event of a wastewater overflow, drinking water supplied to the community will continue to meet the health quality criteria in the NES. QLDC has a number of options available and acts in consultation with the Drinking Water Assessor, to ensure that the requirements of the DWSNZ and the NES are met (as outlined in the bullet points above). QLDC takes a precautionary approach to ceasing supply where necessary in consultation and agreement with the Drinking Water Assessor.

In terms of mitigating potential adverse effects on non-QLDC community supplies, an approach similar to the intention of NES section 12 is proposed, whereby QLDC response protocol is to notify the operator of any drinking water supply registered with the Ministry of Health, if an overflow occurs that may have a significant adverse effect on the quality of the water at the abstraction point of that supply. Measures that can be undertaken for those unregistered lawful drinking water takes are discussed above.

Human Drinking Water Conclusion

Existing treatment processes are not relied upon to ensure drinking water standards. As explained above there are robust planning, risk assessment, monitoring, and response protocols in place to ensure that the DWSNZ can continue to be met, even in the event of a worst case scenario nearby wastewater overflow. Accordingly, the effects of the application on QLDC community drinking water supplies is considered to be less than minor to negligible.

The likelihood of an overflow significantly adversely affecting a private supply is low, given that these areas are less likely to have reticulated wastewater. However, in the event of an overflow occurring that may have a significant adverse effect on nearby or downstream private drinking water supplies that are registered with the Ministry of Health such that the health quality criteria as defined in the NES may not be met, QLDC will notify these supply operators/owners and in some cases may be required to provide an alternative drinking water source.

Attachment 2 – Cultural Values Assessment

Cultural Values Summary

The Cultural Values Statement received relays that Kāi Tahu Whanui have always held strong innate connection with the waters of the Queenstown Lakes District. There is a common view that the water was left by ancestors as taoka to sustain life. This connection with the District is still strong today – for food gathering, the ara tawhito (ancient tracks), traditional pā sites and sacred places, through nohoaka (a place to sit) recognised under the Ngāi Tahu Claims Settlement Act 1998, and areas of cultural importance for tikaka, mahika kai or lore. It is for these reasons that the health and cleanliness of water and the ecosystem are of upmost importance to Ka Rūnaka who maintain role as kaitiaki guardians.

Throughout the District there are a number of ara tawhito linking the West Coast with the Southland and Otago coastal areas. The rivers were vital to the interconnectedness of these tracks and their ability to connect Kāi Tahu to the west and with Southland and Otago coastal areas. Along with the settlements in the District, it was also a food gathering area for those travelling through, where food was predominantly gathered in and around the shores of the lakes and rivers. The ability to gather and share food is still a cornerstone of Kāi Tahu society.

Mystical beings are associated with, in particular, the Mata-Au/Clutha River and with Lake Wakatipu.

The Cultural Values Statement provides a description in more detail to the above connections and values in relation to each lake and the main rivers and streams.

Under the Ngāi Tahu Claims Settlement Act 1998 Kāi Tahu have statutory acknowledgement over the area that is the subject of this consent application.

The Cultural Values Statement provides that discharge of any raw wastewater into these waterbodies will have an adverse effect on the relationship that Kāi Tahu has with these waterbodies, both physically and metaphysically. These discharges will form a pollution that degrades the mauri of the water.

Assessment of effects on cultural values

QLDC acknowledges that raw wastewater into waterbodies is unacceptable to iwi. QLDC acknowledges that these discharges will have an immediate effect on the waterbodies in terms of the values that are important to Kāi Tahu. These effects can only be mitigated through minimising the likelihood of overflows occurring over time, preventing those overflows from reaching water and remedying the water and surrounding environment immediately following an overflow event occurring.

Proposed mitigation of effects

The engagement undertaken with Kāi Tahu pre-lodgement sought understanding of any practices or protocols that it would like incorporated into the conditions of consent as part of, or post, any response to an overflow. No specifics were received, and the Cultural Values Statement does not contain any information in regard to this either. Kāi Tahu's submission requests notification of overflow events occurring, and one of the reasons for this notification is to provide warning in relation to food gathering from the affected waters.

QLDC is now proposing the following changes to condition 8 (lodged with the AEE) to address this matter:

Responding to a Wastewater Overflow covered under this Consent

Once QLDC is notified of a wastewater overflow ~~authorised under this consent~~, it shall respond to the overflow in ~~general~~ accordance with the process set out in the **Incident Response Procedure developed under condition X of this consent. flow chart in Attachment 1 to these conditions.**

As part of responding to an overflow authorised under this consent the QLDC shall notify Otago Regional Council, Ministry of Health, and Kāi Tahu within X of responding to the incident.

Note a new condition requiring the preparation of an Incident Response Procedure (referred to above), was proposed as part of QLDCs response to the first section 92 request.

Methods to minimise the likelihood of overflows occurring over time is included in a proposed condition of consent, condition 10 in the lodged documentation. QLDC is in the process of reviewing and updating the proposed conditions to address matters raised by a number of submitters. In that regard, as disposal to land, while still not acceptable, is more acceptable to cultural values than disposal to water. QLDC is currently considering a condition of consent regarding implementing further preventative measures to stop an overflow on land from reaching water.

Assessment of effects on cultural values conclusion

Given the above it is considered that the changes proposed to the conditions of consent will assist in managing the adverse effects on cultural values, particularly the notification to Kāi Tahu within a suitable timeframe following the event. This will allow it to, at the earliest opportunity, implement any necessary communications and protocols with rūnanga around food gathering and other values. QLDC is currently undertaking further liaison with Kāi Tahu to ascertain any further changes to conditions it would like to see.