DRAFT Integrated Three Waters Bylaw 2020

ADMINISTRATION MANUAL

Queenstown Lakes District Council

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This Administration Manual forms part of Queenstown Lakes District Council's Integrated Three Waters Bylaw 2020 that is adopted under Section 146 of the Local Government Act 2002

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Introduction

Purpose

The purpose of this Administration Manual is to provide material complementary to the Integrated Three Waters Bylaw 2020, which includes Water Supply, Stormwater, Wastewater and Trade Waste. This Administration Manual brings together those matters which may otherwise be included in the Bylaw, but which are of a technical or administrative nature, or operational matters that are more likely to be amended before the Bylaw is reviewed. These aspects also include guidelines, which are intended for that purpose – to provide guidance only, with respect to matters covered within the Bylaw.

In taking this approach, it will simplify the administration of the Bylaw, allow for administrative and technical processes to be kept up to date, and assist in the interpretation of the Bylaw.

The Administration Manual is made under the Bylaw, and will assist the implementation and operation of the Bylaw. The Administration Manual is a public document, and will be made available on the Council's website alongside the Bylaw. A hard copies of both can be provided on request, and will be available to review at public libraries.

The Administration Manual will be updated from time to time, as necessary, to ensure that it is kept up to date and reflects current practice. Amendments to this document will be authorised either by an Order of Council or the Council's Chief Executive or Officer's delegated authority.

Part A – Requirements Common to all Water Services

A1. Format of this Administration Manual

There are five parts and a number of Schedules to this Administration Manual. These follow the format of the Bylaw:

Part A Requirements Common to All Water Services

Part B Water Supply

Part C Stormwater

Part D Wastewater

Part E Trade Waste – which is discharged into the Wastewater Network

Schedules A to D

A2. Updated and New Legislation

Updated and new legislation will be included in Clause A3 and upon the Bylaw being reviewed any new legislation that gives further or changed authority for the Bylaw will then be included in the Bylaw.

A3. Applicable Acts, Regulations, Codes and Standards, and Council Codes of Practice, Policies and Plans

The Bylaw is made under the authority of the Local Government Act 2002. The following lists a range of other legislation, Regulations, Codes of Practices and Standards, and Council documents that are also applicable to the Bylaw.

a) Statutory Acts and Regulations, and updated/new legislation as may be enacted from time to time:

   i. Resource Management Act 1991, and relevant National Policy Statements and National Environmental Standards

   ii. Health Act 1956

   iii. Building Act 2004

   iv. Building Regulations 1992 Schedule 1 (New Zealand Building Code)

   v. Fire Service Act 1975

   vi. Local Government (Rating) Act 2002

   vii. Health (Drinking Water) Amendment Act 2007

   viii. Hazardous Substances and New Organisms Act 1996

ix. Litter Act 1979

x. Health and Safety at Work Act 2015

xi. Health and Safety in Employment Regulations 1995

xii. Health and Safety at Work (General Risk and Workplace Management) Regulations 2016

xiii. Health and Safety at Work (Mining Operations and Quarrying Operations) Regulations 2016

b) Relevant Codes and Standards:

i. Drinking Water Standards for New Zealand 2005 (revised 2018)

ii. Management and Handling of Used Oil HSNOCOP63. November 2013

iii. Environmental Guidelines for Discharges from Petroleum Industry Sites in New Zealand, in New Zealand Ministry for the Environment December 1998

iv. SNZ PAS 4509:2008 New Zealand Fire Service Firefighting Water Supplies Code of Practice

v. Water NZ Boundary Backflow Prevention for Drinking Water Supplies Code of Practice June 2013

vi. NZWWA Water Meter Code of Practice 2003.

c) Queenstown Lakes District Council Codes of Practice, procedures, guidelines and plans:

i. Land Development and Subdivision Code of Practice

ii. Water Supply Boundary Backflow Policy

iii. Approval Procedure for Access to the Three Water Networks for Investigations

iv. Procedure for Approved Contractors to commission Physical Connections to the Three Water Networks

v. Water Restrictions Procedure (to manage peak demand)

vi. Procedures to rectify wastage of water and excessive use of water

vii. Water demand management procedures

viii. Guidelines for Environmental Management Plans

ix. Environmental Best Management Practices

A4. Definitions

In this Administration Manual unless the context otherwise requires:

Acceptable Discharge means Wastewater and Stormwater with physical and chemical characteristics which comply with the requirements of the Council.

Administration Manual means the Administration Manual for this Bylaw as approved by Council and as amended from time to time by Council or delegated authority of the Council.

Approved or Approval means approved in writing by Council, either by resolution of Council or by any authorised officer of Council or other person authorised to give such approval on behalf of Council.

Approval Notice means an approval given by Council and signed by an Authorised Officer authorising a person to discharge Permitted Trade Waste to the Wastewater Network.

Authorised Officer means an employee, agent or contractor of Council, appointed by Council as an enforcement officer under section 171 of the Local Government Act 2002

Backflow means the unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system. There are two types of backflow: back pressure and back siphonage.

Biosolids means Sewage Sludge derived from a wastewater treatment plant that has been treated and/or stabilised to the extent that it is able to be safely and beneficially applied to land. The term biosolids is used generically to include products containing biosolids (e.g. composts).

BOD5 means the five-day carbonaceous biochemical oxygen demand which is a measure of the strength of sewage/wastewater.

Building means any building within the meaning of Sections 8 and 9 of the Building Act 2004.

Characteristics means any of the physical, biological or chemical characteristics of a wastewater, trade waste or stormwater discharge referred to in this Bylaw.

Chemical Oxygen Demand means total Chemical Oxygen Demand as determined by established standard methods of testing,

Cleaner Production means the implementation on Trade Premises, of operations, methods and processes appropriate to the goal of reducing or eliminating the quantity and toxicity of wastes. This is required to minimise and manage Trade Waste by:

i. using energy and resources efficiently, avoiding or reducing the amount of waste produced;

ii. producing environmentally sound products and services.

Condensing Water or Cooling Water means any water used in any trade or industry or commercial process or operation in such a manner that it does not take up matter into solution or suspension.

Conditional Trade Waste means Trade Waste that does not comply with one or more of the physical and chemical characteristics set out in Schedule A of the Administration Manual and/or has a maximum volume of Trade Waste of more than 2000L/day, but which does not have any characteristics of Prohibited Trade Waste. Conditional Trade Waste Consents includes consents for Temporary Discharges.

Contaminant has the same meaning as defined in Section 2 of the Resource Management Act 1991

Contingency management procedures means those procedures developed and used to avoid, remedy, or mitigate the actual and/or potential adverse effects on the environment from an unexpected or unscheduled event resulting in discharge, or potential discharge of contaminants of concern onto land or into the stormwater and wastewater systems or into receiving bodies such as wetlands, streams, rivers and lakes.

Consent means a consent in writing, given by the Council authorising an Occupier of Trade Premises to discharge Trade Waste to the Wastewater Services.

Consent holder means the Occupier who has obtained a Consent to discharge or direct the manner of discharge of Trade Waste and where appropriate stormwater discharges from any Premises to the Wastewater or Stormwater Network and includes any person who does any act on behalf or with the express or implied consent of the consent holder (whether for reward or not) and any licensee of the consent holder.

Controlled Trade Waste means a Trade Waste that complies with all the physical and chemical characteristics set out in Schedule A of the Administration Manual, after pre-treatment, and has a maximum volume of Trade Waste of no more than 2,000L/day.

Council means Queenstown Lakes District Council, or any officer or agent authorised to execute the authority of the Council.

Customer means a person who uses, or has obtained the right to use, or direct the manner of use of the Water Services provided by the Council.

Demand management procedures are procedures for implementing demand management measures in each of Council's Water Supply Areas.

Domestic Wastewater means either Wastewater that is typical of that discharged from Premises that are used solely for residential activities or Wastewater of the same character discharged from other Premises and includes the drainage from domestic swimming pools and spas.

Discharge includes emit, deposit, and allow to escape on a continuous, intermittent or temporary basis.

Disconnection means the physical cutting and/or sealing of any of water service from a premise.

District means the District of the Council.

Fees and Charges means the list of items, terms and prices for services associated with the Council's provision of Water Services as adopted by the Council in accordance with the Local Government Act 2002 and the Local Government (Rating) Act 2002 and as set out in this Bylaw and the Administration Manual.

Food Premises means premises from which a food business (as defined under section 10 of the Food Act 2014) operates.

Hose means any flexible or moveable tube for conducting water and includes a water sprinkler, soaker or any form of similar water distributing device whether held by hand or not.

Management Plan means the plan for management of Trade Waste operations and in some cases Stormwater for the Premises from which Trade Waste is discharged and may include provision for Cleaner Production, waste minimisation, monitoring and recording of discharges, contingency management procedures, and any relevant industry Code of Practice. In some situations, this plan also

addresses the protection of Stormwater outflows from Contaminants and minimise or prevent Stormwater merging with Trade Waste.

Mass limit means the total mass of any characteristic that may be discharged to the Council's wastewater system over any stated period from any single point of discharge or collectively from several points of discharge.

Maximum concentration means the instantaneous peak concentration of trade waste or other discharge that may be discharged at any instant in time.

Meter means a Council owned meter which measures and records the flow and/or volume of water supplied from the Water Supply.

Mobile Facility and Vendor Operations includes a vehicle, trailer, or caravan that may be used for food preparation and sale and a range of mobile activities such as commercial cleaning where liquid wastes are containerised and transported to discharge points in the Wastewater Network.

Nuisance means has the same meaning as section 29 of the Health Act 1956, and includes a person, thing, or circumstance causing distress or annoyance or unreasonable interference.

Occupier means any person who occupies any building or land connected to the Water Service and includes, where appropriate, employees and agents, and if the building or land is not occupied, means the owner.

Owner means any person who owns any building or land connected to the Water Service.

Permitted Trade Waste means a Trade Waste discharge that complies with all the physical and chemical characteristics set out in Schedule A, without the need for any pre-treatment, and does not exceed a maximum volume of trade waste of 2,000L/day (2 cubic metres/day).

Person includes a person, the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporated.

Point of Supply for Water Services is the point at which the ownership of the Water Service passes to the Occupier.

Premises means either:

i. A property or allotment which is held under a separate certificate of title or for which a separate certificate of title may be issued and in respect to which a building consent has been or may be issued;

ii. A building or part of a building that has been defined as an individual unit by a cross lease unit title or company lease and for which a certificate of title is available;

iii. land held in public ownership (e.g. reserve) for a particular purpose; or

iv. individual units in buildings which are separately leased or separately occupied.

Pre-treatment means any processing of Trade Waste, as included in a Controlled or Conditional Trade Waste that is designed to reduce any detrimental characteristics in Wastewater, before discharge to the Wastewater Network. Pre-treatment in certain circumstances can also relate to Stormwater.

Private Stormwater Drain means that section of stormwater drain between the Occupier's Premises and the Point of Discharge through which Stormwater is conveyed from the Premises. This section of the drain is owned and maintained by the Occupier or a group of Occupiers.

Prohibited Trade Waste means Trade Waste that has, or is likely to have, any of the physical and chemical characteristics as set out in Schedule B of the Administration Manual.

Registration means the process followed by all Trade Premises in providing information to Council regarding Wastewater and Stormwater discharges.

Schedule of fees and charges means the list of items, terms and prices for services associated with the supply of water and discharge of wastewater, trade waste and stormwater as approved by Council. These fees and charges are covered in Schedule D of this Administration Manual in addition to Council's other schedules of fees and charges.

Sewage means the wastewater discharge from any fixtures or appliances used for sanitation (the activity of washing and/or excretion carried out in a manner or condition such as that the effect on public health is minimised) and may include Trade Waste; and means the same as Wastewater.

Sewage Sludge means the material settled out and removed from Sewage during the treatment process.

Sewer means any pipe that conveys Wastewater/Sewage.

Sewerage means infrastructure for the collection, treatment, disposal of Wastewater and Trade Waste, including all Public Sewers, pumping stations, Storage Tanks, Sewage treatment plants, outfalls and other related structures operated by Council and used for the reception, treatment and disposal of Wastewater. This is the same as the Wastewater Network.

Stormwater means all surface water run-off and associated Contaminants resulting from precipitation that enters or may enter the stormwater network as a result of a rain event.

Stormwater Characteristics means those constituents as specified in the Otago Regional Plan: Water, as set out in Schedule C of this Administration Manual.

Stormwater Drain means any passage, channel or pipe on, over or under the ground by which stormwater is conveyed.

Stormwater Network means the Stormwater Network including all public stormwater drains, channels, manholes, treatment and attenuation facilities and other structures for the reception and discharge of Stormwater vested in the Council or acquired or constructed or operated by or under the control of the Council.

Tankered Waste means any water or other liquid, including waste matter in solution or suspension, which is conveyed by vehicle for disposal, but excludes Domestic Sewage discharged directly from house buses, camper vans, caravans, buses and similar vehicles.

Temporary Discharge means any discharge of an intermittent or short duration and includes the short-term discharge of non-complying Trade Waste in terms of Schedule A of the Administration Manual Permitted Discharge from premises subject to an existing Trade Waste Consent.

Trade means a basic economic concept involving the buying and selling of goods and services, with compensation paid by a buyer to a seller, or the exchange of goods or services between parties.

Trade Premises means:

i. any premises used or intended to be used for any industrial or trade purpose;

ii. any premises used or intended to be used for the storage, transfer, treatment, or disposal of waste materials or for other waste management purposes, or used for composting organic materials;

iii. any other premises, work site, mobile facility, or vendor operation from which a contaminant is discharged in connection with any industrial or trade process; or

iv. any other premises discharging other than Domestic Sewage to the wastewater network and includes any land or premises wholly or mainly used for agricultural or horticultural purposes.

Trade Waste is any liquid or gas, with or without matter in suspension or solution, that is, or may be, discharged from a Trade Premise to the Wastewater Network in the course of any trade, commercial, educational or industrial process or operation, or in the course of any activity or operation of a like nature; and may include Condensing or Cooling Waters, and Stormwater which cannot be practically separated, or Domestic Sewage.

Trade waste application means an application, made in accordance with the Trade Waste Consent Application Form (available via the Council's website).

Trade Waste Consent means a consent granted by Council under this Bylaw allowing the discharge of Controlled or Conditional Trade Waste to the Wastewater Network.

Wastewater has the same meaning as Sewag**e and** means any water with matter in solution or suspension, domestic wastewater, or liquid trade waste that discharges to the wastewater network**.**

Wastewater Network means the system for collection, treatment and disposal of wastewater and trade waste, including all Sewers, pumping stations, and storage used by the Council for the reception, treatment and disposal of Wastewater and Trade Waste.

Water Services means water supply and Wastewater Services (Sewerage, treatment and disposal of Sewage and Stormwater drainage) (Section 124 Local Government Act 2002)

Water Main means a pipe or conduit that conveys water.

A5. Administrative Procedures

A6. Fees and Charges

A6.1. General

There are no charges made under the Bylaw for water supply or stormwater or domestic type wastewater discharges other than those under the Offences and Penalties provisions as set out in clause A19.2 of the Bylaw.

Clause A22 of the Bylaw references the Local Government Act 2020 in terms of Council's powers to prescribe fees and recover reasonable costs.

A6.2. Prescribed Charges

Charges are set out in Schedule D to this Administration Manual. These cover the following.

a) All trade businesses other than those identified in clause E3.1 of the Bylaw are required to register their trade waste discharges with the Council. This registration process (also described in clause A5 of this Administration Manual) will determine if the business activity requires a consent or not. There will be no charge for registering discharges with the Council.

b) "Permitted" trade waste premises, mobile facilities and vendor operations may incur fees and charges relating to administration and an inspection fee.

c) For "controlled" consents set fees are charged for administration and inspections, inspection fee, in additional sampling and testing will be charged at cost (should this be required).

d) For "conditional" consents

i. Set fees are charged for administration, inspection fee, sampling and testing; and

ii. Unit charges based on a "cost causative approach" calculation following the principles set out in "New Zealand Standard 9201: Part 23 – 2004 Model General Bylaws – Trade Waste" Section G6.3".

iii. The appropriate parameters for this approach have been deemed by Council as:

- Volume $ per cubic metre
- Total Suspended Solids $ per kg
- Total Chemical Oxygen Demand $ per kg
- Total Nitrogen $ per kg

Introduction of cost causative charges will commence 24 months following introduction of the Bylaw. The purpose of delaying the introduction of this approach will allow businesses holding conditional consents to either make changes to their discharges (to reduce the cost) or allow the business to budget for these additional costs. It also allows for water meters to be installed in these areas (further information on roll out of water metering is provided in clause B1 of this Administration Manual). Discharges from "conditional" trade waste customers will then be sampled and the sample results will be calculated using the "Cost Causative Cost Approach".

Conditional trade waste Occupiers will be responsible for payment of these charges.

e) Fees and charges relating to sampling and testing could also be incurred should Council's officer deem it necessary to confirm whether a discharge is "permitted" or should be classed as "controlled" or "conditional".

f) Tankered waste will incur a volume charge only. Costs associated with random testing of tankered waste will be paid for by Council.

Part B – Water Supply

These provisions supplement those set out in Part A "Requirements Common to all Water Services"(of this Administration Manual and the Bylaw) and Part B "Water Supply" of the Bylaw.

B1. Water Metering Status

The District, like many districts in New Zealand is faced with an increasing demand for water and high costs for implementing new supplies. The District has a comparatively high average water use when compared with many other districts in New Zealand. Peak day use is also high as a result of widespread irrigation through the summer months, reflective of the district's relatively dry climate. Future expansions to the water supply network are designed for this peak day.

Water metering is a tool to not only help provide accurate information on water use in the district, because it is not possible to efficiently manage what isn't measured, but also to help reduce peak demand during summer months when water resources are most stretched. Reduced demand can defer the need for network upgrades leading to both capital and operation cost saving for the rate payer.

Council is currently investigating the cost benefit of introducing universal water metering and potential volumetric pricing in the future. The introduction of district-wide water metering is a significant undertaking and the introduction of any form of widespread customer metering would only occur when the financial and other benefits from doing so can be clearly demonstrated.

Due to the presence of the algae *Lindavia intermedia* in Lakes Wakatipu and Wanaka customer meters are unlikely to function properly in the Queenstown and Wanaka networks until upgraded water treatment plants are constructed at both sites (current expected completion date 2024).

A comprehensive project plan, risk assessment and a communication plan will be prepared in advance of any district-wide metering roll out.

Part C – Stormwater

These provisions supplement those set out in Part A "Requirements Common to all Water Services" (of this Administration Manual and the Bylaw) and Part C "Stormwater" of the Bylaw.

C1. Contamination of Stormwater

All discharges to Council's reticulated stormwater network must meet the requirements of clause C5 of the Bylaw and Schedule C of the Administration Manual.

C2. Stormwater Management Plans

C2.1. Where a trade premise generates trade waste and there is a reasonable probability that accidents or other events may take place where trade waste could enter Council's stormwater network, Council may decide to require a the trade waste consent to also consider protection of the stormwater system from such events. In this situation the trade waste consent could include the preparation of a Stormwater Management Plan, which contains measures for protection of Council's stormwater network.

C2.2. A Stormwater Management Plan must include:

a) A suitably scaled drawing showing the site layout, boundaries, all private stormwater and wastewater drainage including the point or points of connection to the Council's stormwater drainage, relevant buildings and outdoor spaces (including their use);

b) A site assessment identifying all actual and potential sources of stormwater contamination;

c) Methods in place to prevent contamination of the Council's stormwater network;

d) Methods and timeframes proposed to control contamination of the Council's stormwater network;

e) A description of the maintenance procedures in place and proposed;

f) Spill prevention and spill response procedures;

g) Cleaner production, pollution prevention and waste minimisation procedures may be included as a condition of trade waste consent associated with the same site. Guidelines of procedures and practices for cleaner production are included in clause E14 of this Administration Manual; and

h) Other matters that Council may decide are required in respect to other features of the site in question.

Part D – Wastewater

These provisions supplement those set out in Part A "Requirements Common to all Water Services" (of this Administration Manual and the Bylaw) and Part D "Wastewater" of the Bylaw.

D1. Discharge of Wastewater to the Wastewater Network

D1.1. Acceptable and Prohibited Characteristics

a) Wastewater discharged to Council's wastewater network must not exceed the contaminant limits as set out in Schedule A of this Administration Manual.

b) Wastewater with prohibited characteristics as set out in Schedule B of this Administration Manual must not be discharged to Council's wastewater network.

D1.2. Disinfected/Super Chlorinated Water

Any water used during the repair and construction of water mains must be de- chlorinated to provide a residual chlorine level of less than 0.5 ppm prior to discharge into the wastewater network. Any chemical used to neutralise the chlorine must not introduce any substances that exceed the limits specified in Schedule A of this Administration Manual.

NOTE: No such water must be disposed of to any stormwater drain, water course, or water body receiving environment except in compliance with Schedule C of this Administration Manual.

D1.3. Swimming Pools and Spa Pool Water

Filter backwash water, from a swimming pool or spa pool draining facility must be discharged to the wastewater network. Water from a swimming pool and spa pool, other than filter backwash water, may only be discharged to the wastewater network once the residual chorine level is less than 0.5 ppm and only in quantities associated with a standard backwash of filters. If the reason for discharge is due to a chemical imbalance, i.e. a pH<6 or >9, then the Council must be consulted before the discharge occurs. All discharges other than backwash must be made after 8pm and before 7am. Discharges outside of the stipulated time requires Council approval. Council reserves the right to limit the rate and timing of the discharge. Discharges are not allowed less than two days after a rain event.

D1.4. Campervan / Motorhome Wastewater

All campervan/motor home and similar domestic type wastewater must be disposed of at a designated facility that complies with the current Dump Station Guide.

D1.5. Mobile Facilities and Vendor Operations

Based on the information contained in the Owner/Operator's registration of these activities the Council may decide to require a conditional trade waste consent for the Owner/Operator's discharges to the wastewater network. Where a consent is required, the provisions of conditional trade waste consents will apply.

D1.6. Impervious yard run off

a) For large impervious areas (such as but not limited to truck washing facilities), the provisions set out in Council's Land Development and Subdivision Code of Practice will apply and specific provision will be made for a permanent barrier which will prevent water from outside the confines of the facility from entering the wastewater network.

b) Where it is impractical to cover a large impervious area, consideration will be given to a system which detains run-off from the first foul flush for ultimate disposal to the wastewater network, with subsequent run-off disposal as uncontaminated stormwater into the Council's stormwater network.

Part E – Trade Waste

These provisions supplement those set out in Part A "Requirements Common to all Water Services" (of this Administration Manual and the Bylaw) and Part E "Trade Waste" of the Bylaw.

E1. Application for a Trade Waste Consent

The requirements for trade waste consents are detailed below. Further details regarding information requirements for consent applications and consideration criteria are provided in clause E2 and clause E3.

E1.1. Every Occupier who discharges, or is likely to discharge, trade waste or tankered waste and in some cases mobile facilities and vendor's operational wastes is required to apply using the prescribed Trade Waste Consents and Registration Application Forms (available via the Council's website) for a trade waste consent:

a) in the case of a trade premises or tankered waste operation that exists at 1 July 2021, an application must be made prior to 1 December 2021; or

b) in all other cases prior to the commencement of a discharge of trade waste.

E1.2. Every Occupier who discharges, or is likely to discharge trade waste with characteristics that may exceed the limits specified in a trade waste consent is required to apply for a variation of the trade waste consent.

E1.3. Every Occupier who changes or is likely to change an approved means of pre-treatment for a discharge that is permitted by a trade waste consent is required to apply for a variation of the trade waste consent.

E1.4. All applications must be made in the prescribed form and be accompanied by the application fees.

E1.5. No discharges of trade waste with volumes, characteristics or constituents prohibited by this Bylaw will be approved to be discharged into the wastewater network.

E1.6. Within 15 working days of receiving an application for a trade waste consent to discharge from any premises or tanker or mobile facility or vendor's operation or to vary a trade waste consent, the Council may require the applicant to:

a) submit any additional information which it considers necessary to determine the application;

b) submit a Trade Waste Management Plan; and

c) obtain an independent report or producer statement completed by a suitably experienced and qualified person to verify any or all information supplied by the applicant, including any management plan; and/or present an analysis of the trade waste together with a report interpreting those results.

E2. Information Requirements for Trade Waste Consent Applications

E2.1. The applicant must ensure that the application and every other document conveying required information is properly executed.

E2.2. The Council will acknowledge the consent application in writing within 5 working days of the receipt of the application. This will be an automated response generated via Council's online application process.

E2.3. On receipt of any trade waste consent application the Council may:

a) Require the applicant to submit any additional information which it considers necessary for the purpose of approving a consent;

b) Require the applicant to submit a Trade Waste Management Plan to the satisfaction of the Council (as per clause E11 of this Administration Manual); and in special circumstances a Stormwater Management Plan as set out in Clause C2.1 of this Administration Manual; and

c) Have the discharge sampled, tested or monitored.

E2.4. The Council will notify the applicant of any further information requirement within 15 working days of receipt of the application.

E3. Consideration Criteria for Consent Applications

E3.1. The Council is not required to issue a trade waste consent until it receives any charge or fee fixed by it in relation to the application consent.

E3.2. In considering any application for a trade waste consent to discharge from any trade premises or to discharge tankered waste or mobile facility or vendor's operations into the wastewater network on such a consent, the Council must have regard to the following matters:

a) The quality, volume, and rate of discharge of the trade waste from such premises or tanker;

b) The health and safety of the Council staff, and Council agents and the public;

c) The limits and/or maximum values for characteristics of trade waste as specified as permitted activities in Schedule A of this Administration Manual;

d) The extent to which the trade waste may react with other trade waste or wastewater to produce an undesirable effect, e.g. settlement of solids, production of odours, accelerated corrosion and deterioration of the wastewater network;

e) The nature of any of Council's wastewater treatment processes and the degree to which the trade waste is capable of being treated in Council's wastewater treatment plants;

f) The flows and velocities in Council's sewers and conveyance systems, and the materials of construction of all components of Council's wastewater network;

g) The capacity of Council's wastewater network, specifically including sewers, trunk conveyance and wastewater treatment plants;

h) The timing and balancing of trade waste flows into the wastewater network;

i) Any statutory requirements such as any Otago Regional Council resource consents relating to the discharge of raw or treated wastewater to receiving waters, the disposal of wastewater sludges, beneficial use of biosolids, and any discharge to air (including the necessity for compliance with any such resource consent, discharge permit or water classification);

j) The effect of the trade waste discharge on the ultimate receiving environment;

k) The possibility of unscheduled, unexpected or accidental trade waste related events and the degree of risk these could cause to humans, the wastewater network, the stormwater network or the receiving environment;

l) Consideration of other existing or future discharges;

m) The amenability of the trade waste to pre-treatment;

n) Requirements to control and isolate stormwater;

o) Requirements and limitations related to sewage sludge and biosolids quality, disposal, and/or reuse;

p) Cleaner production techniques, pollution prevention and waste minimisation practices.

q) Any Management Plan; and

r) Tankered and mobile facilities or vendor's operation waste being discharged at an approved location/s.

E4. Decision on Application

E4.1. The Council must determine an application for a trade waste Approval Notice or consent and issue its decision to either:

a) grant the application as a Permitted Trade Waste through the Approval Notice procedure where all the characteristics of the trade waste meet the parameters in Schedule A of this Administration Manual and does not exceed a maximum volume of trade waste of 2,000L/day;

b) grant the application as a Controlled Trade Waste consent where all the characteristics of the trade waste complies with all the physical and chemical characteristics set out in Schedule A and has a maximum volume of Trade Waste of no more than 2,000L/day and is subject to pre-treatment requirements as set by Council in Part D of both the Bylaw and this Administration Manual and also the conditional consent itself;

c) grant the application as a Conditional Trade Waste consent with conditions imposed on the discharge;

d) decline the application as the trade waste has prohibited characteristics as set out in Schedule B of this Administration Manual; or

e) decline the application and provide reasons for refusal.

E5. Conditions of Trade Waste Consent – General

E5.1. A trade waste consent to discharge may impose restrictions on trade waste discharges by:

a) specifying mass, volume, pH, temperature and concentration limits for any constituent or characteristic as set out in clause E6 of this Administration Manual; and

b) specifying the rate of discharge of any constituent or characteristic.

E5.2. The Council may at any time require an Occupier discharging trade waste as a permitted trade waste discharge to apply for a controlled or conditional trade waste discharge consent, if that discharge ceases to be a permitted trade waste discharge as defined in Schedule A of this Administration Manual and is not a prohibited trade waste discharge set out in Schedule B of this Administration Manual.

E5.3. Any consent may be granted subject to such conditions that the Council may impose, including but not limited to:

a) the part of the Council's wastewater network to which the discharge will be made;

b) the maximum daily volume of the discharge and the maximum rate of discharge, and the duration of maximum discharge;

c) the maximum limit or permissible range of any specified characteristics of the discharge, including concentrations and/or mass limits determined by Council;

d) the period or periods of the day during which the discharge, or a particular concentration, or volume of discharge may be made;

e) the degree of acidity, or alkalinity of the discharge at the time of discharge;

f) the temperature of the trade waste at the time of discharge;

g) the provision by, or for the Occupier, at the Occupier's expense, of screens, grease traps, silt traps or other pre-treatment works to control trade waste discharge characteristics to the consented levels;

h) the provision and maintenance at the Occupier's expense of inspection chambers, manholes or other apparatus or devices to provide safe and reasonable access to drains for sampling and inspection;

i) the provision and maintenance of a sampling and analysis programme, and flow measurement requirements, at the Occupier's expense;

j) the method or methods to be used for the measuring flow rates and/or volume and taking samples of the discharge for use in determining compliance with the Consent and for determining the amount of any trade waste charges applicable to that discharge;

k) the provision and maintenance by, and at the expense of, the Occupier of such meters or devices as may be required to measure the volume or flow rate of any trade waste being discharged from the premises, and for the calibration of such meters;

l) the provision and maintenance, at the Occupier's expense of such services, (whether electricity, water or compressed air or otherwise), which may be required, in order to operate meters and similar devices including safe sampling points of access as may be required;

m) at times specified, the provision in a Council approved format by the Occupier of all flow and/or volume records and results of analyses;

n) risk assessment of damage to the receiving environment due to an accidental discharge of a chemical or other contaminant;

o) the provision and implementation of a Management Plan;

p) cleaner production, pollution prevention and waste minimisation as set out in a Management Plan if required for that premise's trade waste consent. Clause E13 of this Administration Manual provides guidance on pre-treatment and clause E14 of this Administration Manual provides guidance on cleaner production, pollution prevention, and waste minimisation;

q) remote monitoring and/or control of discharges;

r) third party treatment, carriage, discharge or disposal of by-products of pre-treatment of trade waste (including sewage sludge and biosolids disposal and reuse);

s) the requirement to provide a bond or insurance in favour of the Council where failure to comply with the consent could result in damage to the Council's wastewater network, its treatment plants, or could result in the Council being in breach of any statutory obligation;

t) the amount, if any, of cooling water, condensing water or stormwater which cannot practically be separated from trade wastes, that may be included with the discharge;

u) the cessation of a consent to discharge putrescible wastes to the wastewater network when the Council has provided or arranged an alternative commercial collection and disposal system; and

v) a prescribed sampling and monitoring programme to be carried out by the Occupier of the trade premises or Operator of a tankered waste operation. Clause E12 of this Administration Manual sets out Council's provisions for sampling and monitoring.

E6. Conditions of Trade Waste Consent - Mass, Volume, Rate, Concentration, Temperature and pH Values

E6.1. Limits on the mass, volume, concentration, pH or temperature may be imposed on the trade waste discharger for any constituent. Any characteristic that is subject to mass limit restrictions shall also have its maximum concentration limited.

E6.2. When setting mass, volume and concentration limit restrictions for a particular constituent in a trade waste consent the Council must have regard to:

a) conditions in Council's wastewater network near the trade waste discharge point and elsewhere in the wastewater network;

b) the extent to which the available industrial capacity for the constituent was met during the Council's preceding financial year, and the expected levels of the constituent for the forthcoming financial year;

c) if the applicant uses cleaner production, pollution prevention and waste minimisation techniques;

d) if the applicant has established a programme to achieve cleaner production, pollution prevention and waste minimisation to the satisfaction of the Council within an agreed timeframe;

e) if in the opinion of the Council, there is any advantage to increasing the discharge of a particular constituent in exchange for decreasing the discharge of another constituent;

f) any requirements of the Council to meet resource consent conditions or regional plan rules;

g) any requirements of the Council to reduce the contaminant discharge of the trade waste or wastewater discharge;

h) how great a proportion the mass flow of a constituent of the discharge will be of the total mass flow of that constituent in the wastewater in Council's wastewater network;

i) the total mass of the constituent allowable in the wastewater, and the proportion (if any) to be reserved for future allocations of discharge of such constituents to other consent holders; and

j) if there is an interaction with other constituents which increases or decreases the effect of their characteristic on the Council's wastewater network including reticulation, treatment process, or receiving water (or land).

E7. Mobile Facilities and Vendor's Operations

Clause D1.5 of this Administration Manual sets out the requirements for Council's consideration of such discharges to Council's wastewater network and the procedures as to how Council may consider these discharges in certain instances to be a trade waste discharge.

E8. Discharges via Grease Traps, Oil and Grit Interceptors

In addition to the requirements of clause E13 of the Bylaw all grease traps and oil/grit separators must be regularly serviced and maintained to ensure:

a) The sediment layer in any trap does not exceed 20% of the depth of the volume of the trap; and

b) The fat/oil grease layer does not exceed 20% of the depth or volume of the trap.

Oil water separators should be inspected weekly and as soon as practical after any spillage occurs on site. These devices should be serviced if there is any significant oily material (more than 3mm) or sediment (more than 150mm) in the device.

E9. Operations not Considered Trade Waste

These are set out in clause E3.3 of the Bylaw.

E10. Trade Waste from Food Premises (Not Commercial)

Premises which prepare and serve food, but are not commercial in nature, may include:

- Marae;
- Churches;
- Community halls and public gathering places;
- Catering facilities within schools and early childhood centres; and
- Other facilities as identified at Council's discretion.

As per clause E14 of the Bylaw, these premises must fit grease traps and apply for a trade waste consent.

E11. Trade Waste Management Plans

E11.1. When required by Council a Trade Waste Management Plan must include a plan for the management of the operations from which the trade waste is produced. This must include but not be limited to:

a) A description of the operations producing the trade waste;

b) A description of pre-treatment devices and their operation;

c) Methods to ensure compliance with the conditions of the trade waste consent;

d) A description of maintenance procedures in place and any further proposed in respect to the trade operation producing the trade waste; and

e) Contingency management procedures.

E11.2. The Trade Waste Management Plan may also need to address the following matters as conditions of the Trade Waste Consent as determined by Council:

a) Cleaner production, pollution prevention and waste minimisation approaches used and/or further planned to be used. Clause E14 of this Administration Manual sets out the guidelines for these;

b) Reference to relevant industry Codes of Practice that are being followed; and

c) Other matters that Council may deem to be appropriate to a particular trade waste discharge.

E12. Sampling and Monitoring of Trade Waste

E12.1. Council may require sampling, testing and monitoring to be undertaken to determine if a discharge:

a) complies with the provisions of the Bylaw;

b) is to be classified as permitted, controlled, conditional, or prohibited; or

c) complies with the provisions of Schedule A of this Administration Manual for a permitted discharge and any trade waste consent to discharge.

E12.2. The taking, preservation, transportation, and analysis of the sample must be undertaken by an authorised officer or agent, or the person discharging, in accordance with accepted industry standard methods, or by a method specifically approved by the Council.

E12.3. Sampling point configuration and other requirements are as set out in Council's Land Development and Subdivision Code of Practice.

E12.4. The person discharging is responsible for all reasonable costs. Where a dispute arises as to the validity of the methods or procedures used for sampling or analysis, the dispute may be submitted to a mutually agreed independent arbitrator.

E13. Trade Waste Pre-treatment Requirements and Guidelines

Table 1 includes a range of trade waste discharging operations; their potential risks to the wastewater network; pre-treatment requirements for controlled consents, and pre-treatment guidelines for other discharge categories.

A number of these other categories will include for conditional consent discharges where that discharge is greater than 2,000 L/day and/or exceeds the permitted discharge criteria in Schedule A of this Administration Manual.

Table 1 Trade Waste Discharges – Risks to the Wastewater Network and Pre-treatment Requirements and Guidelines

Type of business activity	Risk to the wastewater network	Pre-treatment required for these "Controlled" Trade Wastes Refer Bylaw Clauses E12, E13, E14, E15 and E16
Food premises including: • Day-care centre • Nursing Homes • Hospitals • Retirement Villages All with cooking on site	• Fats, oil and grease can clog the wastewater 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 activity	• Grease trap • Sink screens
Dentists	• Amalgam from fillings contaminate the biosolids and should be recycled	• Amalgam Trap
Car Washes Large areas roofed and bunded (Clause D1.6 of this Administration Manual)	• 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
Pre-treatment Guidelines		
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
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

Type of business activity	Risk to the wastewater network	Pre-treatment required for these "Controlled" Trade Wastes Refer Bylaw Clauses E12, E13, E14, E15 and E16
Garbage Bin Cleaning	• Can clog wastewater network	• Basket Trap and Fixed Screen
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 • May require cooling pit
Equipment Washing	• Clog wastewater networks	• Oil/grit/water separation
School Art Studio and Laboratories	• Wastewater network risks	• Grit trap and/or neutralisation/mixing chamber
Septic Tank Waste (Septage)	• 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 septic tank management required in accordance with good practice

E14. Cleaner Production, Pollution Prevention and Waste Minimisation Guidelines

Cleaner production, pollution prevention, and waste minimisation programmes should, at a minimum, address the following:

a) An overall approach to pollution prevention including where necessary stormwater contamination in addition to the various categories of trade waste discharge and wastewater discharge.

b) The effective use of water including adherence to Council's water demand management procedures.

c) Opportunities for reducing the contamination potential of trade waste constituents that enter the wastewater system and may be transferred through into Council's wastewater sludges and biosolids (for example, using alternative chemicals that are less toxic).

d) The effectiveness of material use and processes (by employing methodologies to minimise waste and the unnecessary consumption of materials, including water conservation).

e) The practice of good housekeeping (to prevent spoilage and contamination due to poor handling or storage).

SCHEDULE A – PERMITTED DISCHARGE CHARACTERISTICS

The nature and levels of the characteristics of any trade waste discharged to the Council's wastewater network shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by Council as part of a consent to discharge a trade waste.

Physical characteristics

Ref No	Bylaw Requirements	Commentary from NZ Standard 9201: 2004 Part 23 Model General Bylaws – Trade Waste
Flow		
A.1.1	a) The 24-hour flow volume must be less than 2,000 litres (2 cubic metres). The maximum instantaneous flow rate must be less than 2.0 L/s.	Flows larger than the Guideline values should be Conditional Trade Waste Consent. Conditional Consents will be dependent on the Contaminant concentration/mass load.
Temperature		
A.1.2	The temperature must not exceed 40 °C.	Higher temperatures: • Cause increased damage to sewer structures; • Increase the potential for anaerobic conditions to form in the wastewater; • Promote the release of gases such as H_2S and NH_3 (can adversely affect the safety of operations and maintenance personnel); and • Reflect poor energy efficiency. It should be noted that this temperature has been reduced from 50°C to come into line with the ARMCANZ/ANZECC Guidelines for sewerage systems. A lower maximum temperature may be require for large volume discharges.
Solids		
A.1.3	a) Non-faecal gross solids must have a maximum dimension that shall not exceed 15 mm. b) The suspended solids	Gross solids can cause sewer blockages. In case of conditional consents fine screening may be appropriate High suspended solids contents can cause sewer blockages and overload the

Ref No	Bylaw Requirements	Commentary from NZ Standard 9201: 2004 Part 23 Model General Bylaws – Trade Waste
	content of any Trade Waste must have a maximum concentration that shall not exceed 2000 g/m^3. For significant industry this may be reduced to 600 g/m^3. c) The settleable solids content of any Trade Waste must not exceed 50mL/L. d) The total dissolved solids concentration in any Trade Waste must be subject to the approval of QLDC, having regard to the volume of the waste to be discharged, and the suitability of the wastewater network and the Wastewater Treatment Plant to accept such waste. e) At no time must the sediment layer in any trap exceed 20% of the depth or volume of the trap. f) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the wastewater network or Wastewater Treatment Plant shall not be present.	treatment processes. Where potential for such problems is confirmed, a lower limit appropriate to the risk may be set. A lower limit may be set between 2000 g/m^3 and 600 g/m^3. The ANZECC Guidelines recommend a limit of 600 g/m^3. High total dissolved solids reduce effluent disposal options and may contribute to soil salinity. Where potential for such problems exists, a limit of 10,000 g/m^3 may be used as a guideline.

Ref No	Bylaw Requirements	Commentary from NZ Standard 9201: 2004 Part 23 Model General Bylaws – Trade Waste
Oil and grease		
A.1.4	a) There must be no free or floating layer. b) Fat, oil or grease must not exceed 100 g/m³ c) At no time must the fat, oil or grease layer exceed 20% of the depth or volume of the trap	Oil and grease can cause sewer blockages, may adversely affect the treatment process, and may impair the aesthetics of the receiving water. Where the Wastewater Treatment Plant discharges to a sensitive receiving water, lower values should be considered. If the WWA only has screening and/or primary treatment prior to discharge, it is recommended that oil and grease be reduced to 100 g/m^3. If quick break detergents are being used, it should be ensured that proper separation systems are being used by the Consent Holder. If not, oil will reappear in drainage systems as a free layer.
Solvents and other liquids		
A.1.5	a) There must be no free layer (whether floating or settled) of solvents or organic liquids.	b) Some organic liquids are denser than water and will settle in sewers and traps.
Emulsions of paint, latex, adhesive, rubber, plastic		

Ref No	Bylaw Requirements	Commentary from NZ Standard 9201: 2004 Part 23 Model General Bylaws – Trade Waste
A.1.6	a) Where such emulsions are not treatable these may be discharged into the wastewater network subject to the total suspended solids not exceeding 1000 g/m^3 or the concentration agreed with QLDC. b) QLDC may determine that the need exists for pre-treatment of such emulsions if they consider that Trade Waste containing emulsions unreasonably interferes with the operation of QLDC's Wastewater Treatment Plant, e.g. reduces % UVT (ultra violet transmission). Such emulsions of both treatable and non-treatable types, must be discharged to the wastewater network only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public wastewater network.	'Treatable' in relation to emulsion wastewater, means the Total Organic Carbon content of the waste decreases by 90% or more when the wastewater is subjected to a simulated wastewater treatment process that matches the WWA treatment system. Emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of emulsion to be treated. Emulsion may colour the WWA treatment plant influent such that % UVT is unacceptably reduced. Emulsions will coagulate when unstable and can sometimes cause sewer blockage. Emulsions are stable when dilute or in the correct pH range.
Radioactivity		
A.1.7	Radioactivity levels must not exceed National Radiation Laboratory Guidelines.	Refer National Radiation Laboratory *Code of safe* *practice for the use of unsealed radioactive materials* NRL C1.
Colour		
A.1.8	No waste must have colour or a	Colour may cause aesthetic impairment of

Ref No	Bylaw Requirements	Commentary from NZ Standard 9201: 2004 Part 23 Model General Bylaws – Trade Waste
	colouring substance that causes the discharge to be coloured to the extent that it impairs wastewater treatment processes or compromises the treated wastewater discharge Consent.	receiving waters, and adverse effects on lagoon treatment processes and ultra-violet disinfection. Where potential for such problems exists, a level of colour that is rendered not noticeable after 100 dilutions may be used as a Guideline. Where UV disinfection is used special conditions may apply.

Chemical Characteristics

Ref No	Bylaw Requirements	Commentary from NZS 9201: Part23:2004
pH value		
A.2.1	The pH must be between 6.0 and 10.0 at alltimes.	Extremes in pH: • Can adversely affect biological treatment processes; • Can adversely affect the safety of operations and/or maintenance personnel; • Cause corrosion of sewer structures; and • Increase the potential for the release of toxic gases such as H_2S and HCN. Relaxation of these limits to 5.5 and 11.0 is acceptable for low pressure premises which discharge into a large flow. Significant industries may need to be restricted to limits between 6.0 and 9.0.
Organic Strength		
A.2.2	Where there is no council treatment system for organic removal the BOD_5 must not exceed 1000 g/m³. For significant Industry this may be reduced to 600 g/m³	The loading on a treatment plant is affected by Biochemical Oxygen Demand BOD_5 rather than Chemical Oxygen Demand (COD). For any particular waste type

Ref No	Bylaw Requirements	Commentary from NZS 9201: Part 23: 2004
		there is a fixed ratio between COD and BOD_5. For domestic wastewater it is about 2.5:1 (COD: BOD_5), but can range from 1:1 to 100:1 for Trade Waste. Therefore BOD_5 is important for the treatment process and charging, but because of the time taken for testing, it is often preferable to use COD for monitoring. However, the use of COD testing must be balanced by the possible environmental effects of undertaking such tests due to the production of chromium and mercury wastes. Where a consistent relationship between BOD_5 and COD can be established the discharge may be monitored using the COD test. If the treatment plant BOD_5 capacity is not limited, and sulphides are unlikely to cause problems, there may be no need to limit BOD_5 High COD may increase the potential for the generation of sulphides in the wastewater. A BOD_5 limit which is too stringent may require
Maximum concentrations		
A.2.3	The maximum concentrations permissible for the chemical characteristics of an acceptable discharge are set out in the following tables: Table 1 – General Chemical Characteristics Table 2 – Heavy Metals Table 3 – Organic Compounds and Pesticides	Where appropriate, maximum daily limits (kg/day) for mass limit Permitted Discharges may also be given.

Table 1 — General Chemical Characteristics

(Mass limits may be imposed, refer to Clause E6.1 of this Administration Manual)

Characteristic	Maximum concentration (g/m^3)	Mass Limits (kg/day)	Reason for limit
MBAS (Methylene blue active substances)	500	1.5	MBAS is a measure of anionic surfactants. High MBAS can: • Adversely affect the efficiency of activated wastewater sludge plants; and • Impair the aesthetics of receiving waters. For Wastewater Treatment Plants that suffer from the effects of surfactants the maximum concentration could be reduced significantly, e.g. Sydney Water utilize a level of 100 g/m^3.
Ammonia (measured as N)			High ammonia: • May adversely affect the safety of operations and maintenance personnel; and • May significantly contribute to the nutrient load to the receiving environment.
— free ammonia	50	0.25	
— ammonium salts	200	1.0	
Kjeldahl nitrogen	150	1.0	High Kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment. A value of 50 g/m^3 should be used as a guideline for sensitive receiving waters.
Total phosphorus (as P)	50	0.75	High phosphorus nitrogen may significantly contribute to the nutrient load of the receiving environment. A value of 10 g/m^3 should be used as a guideline for sensitive receiving waters.
Sulphate (measured as SO_4)	500 1500 (with good mixing)	2.5	Sulphate: • May adversely affect the wastewater network; and • May increase the potential for the generation of sulphides in the wastewater if the wastewater network is prone to becoming anaerobic.

Characteristic	Maximum concentration (g/m^3)	Mass Limits (kg/day)	Reason for limit
Sulphite (measured as SO_2)	15	0.075	Sulphite has potential to release SO_2 gas and thus adversely affect the safety of operations and maintenance personnel. It is a strong reducing agent and removes dissolved oxygen thereby increasing the potential for anaerobic conditions to form in the wastewater.
Sulphide—as H_2S on acidification	5	0.025	Sulphides in wastewater may: • Cause corrosion of the wastewater network, particularly the top non- wetted part of a sewer; • Generate odours in sewers which could cause public nuisance; and • Release the toxic H_2S gas that could adversely affect the safety of operations and maintenance personnel. Under some of the conditions above sulphide should be <2.0 g/m^3

Characteristic	Maximum concentration (g/m^3)	Mass Limits (kg/day)	Reason for limit
Chlorine (measured as Cl_2) Free chlorine Hypochlorite	3 30	0.015 0.15	Chlorine: • Can adversely affect the safety of operations and maintenance personnel; and • Can cause corrosion of the wastewater network. ARMCANZ/ANZECC Guidelines for sewerage systems utilize a figure of 10 g/m^3.
Dissolved aluminum	100	1.5	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate on a scale that may cause a sewer blockage.
Dissolved iron	100	1.5	Iron salts may precipitate and cause a sewer blockage. High concentrations of ferric iron may also present colour problems depending on local conditions.
Boron (as B)	25	0.125	Boron is not removed by conventional treatment. High concentration in wastewater may restrict irrigation applications. Final wastewater use and limits should be taken into account.
Bromine (as Br_2)	5	0.025	High concentrations of bromine may adversely affect the safety of operations and maintenance personnel.
Fluoride (as F)	30	0.15	Fluoride is not removed by conventional wastewater treatment, however pre-treatment can easily and economically reduce concentrations to below 20 g/m^3.
Cyanide — weak acid dissociable (as CN)	5	0.005	Cyanide may produce toxic atmosphere in the sewer and adversely affect the safety of operations and maintenance personnel.

Table 2 — Heavy Metals

(Mass limits may be imposed, refer to Clause E6.1 of this Administration Manual)

Metal	Maximum Concentration[1] (g/m^3)	Mass Limit[2] (kg/day)	Metal	Maximum Concentration (g/m^3)	Mass Limit (kg/day)
Antimony	10.0	0.025	Manganese	10.0	0.025
Arsenic	5.0	0.025	Mercury	0.05	0.0001
Barium	10.0	0.025	Molybdenum	10.0	0.025
Beryllium	0.005	0.0001	Nickel	10.0	0.050
Cadmium	0.5	0.001	Selenium	10.0	0.025
Chromium	5.0	0.050	Silver	2.0	0.010
Cobalt	10.0	0.025	Thallium	10.0	0.025
Copper	10.0	0.050	Tin	10.0	0.025
Lead	10.0	0.025	Zinc	10.0	0.050

Note:

Heavy metals have the potential to:

a) Impair the treatment process;

b) Impact on the receiving environment; and

c) Limit the reuse of wastewater sludge and effluent.

Where any of these factors are critical it is important that local acceptance limits should be developed.

The concentration of chromium includes all valent forms of the element. Chromium (VI) is considered to be more toxic than chromium (III), and for a discharge where chromium (III) makes up a large proportion of the characteristic, higher concentration limits may be acceptable. Specialist advice should be sought.

Metals will be tested as total, not dissolved. If sludge is used as a biosolid then metal concentration/mass are important such that the Biosolids Guidelines are met.

[1] It is intended that these maximum concentrations refer to the total metal fraction

[2] It is intended that these mass limits refer to the total metal fraction.

Table 3 — Organic compounds and pesticides

(Mass limits may be imposed, refer to Clause E6.1 of this Administration Manual)

Compound	Maximum concentration[3] (g/m^3)	Mass Limits[4] (kg/day)	Reason for limit
Formaldehyde (as HCHO)	50	0.25	Formaldehyde in the sewer atmosphere can adversely affect the safety of operations and maintenance personnel.
Phenolic compounds (as phenols) Excluding chlorinated phenols	50	0.25	Phenols may adversely affect biological treatment processes. They may not be completely removed by conventional treatment and subsequently impact on the environment.
Chlorinated phenols	0.02	0.001	Chlorinated phenols can adversely affect biological treatment process and impair the quality of the receiving environment.
Petroleum hydrocarbons	30	0.15	Petroleum hydrocarbons may adversely affect the safety of operations and maintenance personnel.
Halogenated aliphatic compounds 5	1	0.001	Because of their stability and chemical properties these compounds may: • Adversely affect the treatment process; • Impair the quality of the receiving environment; and • Adversely affect the safety of operations and maintenance personnel.
Monocyclic aromatic hydrocarbons	5	0.025	These compounds (also known as benzene series) are relatively insoluble in water, and are normally not a problem in Trade Waste. They may be carcinogenic and may adversely affect the safety of operations maintenance personnel.
Polycyclic (or polynuclear) aromatic hydrocarbons (PAHs) Including specifically: dibenzo [a,h] anthracene benzo [a] anthracene benzo[a] pyrene benzo [b] fluoranthene benzo [k] fluoranthene chrysene indeno [a,2,3-cd] pyrene	0.05	0.001	Many of these substances have been demonstrated to have an adverse effect on the health of animals. Some are also persistent and are not degraded by conventional treatment processes.

[3] Where several compounds are grouped into a generic type, the sum of individual concentrations is not to exceed the maximum listed

[4] Where several compounds are group into a generic type, the sum of individual mass quantities is not to exceed the maximum listed

[5] These compounds shall be accepted up to the given maximum concentration only when specifically approved

Compound	Maximum concentration[3] (g/m^3)	Mass Limits[4] (kg/day)	Reason for limit
Halogenated aromatic hydrocarbons (HAHs)	0.002	0.0001	Because of their stability, persistence and ability to bioaccumulate in animal tissue these compounds have been severely restricted by health and environmental regulators
Polychlorinated biphenyls (PCBs) Polybrominated biphenyls (PBBs) Including specifically the following congeners using the IUPAC nomenclature: PCB-28 PCB-52 PCB-77 PCB-81 PCB-101 PCB-105 PCB-114 PCB-118 PCB-123 PCB-126 PCB-138 PCB-153 PCB-156 PCB-157 PCB-167 PCB-169 PCB-180 PCB-189	0.002	0.0001	Because of their stability, persistence and ability to bioaccumulate in animal tissue these compounds have been severely restricted by health and environmental regulators
Pesticides (general) (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticides not registered for use in New Zealand)	0.002 each 0.2 in total	0.0001	Pesticides: • May adversely affect the treatment processes; • May impair the quality of the receiving environment; and • May adversely affect the safety of operations and maintenance personnel.
Organophosphate pesticides - excludes pesticides not registered for use in New Zealand - These compounds shall be accepted up to the given maximum concentration only when specifically approved.	0.1	0.0001	

[6] These compounds shall be accepted up to the given maximum concentration only when specifically approved

[7] Excludes pesticides not registered for use in New Zealand.

A.3.4 Inhibitor Chemicals

No waste being diluted at a ratio of 100 to 1 of wastewater may inhibit the performance of the wastewater treatment process, such that QLDC is significantly at risk, or prevented from achieving its environmental statutory requirements.

After dilution with de-chlorinated water, at a ratio of 15 to 1 of wastewater, a discharge which has an acute result when subjected to the Whole Effluent Toxicity Testing, will be deemed to have inhibitory chemicals. Whole Effluent Toxicity Testing will be undertaken using organisms selected by the QLDC.

SCHEDULE B – PROHIBITED CHARACTERISTICS

B1 Introduction

Schedule B defines prohibited characteristics.

Any discharge has prohibited characteristics if it has any solid, liquid or gaseous matters, or any combination or mixture of such matters, which by themselves or in combination with any other matters, will immediately or in the course of time:

a) Interfere with the free flow of wastewater in the wastewater network;

b) Damage any part of the wastewater network;

c) In any way, directly or indirectly, cause the quality of the treated wastewater or residual biosolids and other solids from any Wastewater Treatment Plant in the catchment to which the waste was discharged to breach the conditions of a consent issued under the RMA, or water right, permit or other governing legislation;

d) Prejudice the occupational health and safety risks faced by wastewater workers;

e) After treatment be toxic to fish, animals or plant life in the receiving waters;

f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance; or

g) Have a colour or colouring substance that causes the discharge from any Wastewater Treatment Plant to receiving waters to be coloured.

The discharge has a prohibited characteristic if it has any amount of:

a) Harmful solids, including dry solid wastes and materials that combine with water to form a cemented mass;

b) Liquid, solid or gas which could be flammable or explosive in the wastes, including oil, fuel, solvents (except as allowed for in Schedule A of this Bylaw), calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with wastewater;

c) Asbestos;

d) The following organo-metal compounds;

   i. Tin (as tributyl tin and other organotin compounds)

   ii. Any organochlorine pesticides;

   iii. Genetic wastes, as follows: All wastes that contain or are likely to contain material from a genetically modified organism that is not in accordance with an approval under the HSNO. The

material concerned may be from premises where the genetic modification of any organism is conducted or where a genetically modified organism is processed;

iv. Any health care waste prohibited for discharge to a Wastewater Network by NZS 4304 or any pathological or histological wastes; or

v. Radioactivity levels in excess of the National Radiation Laboratory Guidelines.

e) Cytotoxic waste, liquid antibiotics or any pharmaceutical waste;

f) Perfluorooctane sulfonate (PFOS), Perfluorooctanoic acid (PFOA), Perfluorooctanoic sulfonic acid (PFHxS);or

Advice Note - Substance mass limit yet to be determined

g) Flushable wipes;

Advice Note – this topic is to be determined following receipt of the Australia/New Zealand Standard on this subject as expected in late 2020.

Prohibited Tanker Waste Streams:

a) Grease waste

b) Oil Interceptor Waste

c) Wine Waste

SCHEDULE C – STORMWATER DISCHARGE ACCEPTANCE CHARACTERISTICS

To comply with this Bylaw; stormwater discharges in Council's reticulated stormwater network from connected premises properties and other locations must:

a) Comply with all relevant sections of the Bylaw and Administration Manual;

b) Not contain any hazardous substances;

c) Not contain substances that are toxic to the aquatic ecosystem (as measured relative to the Australian and New Zealand (ANZ) Guidelines for Fresh and Marine Water Quality, 2018);

d) Not cause any conspicuous colour changes in the receiving water;

e) Not cause the production of any conspicuous oil, grease films, scums or floatable materials;

f) Not contain any wastes (including but not limited to wastewater or condensates) from a trade or industrial process or premise or a business, institutional or domestic premise;

g) Not have wastes from trade or industrial processes that should be discharged to a trade waste system, or suitable alternative subject to a Resource Consent;

h) Ensure that any water used during the repair, maintenance and/or construction of water mains, or the flushing or testing of water mains is de-chlorinated and screed as required prior to the discharge into the stormwater system. The water used will need to be de-chlorinated such that there is no detectable free or residual chlorine;If the water used during work as described above is discharged directly into adjacent water course a consent will need to be obtained from the Otago Regional Council as per the requirements in the Operative Regional Plan: Water for Otago; and

i) Meet the requirements of the Otago Regional Council's Operative Regional Plan: Water for Otago for permitted reticulated stormwater discharges as per section 12.B.1.8 of 1st September 2015 issue of this Plan (or a subsequent update of that Plan, or a replacement plan).

The requirements of section 12.B.1.8 are currently:

The discharge of stormwater from a reticulated stormwater system to water, or onto or into land in circumstances where it may enter water, is a <u>permitted</u> activity, providing:

(a) Where the system is lawfully installed, or extended, after 28 February 1998:

(i) The discharge is not to any Regionally Significant Wetland; and

(ii) Provision is made for the interception and removal of any contaminant which would give rise to the effects identified in Condition (d) of this rule; and

(b) The discharge does not contain any human sewage; and

(c) The discharge does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and

(d) The stormwater discharged, after reasonable mixing, does not give rise to all or any of the following effects in the receiving water:

(i) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or

(ii) Any conspicuous change in the colour or visual clarity; or

(iii) Any emission of objectionable odour; or

(iv) The rendering of fresh water unsuitable for consumption by farm animals; or

(v) Any significant adverse effects on aquatic life.

SCHEDULE D –SCHEDULE OF FEES AND CHARGES

The Cost of administering the Bylaw will be reviewed every 12 months and the Schedule of Fees and Charges updated accordingly. These fees and charges have been established at the time of drafting the bylaw and will be subject to review prior to Bylaw implementation in July 2021.

Operative Date: 1 July 2021 to 30 June 2022

Part E Trade Waste

1. Registration of all discharges with the Council	
Early application fee - within two months of commencement of Trade or within two months after published notification date (for existing premises)	$0
Standard application fee	$50
2. Trade Waste Application and Management Fees for Permitted Trade Wastes	
Administration Fee – consists of a flat fee to process the application.	$180
Initial inspection fee - if required to process the application.	$180
Non-compliance inspection fee	$270
Sampling Event – if required. (As per laboratory charges)	At cost
3. Trade Waste Application and Management Fees for Controlled Trade Wastes	
Administration Fee – consists of a flat fee to process the application.	$360
Initial inspection fee - to process the application.	$180
Scheduled Compliance inspection	$180
Non-compliance inspection	$270
Sampling Event – if required. (As per laboratory charges)	At cost

4. Trade Waste Application and Management Fees for Conditional Trade Wastes	
Administration Fee – consists of a flat fee to process the application.	$450
Initial inspection fee - required to process the application.	$180
Compliance inspection	$180
Non-compliance inspection	$270
Sampling Event (As per laboratory charges)	At cost
5. Trade Waste Application and Management Fees for Prohibited Trade Wastes	
Administration Fee – consists of a flat fee to process the application.	$450
Initial inspection fee - required to process the application.	$180
Sampling Event – if required. (As per laboratory charges)	At cost
For temporary discharge consents	
Administration Fee – consists of a flat fee to process the application.	$180
Initial inspection fee - if required to process the application.	$180
Sampling Event – if required. (As per laboratory charges)	At cost

Unit Tanker Waste Charges for Septage Waste will be reviewed after an initial period of 24 months and the Schedule of Fees and Charges updated accordingly. These rates will then be reviewed on a 3 yearly basis. These fees and charges have been established at the time of drafting the bylaw and will be subject to review prior to implementation in July 2021.

Operative Date: 1 July 2021 to 30 June 2023

Tanker Charges	
Septage Waste	$45 m^3

Unit Trade Waste Charges for Conditional Consents will be reviewed every 3 years and the Schedule of Fees and Charges updated accordingly. These fees and charges have been established at the time of drafting the bylaw and will be subject to review prior to implementation in July 2023.

Operative Date: 1 July 2023 to 30 June 2026

Unit Trade Waste Charges for Conditional Consents		
Unit Charge Categories	**Wakatipu Ward**	**Wanaka Ward**
Volume per m^3	$0.31	$0.44
Total Suspended solids (TSS) per kg	$0.24	$0.50
Total Chemical Oxygen Demand (TCOD) per kg	$0.83	$1.76
Total Nitrogen (TN) per kg	$3.15	$5.57