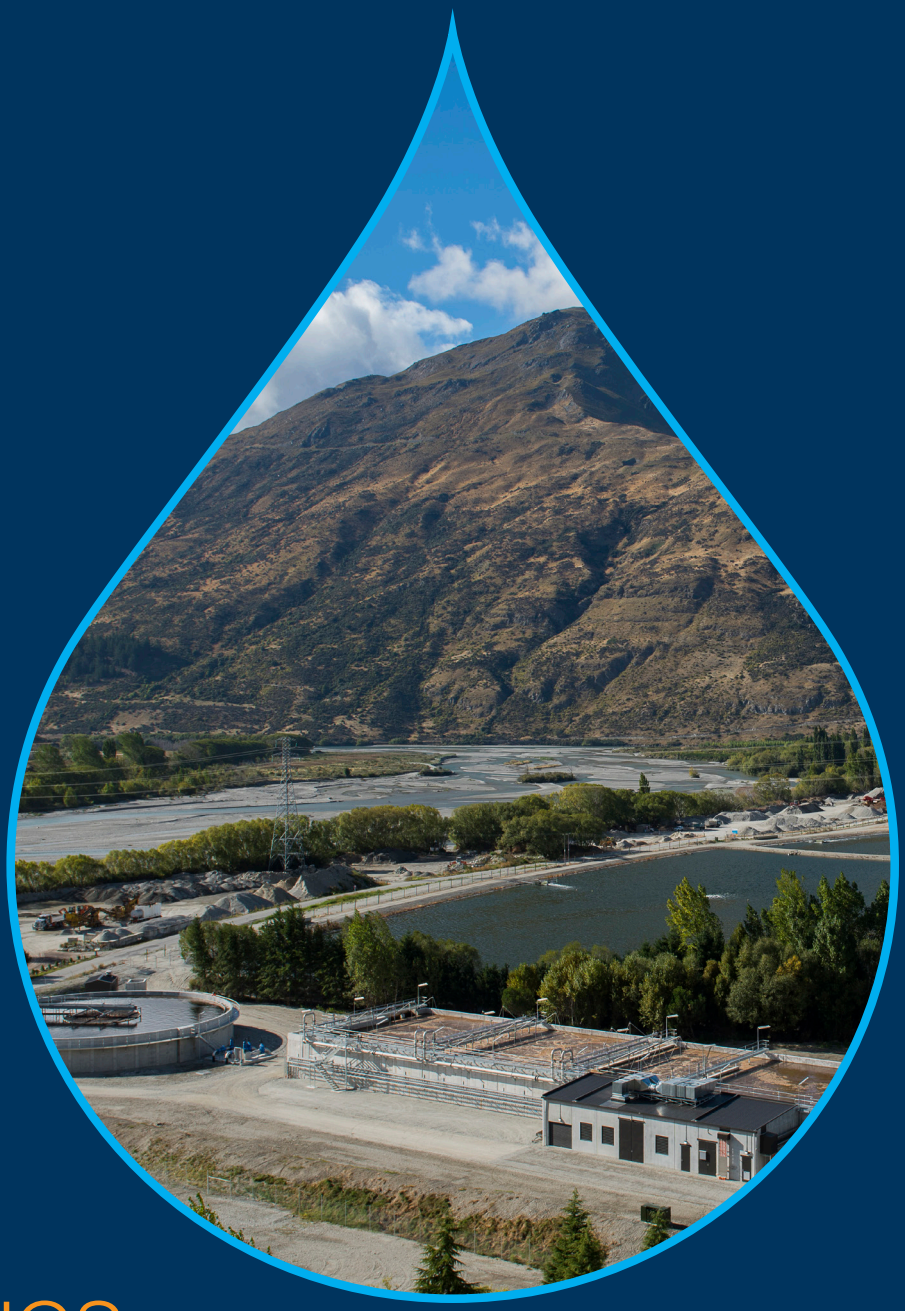
TRADE WASTE BYLAW 2014

2020 REVIEW



FINDINGS REPORT

QUEENSTOWN LAKES DISTRICT COUNCIL

QUEENSTOWN LAKES DISTRICT COUNCIL

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1. SUMMARY OF KEY FINDINGS

According to stakeholders, the council's bylaw has had a positive impact on trade waste discharges in the district, by minimising the build-up of fat in the wastewater network most notably around high density food premises. CCTC footage of the CBD has demonstrated a reduction of approximately 80% build-up of fat in the sewer network. However, breaches of the bylaw do still occur. Volumetric monitoring is not feasible throughout the district and the council has had to rely on other sources of data to understand those premises who pose the greatest risks to the network. Other sources of data have included:

- Trade Waste surveying.
- Surveys of research across sectors in other NZ jurisdictions to understand likely demand for network capacity. This research indicates that laundromats, car wash facilities and restaurants that operate for longer than 10 hours a day pose the most significant risk to the wastewater network.

There have been some emergent issues which the bylaw has not been able to provide effective response to in its current form. These include:

- There has been a decrease in the volumes of hazardous waste, such as used engine oil being recycled compared to the past. This suggests illegal discharges to the wastewater network may be occurring.
- Understanding and limiting harm posed by emergent contaminants.

The key findings of this review are that:

- If the council amends the bylaw, the reviewed bylaw will benefit from improved system readiness and critically organisational awareness of the importance of trade waste.
- Illegal discharges of trade waste to land and the natural stormwater network are not being captured by the bylaw and whilst this is not a problem for the bylaw, it presents challenges for an integrated approach to water management.
- The consenting regime in the current bylaw needs to be updated to capture industry sectors using an appropriate risk-based approach.
- Fee setting in the annual plan; lags in implementing technology; resourcing constraints with compliance monitoring need to be factored into the bylaw's implementation so that businesses enjoy a smooth transition to enhanced management. Rate payers should feel assured that investment in the management and administration of the bylaw is appropriately/fairly funded by consent holders.
- To change behaviours to be more sustainable and consistent with other council strategies and policies (e.g. waste minimization, smoke-free, etc.) the bylaw should be supported with appropriate behavioural tools and educational initiatives to improve recycling, product stewardship, approved product systems etc.

2. INTRODUCTION

2.1 Purpose of the Report

This report presents findings on the operation of the Queenstown Lakes District Council's Trade Waste Bylaw 2014 (**Bylaw**). The council has a statutory responsibility under the Local Government Act 2002 (**LGA**) to review new bylaws within five years of making them. The Bylaw was adopted on 27 November 2014 and came into force on 30 July 2015. The Bylaw will be automatically revoked if not reviewed by November 2021.

2.2 Scope of the Review

The scope of this review includes:

- Stakeholder feedback about how the Bylaw is influencing behaviours.
- Review of existing QLDC policies and initiatives that are relevant to trade waste.
- Review of relevant regulations.

2.3 Background

Trade waste is any liquid that is discharged from a business process or trade premises to the wastewater network.

Typically, trade waste is sourced from premises such as restaurants, dentists, butchers, take-away bars, bakeries and automotive dealers. The largest contributors of trade waste in the region include premises such as laundries, car rentals (that include valet services), septic tank collection services and restaurants that operate for more than 10 hours a day for seven days of the week.

Prohibited trade wastes such as toxic chemicals and compounds, landfill leachate, petroleum products, heavy metals, latex, emulsifiers, paints and paint products also have the potential to enter the wastewater network.

Trade waste is regulated differently to domestic wastewater. Compared to domestic wastewater, trade waste may contain higher concentrations of substances which could harm people's health or the environment, corrode and/or block wastewater pipes and other wastewater facilities, create odours or place extra demands on the district's wastewater treatment plants and result in non-compliance of the council's discharge consents.

The Council provides a reticulated wastewater service to approximately 21 660 residential properties in the district and approximately 2893 non-residential properties. An average volume of 14 521 m^3 of wastewater is produced in the district daily. The wastewater travels through the wastewater network via approximately 551 km of wastewater pipe and requires 65 pump stations to move the wastewater to seven wastewater treatment plants. More information about the district's wastewater network is outlined in Appendix D of the Cover Report.

3. THE BYLAW

The purpose of the Bylaw is to:

- protect the water quality within the district's rivers and lakes.

- give effect to Queenstown Lakes District Council's obligations under National Environmental Standards and Regional Plan rules, and achieve compliance with the resource consents that apply within the Queenstown Lakes District.
- protect the health, safety and wellbeing of people within the district.
- ensure that the council can meet its obligations under the Resource Management Act 1991 and the Local Government Act 2002.
- protect the wastewater network (including the treatment plant) from substances that have a detrimental effect on its operation and asset life.
- optimise the capacity of wastewater infrastructure and treatment assets.
- ensure compliance with resource consent conditions.
- provide a basis for monitoring discharges from industry and trade premises.
- encourage waste minimisation, cleaner production and encourage water conservation.

These purposes are consistent with the objectives in the New Zealand Model General Bylaws NZS9201: Part 23:2004 (referred to below).

Parts 3 and 4 of the Bylaw outline how the council will consider applications for consent and the conditions that may be imposed on the consent holder, especially for “conditional” trade waste discharges.

3.1 The Importance of Protecting the Wastewater Infrastructure

Due to the characteristics of trade waste discharges, the network as well as the performance of the wastewater treatment plant can be placed at risk if the discharges are not properly regulated. All five wastewater treatment plants in the district rely on biological treatment processes, i.e. microbes to break down waste products. Once these waste products have been broken down they will be safe to discharge to the receiving environment.

A biological wastewater treatment plant is designed to treat domestic waste, i.e. toilet paper, bathroom and kitchen waste that is readily biodegradable. However, it is vulnerable to trade waste discharge characteristics that exceed modelled parameters.

Trade waste contaminants can have a detrimental effect on the microbial population of the plants resulting in effluent discharge from the treatment plants that does not comply with resource consent conditions, designed to protect the receiving environment. Once these microbes have been affected by toxic contaminants they may take several weeks to regain organic strength, i.e. Biological Oxygen Demand (BOD) and be able to treat wastewater to an acceptable level again.

Trade waste discharges that exceed the limits for BOD and fats oil and grease (FOG) may also have the following effect on the wastewater network:

- block wastewater pipes
- damage pumps
- cause odours and accelerated corrosion of the wastewater network
- overload treatment plants
- costlier to treat than domestic wastewater.

A key reason that the Bylaw was adopted by the council was to protect this key infrastructure network from abuse and mitigate the discharge of non-compliant effluent to the receiving environment.

To meet the objectives trade premises are required to be consented and comply with the minimum standards as set out in the Bylaw. Table 1 outlines the trade waste categories managed in the Bylaw.

Permitted trade waste	Conditional trade waste	Prohibited trade waste
Trade waste discharge that complies with the characteristics set out in Schedule 1A of the bylaw	Trade waste discharge that is likely to have no prohibited characteristics but exceed any one or more of the characteristics as set out in Schedule 1A of the bylaw	Trade waste discharge with characteristics set out in Schedule 1B of the bylaw

Table 1: Trade waste categories

Permitted	Conditional	Prohibited
• Must meet the discharge limits as set out in Schedule 1A of the bylaw • Must have no prohibited characteristics • Discharge limit may not exceed 2m³ per day • Flow rate may not exceed 2.0L per second • Trade premise contenting is required • Trade waste management plan is required • Trade waste consent conditions are based on a risk assessment • Trade Waste discharges are monitored for compliance • Non-compliances are actively managed • Continuous improvements and education required	• Exceeds the discharge limits that are set out in Schedule 1A but not Schedule 1B of the bylaw • Must have no prohibited characteristics • Discharge limit exceeds 2m³ per day • Flow rate exceeds 2.0L per second • Trade waste consent is required • Trade waste management plan is required • Trade waste consent conditions are based on a risk assessment • Trade waste discharges are monitored for compliance • Non-compliances are actively managed • Continuous improvements and education required	• Trade waste with prohibited characteristics, i.e. exceeds the limits of Schedule 1B of the bylaw, i.e. characteristics that interfere with the free flow of wastewater, a risk to the health and safety of any person or the environment, genetic waste, flammable explosives or radioactive

Table 2: Lays out the criteria for the three trade waste categories controlled in the bylaw.

Further analysis of the trade premise types, their risks to the wastewater network and pre-treatment conditions that support the Bylaw compliance are presented in Table 3 below.

Type of business activity	Risk to the wastewater network	Pre-treatment required
Food premises	• Fats, oil and grease can clog the sewer network • Risk to the WWTP – toxic waste and waste with a high nutrient load is more difficult to treat and requires additional aeration • Emerging contaminants in cleaning chemicals pose a risk to the receiving environment and biosolids • Premises that operate for more than 10 hours/day are likely to exceed the allocated amount of water as allowed under a permitted consent	• Grease trap • Sink screens
Dentists	• Amalgam from fillings contaminate the biosolids and should be recycled	• Amalgam Trap
Hairdressers	• Hair can tangle around pumps in the pump station and assist in causing sewer blockages that can lead to sewer overflows	• Sink screens
Medical Facilities	• Risk to the WWTP – toxic waste is more difficult to treat and requires additional aeration • Emerging contaminants in cleaning chemicals pose a risk to the receiving environment and biosolids	• Sink screens and plaster arrestors
Car Rentals	• Hydrocarbons/grit • High water users (> 2m³/day) – causes capacity issues in the network • Emerging contaminants in cleaning chemical pose a risk to the receiving environment and contaminate the biosolids • Solvents and used oil pose a risk to the network if not stored correctly and requires to be collected for recycling purposes	• Oil/grit Interceptor
Automotive /Mechanical	• Hydrocarbons, oil and other solvents • Solvents and used oil pose a risk to the network if not stored correctly and requires to be collected for recycling purposes	• Oil / water interceptors
Laundries	• High water users (> 2m³/day) – causes capacity issues in the network • Emerging contaminants, i.e. surfactants in washing powder pose a risk to the receiving environment and contaminate the biosolids	• Lint screens
Septic Tank Waste	• Toxic waste can have a detrimental impact on the microbes that break down the waste in the wastewater treatment plant.	No pre-treatment required? Private device management?

Table 3 Tabulated risks that various industries have on the wastewater network and biosolids.

Since the Bylaw came into force on 30 July 2015 the Bylaw has been implemented through:

- Education one on one
- Development of educational material
- A trade waste management system has been developed (to enter applications only).

4. LEGISLATIVE FRAMEWORK

Section 146(a) (iii) of the LGA gives the council the power to make bylaws for the regulation of trade waste. Section 148 sets out the requirements for bylaws relating to trade waste. Of note, a trade waste bylaw has a two-month minimum period for engagement with trade waste operators, the Minister of Health, and other persons specifically affected by the bylaw.

The Resource Management Act 1991 and associated regulations, including the National Policy Statement for Freshwater Management 2017 (NPS-FM) and the proposed strengthened version currently being considered by the government point to increasingly stringent water quality standards. The Otago Regional Water Plan sets discharge thresholds for discharges of contaminants into water.

The NZS 9201.23:2004 Model general bylaw - Trade waste provides a model for local authorities to use as the basis of a bylaw to regulate trade waste.

Other legislation and policy frameworks are summarised in Appendix C of the Cover Report.

5. METHODS

To determine whether a bylaw remains the most appropriate way of dealing with trade waste problems, staff undertook the following:

- ***Key stakeholders - Workshops and drop-in sessions:*** Key internal staff, external stakeholders including council contractors and waste management operators in the district attended workshops. The community, Ngāi Tahu, the regional council and various NGO's throughout the district were invited to attend drop-in sessions in both Wanaka and Queenstown.
- ***Analysis of trade waste customer information***: A combination of data was analysed and cross-referenced to gain a picture of trade waste discharges in the district, including survey data from 2018, cleanout schedules, i.e. maintenance of onsite pre-treatment systems, received from waste management contractors in the district and the Environmental Health Unit's database.
- ***Research****:* Research relevant to national and International regulatory approaches, industry standards, best practise guidelines and key trade waste management approaches in New Zealand and globally.
- ***Advice****:* Input from the council's legal experts, Meredith Connell, and Stantec, the council's technical review consultants.

Key Questions

The statutory review process is laid out in ss 148, 155-157 and 160 of the LGA. This review addresses the following key questions.

1. Do the problems the Bylaw sets out to address still exist?

2. Has there been any change in the nature and scale of the problem the Bylaw was intended to address?
3. Has the implementation been effective and efficient?
4. Is the Bylaw still the most appropriate way to protect the public wastewater system, people and the environment and encourage waste minimisation?

To assist with answering these key questions stakeholder feedback was sought and research undertaken.

6. THE PERCEIVED PROBLEMS WITH TRADE WASTE MANAGEMENT

6.1 Do the Problems Still Exist?

Non-compliant trade waste discharges do occasionally occur - The Bylaw sets out the requirements for the quality of trade waste discharges. However, non-compliance with the Bylaw is likely to occur due to a variety of reasons, such as:

- Insufficient pre-treatment of trade waste before discharge to the network, i.e. increases in discharges outgrow the existing pre-treatment system.
- Staff not following standard operating procedures resulting in equipment failure and unauthorised spills.
- Operational process failures.
- Insufficient maintenance and servicing of pre-treatment systems.
- Depletion of pre-treatment chemicals, i.e. enzymes
- A lack of control over fats, oil and grease discharged from some food premises, aimed at those premises that are not on a regular grease trap cleaning schedule.
- A change of ownership of businesses leading to a breakdown in good waste discharge practices.
- Concrete grease traps or passive traps that have been installed a long time ago are now corroding away to the point that the rebar's are visible. This is a huge risk to the network as concrete breaking away from the trap could cause a blockage downstream.
- Insufficient staff training
- Accidents.

6.2 Business activities and contaminants that pose a risk to our sewer network and the receiving environment

Business activities and trade premises that pose a risk to our sewer network - The largest and most concerning contributors of trade waste in the district are food premises, laundries, car rentals, automotive/mechanical services, and septic tank septage (sludge) collection services, and producers of wastewater, i.e. landfill leachate[1].

[1] The assumption was made on data sourced from – the Trade Waste survey 2018, clean-out schedules, water use data – by activity (from other Councils) and information sourced from the council database

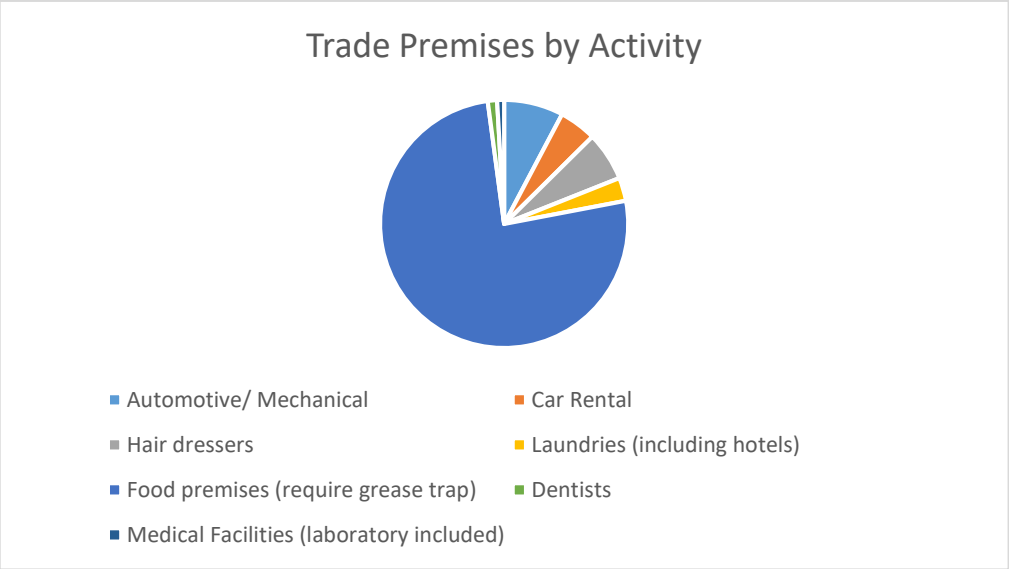

Figure 1: Different trade activities that pose a risk to the wastewater network[1].

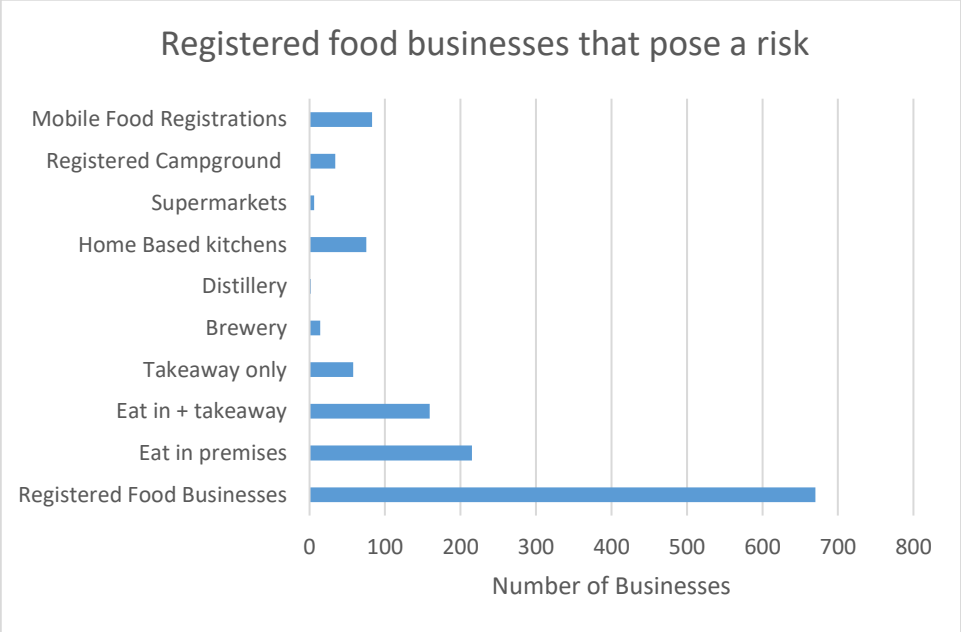

Figure 2: List of different types of registered food businesses that pose a risk to the wastewater network[1].

Figures 1 and 2 illustrate that the food service industry is the biggest industry in our district followed by the automotive industry.

Used car oil and solvents relative to the automotive and mechanical workshops are difficult waste steams to monitor and consist of the following:

- Glycol
- Contaminated fuels
- Contaminated rags

- Aerosol cans
- Oil filters
- Brake pads + fluid
- Parts washer solvents and aqueous waste.

Properties with on-site wastewater systems (e.g. septic tanks) rely on companies to transport waste to wastewater treatment plants by truck. Figure 3 shows seasonal fluctuations. These are due to the events schedule in the district. Portaloo waste is a large contributor of waste to the wastewater treatment plant in the summer season.

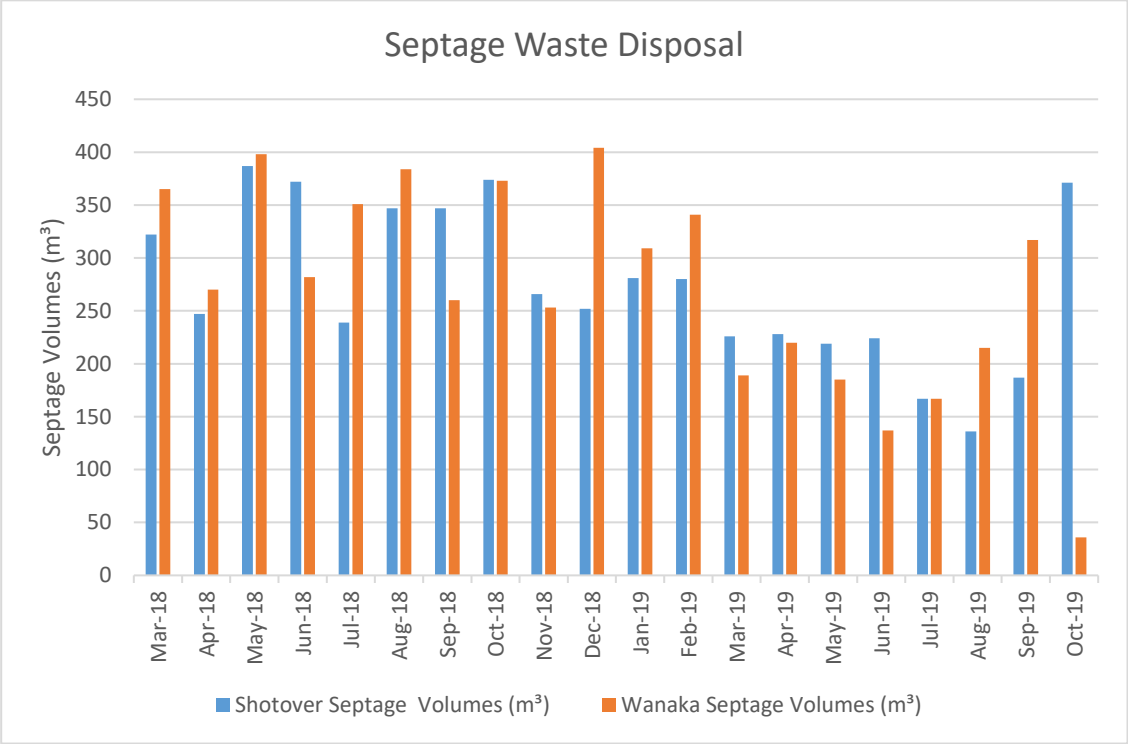

Figure 3: Septic tank discharges to the Shotover and Project Pure wastewater treatment plants[1].

The bylaw put in place controls aimed at septic tank waste discharges to the network to minimise the potential impact of these discharges on plant performance. However, the need for vigilance in preventing toxic shocks on the wastewater treatment processes is vital and ongoing.

Trade waste operators without a fixed premises- Industry stakeholders raised concerns during stakeholder engagement in relation to some dischargers not meeting their obligations including:

- mobile businesses that move from site to site and potentially dispose of waste via the stormwater network, toilets and gulley traps in an uncontrolled manner.
- building waste, i.e. polystyrene and blocks of wood causing sewer overflows.

Further, a number of emergent issues have arisen that the Bylaw in its current form is ineffective at addressing, such as:

Hazardous waste disposal - A waste management company that operates an oil recovery service in the district collects a significant volume of used car oil per month from a number of trade premises in the district[2].

This same waste management company provided a Haz mobile operation in the area up until about two years ago where they report having collected around 4 to 5 tonnes of hazardous industrial and household waste annually. About two years ago the company began collecting waste from centralised transfer stations instead. To date the company has made one collection of hazardous substances in Wanaka and Queenstown.

Approximately 350kg was collected from Queenstown and 650kg from Wanaka. Based on these low numbers, it can be assumed that people are either stockpiling waste or are disposing of it illegally. The current bylaw sets out the basic requirements for storing hazardous substances on-site but does not stipulate the need to track this waste. Amendments to the bylaw need to address these issues, i.e. tracking hazardous waste produced in the district to ensure appropriate recycling and/or disposal procedures are followed.

Emerging Organic Contaminants - While water quality investigations usually focus on nutrients, bacteria, heavy metals and priority contaminants (compounds with known health effects), recent research has identified the occurrence of many organic contaminants in wastewater that have impacted urban surface waters. These organic compounds are collectively referred to as Emerging Organic Contaminants (EOC's) and include compound classes, i.e. human and veterinary pharmaceuticals, hormones, antibiotics, surfactants, endocrine disruptors, x-ray contrast media, pesticides and metabolites, disinfectant by-products and taste-and-odour compounds.

EOCs originate from products that that are used in relatively small amounts. However, as they are used by many differ individuals/businesses on multiple occasions, the cumulative amount released into the environment becomes significant.

EOCs are present in recently developed industrial compounds that have been newly introduced to the environment and other compounds that are commonly used, but their harmful eco-toxicological effects have only recently been determined. The toxic significance of these EOC's are difficult to assess and their accepted concentrations in drinking water and discharge limits for wastewater effluent have not yet been determined[3].

A recent paper by the Department of Internal Affairs[4] has proposed that the current national water policy review set policy for EOC and related contaminants.

Besides discharges from chemical industries, the main source of EOCs released to the environment is from wastewater treatment plant effluents. A wide variety of EOCs are collected in the wastewater steam but not fully degraded and /or removed from the waste steam by traditional primary and secondary wastewater treatment systems. Biosolids and effluent from municipal wastewater treatment plants have been identified as the major source

[2] Actual volumes have not been reported due to commercial sensitivity.

[3] 1 Pal, A., He, Y., Jekel, M., Reinhard, M., Yew-Hoong Gin, K. (2014). Emerging contaminants of public health significance as water quality indicator compounds in the urban water cycle. Environment International (71), 46-62

[4] Department of Internal Affairs, Regulatory Impact Assessment, Strengthening the regulation of drinking water, wastewater and stormwater, 15 July 2019

of EOCs into the environment, particularly (PPCPs) pharmaceuticals and personal care products and endocrine disrupting chemicals (EDCs)[5].

The discharge characteristics of the parameters listed must be aligned with our wastewater treatment process to ensure the quality of our discharge to the receiving environment has minimal impact on public health and the receiving environment.

Although the current bylaw defines and encourages cleaner production it has not been included in the purpose of the bylaw. To ensure greater uptake and truly encourage cleaner production the amended bylaw needs to include cleaner production within the purpose of the bylaw.

Cleaning products - The Trade Waste Officer has determined that the risk posed by discharge of large amounts of chemical cleaning products in the district is a growing concern.

To encourage cleaner production within the various business activities of our region we need to promote the use of products that are environmentally preferable, i.e. cleaning products that are readily biodegradable and have been certified through environmental choice or similar.

6.3 Has There Been a Change in the Nature and Scale of the Problems?

The scale of trade waste discharges has changed significantly since the introduction of the Bylaw. The number of trading businesses in the region has grown significantly over the past five years. The growth rate in the area is the fastest in the country with the population growing 7.1% from 2015 to 2016 in a 12-month period. Most jobs in Queenstown are tourism- or accommodation-related. Employment growth was also the highest of any area in New Zealand at 10.3 per cent in the March 2016.

Trade waste discharges from certain sectors have changed significantly. The food and beverage service business sector has increased by 75 per cent over the past five years. This could be partly due to the reform of the Food Act 2014.

Automotive/mechanical services as well as car rental services have also increased in the district. Car rental services tend to grow parallel to the tourism industry in the region.

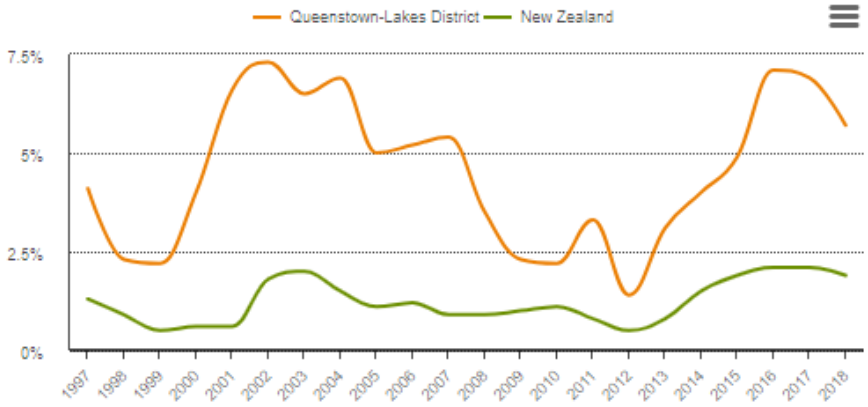

Figure 4 showing population growth in Queenstown since the bylaw was adopted in 2014[6]

[5] Tremblay, L., Northcott, G. (2015) Risk assessment of Emerging Contaminants in the Auckland Region.
[6] Sourced from:https://ecoprofile.infometrics.co.nz/QueenstownLakes%20District/Population/Growth

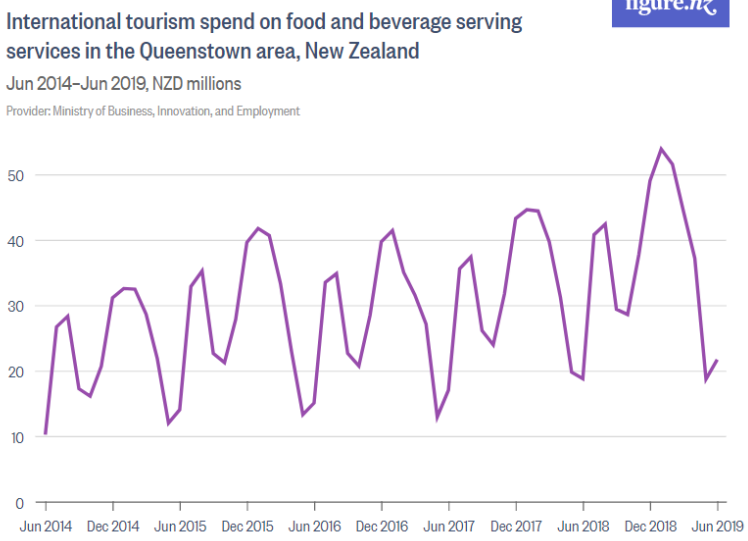

Figure 5 showing an upward trend of International tourism spending relative to the food and beverage industry in Queenstown.[7]

A change that will impact the nature and possibly scale of trade waste discharges is the implementation of water metering of trade premises in the district.

An unintended consequence of water metering is that it tends to concentrate contaminants (the direct consequence of water metering results in a decrease in consumption) i.e. the same amount of contaminants discharged in less water. This in turn can make the wastewater more difficult to treat and more difficult for water authorities to meet their environmental discharge consent obligations. The concentration of pollutants is a trend that has been noted by Sydney Water and in Australia (Water Services Association of Australia, 2012).

For a permitted activity to comply with the Bylaw, less than 2m³ of water a day would need to be used. This water use limit of 2m³ is one of the lowest in New Zealand and it has been found that most other councils have a limit of 5m³ (Auckland Council has a limit of 10m³). The reason for the low limit is to prevent network capacity issues, such as to minimising the risk of blockages.

To determine the estimated amount of water used by different trading activities, the council looked at water metering data from different councils around the country to understand how much water is used by various trading activities. The research determined that laundries, car wash facilities (including car rentals with a wash bay) and those food premises that operate for greater than 10hrs a day would exceed the allocated amount of 2m³ a day.

Installing water meters at all trade premises would allow for all trade premises to be consented which will further improve the quantity of discharges to the wastewater network. However, due to the presence of algae in the lake water, metering in the district might not be an option in the near future (presently algae in the lakes have been responsible for blocking existing water meters in the district).

External contractors and waste management contactors mentioned that they would like to see the council report quarterly or annually on trade waste discharges as well as benchmark the effects such discharges have on the wastewater network.

[7] Sourced from: https://figure.nz/chart/ILFPXEpzJc6tN7xx-1dNETwSLSjTda9jr

6.4 Is a bylaw Still the Most Appropriate Way to Address the Perceived Problem?

Stakeholders consider that a bylaw continues to be the most appropriate way to protect the Council's wastewater network, public health and safety, and the environment from the harmful effects of wastewater discharges. They also consider that it will help to prevent harm by encouraging waste minimisation.

Council network contractors and septic tank operators that clean out the grease traps consider that a bylaw is the most appropriate way to control trade waste discharges. The educational phase of implementation has worked well with contractors reporting that the build-up of fat in the network, especially where there is a high density of food premises, has decreased dramatically.

The Trade Waste Officer considers that a bylaw facilitates the regulation of trade waste and that it would be a lot more difficult to manage without a legal instrument that forces trade waste dischargers to comply with a minimum standard.

Internal stakeholders responsible for the efficient and effective operation of the wastewater network and for meeting environmental discharge consents are concerned about the risk trade waste discharges pose to the wastewater network operations and believe a bylaw is an important instrument required to regulate and control trade waste dischargers in the district.

6.5 Has Implementation Been Effective and Efficient?

Stakeholders consider that the educational phase of the Bylaw has worked well and been effective in controlling the amount of fats, oils and grease entering the wastewater network. CCTV footage has provided evidence of this. Approximately 224m^3 of grease trap waste has been removed from the district in the past 12 months.

The discharge limits provided for in the Bylaw have reduced the potential impact of trade waste discharges, i.e. fats, oil and grease and other wastes on the wastewater network and the receiving environment to which the treated wastewater is discharged.

Since the appointment of the Trade Waste Officer in May 2016 the implementation of the Bylaw has moved through the following stages of implementation.

- Education one on one.
- Development of educational material.
- Trade waste online application system operational.
- Trade waste management system developed (to enter applications only) and operational.
- Customers have not been categorized as permitted or conditional due to the lack of water metering in the district.
- Fees and charges have not been set due to:
  - the delay in installing water meters and;
  -due to the commissioning of the Shotover Wastewater Treatment Plant in February 2017. The requirement was that the plant should operate for at least 12 to 18 months before setting the trade waste charges.

Implementation challenges - The Bylaw requires all businesses to apply for a trade waste consent. However, to determine whether a trade waste discharge is permitted or conditional the council needs to install water meters. The absence of water metering in the district (due to algae issues) has prevented the council consenting any trade premises in the district under the current Bylaw.

Trade waste management plan- The Bylaw requires consented businesses to have a trade waste management plan (a type of environmental management system) in place and monitor and report on their discharge quality. To ensure businesses play their role in preventing further degradation to the environment it is important that they consider all aspects relating to the quality and quantity of their discharges, i.e. adopting cleaner production practices, water stewardship and waste minimisation. Trade waste management plans and associated guidance documents provide a low-cost opportunity for businesses to do this. As there are currently no consented businesses, there are currently no trade waste management plans.

Environmental Management Systems - "the organised effort of all functions in an industrial enterprise that has the main objective of enabling the enterprise to comply fully with all existing governmental regulations concerning the environment, and of enabling the infrastructure to adapt quickly to stricter environmental regulations through continuous efforts towards improvement…." Huxell (1993)

6.6 Recommended changes to the Bylaw

The Bylaw requires all trading premises to apply for a consent and in doing so all trading premises in the district are given the opportunity of understanding the wastewater network and the important function it has in protecting both public health and the environment. This is considered by stakeholders to be a positive element of the Bylaw.

Internal and external stakeholders have suggested some improvements to the Bylaw. The improvements are consistent with the objectives of the Bylaw. They include:

- applying consent conditions to individual trading premises, especially for conditional trade wastes - should be based on risk rather than a "one fits all approach". Those that pose a higher risk to the network should be doing more to prevent contaminants entering the network. The classification of industry by risk is a logical way of mitigating risk to the wastewater network, public health and the receiving environment in the absence of district-wide meterage.
- the Bylaw should be presented using less technical terms so that it is easier for a greater number of people to understand.
- fully implementing the Bylaw will further improve the quality of wastewater discharging to the network.
- review the current trade waste permitted and prohibited discharge parameters to ensure they align with current legislation and promote cleaner production.
- ensure all waste streams are accounted for and pre-treatment systems are maintained accordingly (for example grease trap waste and other hazardous wastes relevant to the automotive industries) a waste tracking system other than Waste Track should be investigated.
- Expand the scope of the Bylaw to regulate more businesses that are likely to be engaging in risky activities, this can be done by adding a new category similar to that shown in Tables 4 (status quo) and 5.

Permitted trade waste	Conditional trade waste	Prohibited trade waste
Trade waste discharge that complies with the characteristics set out in Schedule 1A of the Bylaw	Trade waste discharge that is likely to have no prohibited characteristics but exceed any one or more of the characteristics as set out in Schedule 1A of the Bylaw	Trade waste discharge with characteristics set out in Schedule 1B of the Bylaw

Table 4: Trade waste categories – current bylaw

- To capture and consent mobile food trucks and catering businesses that operate from a home-based kitchen consideration should be given to adjusting the trade waste discharge categories to accommodate these business types. Table 5 below illustrates how the Bylaw could be amended to capture the mobile food trucks and home based catering businesses.

Permitted trade waste	Controlled	Conditional trade waste	Prohibited trade waste
Trade waste discharge that complies with the Characteristics set out in Schedule 1A of the Bylaw. *Would apply to catering businesses that work from their home kitchen and mobile food trucks*	Requires a pre-treatment system. Trade waste discharge that complies with the characteristics set out in Schedule 1A of the Bylaw. *Would apply to all restaurants and businesses that require a pre-treatment system to comply with the limits set out in 1A of the Bylaw schedule.*	If required a pre-treatment system must be installed. Trade waste discharge that is likely to have no prohibited characteristics but exceed any one or more of the characteristics as set out in Schedule 1A of the Bylaw. *Would apply to all businesses that may require a pre-treatment system, i.e. an oil/grit interceptor (a car wash facility) and also will exceed the limits in Schedule 1A of the Bylaw.*	Trade waste discharge with characteristics set out in Schedule 1B of the Bylaw

Table 5: Trade waste categories - revised bylaw

Under this example, a home-based kitchen would be classified as a permitted activity. However, should they be responsible for a blockage they would be reclassified as controlled, requiring them to install a grease trap. These new categories will incentivise trade premises to comply with the discharge limits as set out in the new bylaw.

Trade waste consents versus trade waste agreements - Approval to discharge trade waste is normally in the form of a consent, agreement or permit that specifies conditions that must be met, including the requirement to provide management plans relating to trade waste discharges.

Councils often have consent requirements as the default position and agreements are used to allow more flexibility in dealing with non-standard situations. For example, a large water user may make financial contributions to the wastewater network rather that investing in a water recycling system and their trade waste discharges is then covered by a trade waste

agreement rather than a consent.

7. OPTIONS FOR ACHIEVING OBJECTIVES

This report identifies the following reasonably practicable options for achieving council's trade waste objectives and assesses the options in terms of their advantages and disadvantages as required by s 77 of the LGA:

A: Revoke the bylaw and manage using existing legislation and education initiatives
Increasing awareness to change behaviour using a programme of educational outreach, industry guidelines and targeted programmes to improve outcomes. This option removes the council's ability to regulate and manage the use and protection of the wastewater network.

B: Update the Bylaw in isolation
This option would review the Bylaw and incorporate the recommendations identified above. This option would improve the efficacy of the Bylaw and address trade waste related problems faced by the district, but would not achieve the integration outcomes sought from the proposed *Integrated Three Waters Bylaw* and *Administration Manual.*

C: Updated and Integrated bylaw

The Bylaw would be amended to incorporate the recommendations in this report and be incorporated as part of the *Integrated Three Waters Bylaw* and *Administration Manual.* This option addresses the trade waste specific problems identified above while also allowing the council to develop bylaws that address the full range of inter-related activities and issues in an integrated manner. The cover report outlines the reasons and advantages of implementing an *Integrated Three Waters Bylaw* and supporting this by an *Administrative Manual* as an efficient ongoing management approach.

7.1 Are There Any Implications Under the New Zealand Bill of Rights Act 1990?

In broad terms there is nothing about having a trade waste bylaw that raises concerns in this regard. However an evaluation of consistency can only be made properly once the specific provisions of the bylaw are proposed.

8. RECOMMENDATIONS

Staff recommend that the council's trade waste network continue to be regulated by a bylaw. It is recommended that the Bylaw be incorporated into the new Integrated Three Waters Bylaw, with the following amendments:

- Adjust the current trade waste discharge parameters to ensure they align with current resource consents and promote cleaner production.
- Produce a set of guidelines and/or controls (as appropriate) that will incentivise and support industry to source products that are environmentally preferable or readily biodegradable and enhance the performance of the wastewater network.

- Investigate a waste tracking system to assist with pre-treatment cleaning schedules and to ensure waste streams are dealt with appropriately.
- Develop controls for the use of trade waste agreements instead of trade waste consents for those industries that financially contribute to the wastewater network rather that investing in a water recycling system, i.e. high water users.
- Amend the Bylaw to ensure all trade premises are captured to ensure a fair and comprehensive management approach, this will include amending the categories and schedules of the Bylaw to capture all trading premises (as defined in the bylaw).
- Staff develop a plan to report on trade waste discharges relevant to compliance requirements as well as benchmarking the quality of wastewater entering the wastewater network.