



**WAIPA DISTRICT COUNCIL TRADE  
WASTE BYLAW  
2011**

January 2011

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In exercise of the powers and authorities vested in it by Sections 145, 146 and 148 of the Local Government Act 2002 the Waipa District Council makes this Bylaw to control trade waste discharges.

Note: this bylaw has been based on the New Zealand Standard "NZS 9201: Part 23:2004 GENERAL BYLAWS – TRADE WASTE"

## **1 INTRODUCTION AND OBJECTIVE**

This Bylaw is the legislative tool for fair and effective management of trade waste entering the Waipa District Council wastewater system. Trade waste discharges are managed to:

- Protect the health and safety of all people working in the wastewater system.
- Protect receiving waters from toxic substances originating from trade waste discharges.
- Protect the wastewater system and wastewater treatment plants from damage due to harmful substances from trade waste sources.
- Assist the Waipa District Council to meet relevant environment and other regulations.
- Assist the Waipa District Council wastewater processing operations to produce effluent and biosolids of an acceptable quality.
- Encourage waste minimisation and cleaner production in the commercial and industrial sectors.
- Encourage water conservation.
- Allow recovery of reasonable costs.
- Allow for the allocation of a wastewater system's capacity including determination of further system optimisation and development.

### **1.1 TITLE AND COMMENCEMENT**

1.1.1 This Bylaw may be referred to as the Waipa District Council Trade Waste Bylaw 2011

1.1.2 This Bylaw comes into force 10<sup>th</sup> January 2011.

1.1.3 It is an offence not to comply with the content of this Bylaw.

1.1.4 Compliance with this Bylaw does not obviate the need to comply with the provisions of the Health Act 1956, Resource Management Act 1991, the Building Act 2004, the Hazardous Substances and New Organisms Act 1996 and its regulations, Dangerous Goods Regulations, or any other relevant statutory or regulatory requirements.

### **1.2 TRADE PREMISES AND OTHER USERS TO WHICH THE BYLAW APPLIES**

1.2.1 This Bylaw shall apply to all trade premises within the Waipa District where trade wastes are discharged or sought or likely to be discharged to the wastewater systems operated by the Waipa District Council or its agents.

1.2.2 The Bylaw shall also apply to wastes collected for the purpose of discharge to the wastewater systems operated by the Waipa District Council or its agents.

1.2.3 Pursuant to Section 196 of the Local Government Act 2002 a Council authorised officer may refuse to allow the discharge of any type of trade waste, which is not in accordance with this Bylaw.

### 1.3 DEFINITIONS

For the purposes of this Bylaw the following definitions shall apply:

<b>Access point</b>	is a place where access may be made to a private drain for inspection (including sampling or measurement), cleaning or maintenance. The location of the access point shall be in accordance with the New Zealand Building Code
<b>Alternative grease removal system</b>	refers to a grease removal system other than a grease trap. Alternative grease removal systems include grease converters and mechanical grease removal systems.
<b>Authorised officer</b>	any officer of Council or other person authorised under Sections 174 or 177 or paragraph 32 of schedule 7 Local Government Act 2002 and authorised by Council to administer and enforce its Bylaws.
<b>Biosolids</b>	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 but does not include products derived solely from industrial wastewater treatment plants
<b>Bylaw</b>	refers to the Waipa District Council Trade Waste Bylaw 2011
<b>Characteristic</b>	any of the physical or chemical characteristics of a trade waste and may include the level of a characteristic. Permitted discharge characteristics and prohibited characteristics are specified in Schedules 1 and 2 of this Bylaw.
<b>Cleaner production</b>	the implementation on trade premises, of effective operations, methods and processes appropriate to the goal of reducing or eliminating the quantity and toxicity of wastes
<b>Condensing water or cooling water</b>	any water used in any trade, industry, or commercial process or operation in such a manner that it does not take up matter into solution or suspension
<b>Conditional trade waste</b>	trade waste which has or is likely to have characteristics which exceed any of the acceptable physical and chemical characteristics as defined in Schedule 1 of this bylaw, but which does not have any prohibited characteristics. A consent is required for conditional trade waste.
<b>Consent</b>	consent in writing given by Council and signed by an authorised officer, authorising a person to discharge trade waste to the wastewater system
<b>Consent holder</b>	the person who has obtained a consent to discharge or direct the manner of discharge of trade waste from any premises or a tanker to the Council wastewater system, 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.
<b>Contaminant</b>	includes any substance (including gases, odorous compounds, liquids, solids and microorganisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy or heat – <ul style="list-style-type: none"> <li>(a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or</li> <li>(b) When discharged onto or into land or into air, changes or is</li> </ul>

	likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.
<b>Contingency management procedures</b>	those procedures developed and used to avoid, remedy, or mitigate the actual and/or potential adverse effects on the environment or the wastewater system from an unexpected or unscheduled event resulting in discharge, or potential discharge of contaminants of concern into the wastewater system.
<b>Controlled trade waste</b>	trade waste that subject to pre-treatment complies with the acceptable physical and chemical characteristics as defined in Schedule 1 of this bylaw. A consent is required for controlled trade waste.
<b>Council</b>	refers to the Waipa District Council
<b>Disconnection</b>	the physical cutting and sealing of any of Council's water services, utilities, drains or sewer from use by any person
<b>District</b>	refers to the Waipa District
<b>Domestic wastewater</b>	liquid wastes (with or without matter in solution or suspension therein) discharged from premises used solely for residential purposes or wastes of the same character discharged from other premises; but does not include any solids, liquids or gases that shall not lawfully be discharged into the wastewater system
<b>Grease trap</b>	a pre treatment device that reduces the amount of fats, oils and grease in trade waste prior to it being discharged into a wastewater system.
<b>Hazardous wastes</b>	hazardous substances as defined by the Hazardous Substances and New Organisms Act 1996 (HSNO).
<b>Infiltration</b>	ground or surface water entering a public sewer or private wastewater drain through defects such as, but not limited to, poor joints and cracks in pipes or manholes. It does not include inflow.
<b>Inflow</b>	water discharged into a drain from non-complying connections or other drainage faults. It includes stormwater entering through illegal down pipe connections or from low gully traps.
<b>Infringement offence</b>	an offence as specified by this Bylaw under Sections 243 and 259 of the Local Government Act 2002.
<b>Management plan</b>	the plan for management of operations on the premises from which trade wastes come, and may include provision for cleaner production, waste minimisation, discharge and contingency management procedures, and any relevant industry Code of Practice.
<b>Mass limit</b>	the total mass of any characteristic that may be discharged to the Council wastewater system over any stated period from any single point of discharge or collectively from several points of discharge
<b>Maximum concentration</b>	the instantaneous peak concentration that may be discharged at any instant in time
<b>Occupier</b>	the person occupying trade premises connected to the wastewater system
<b>Permitted discharge</b>	a trade waste discharge that has been assessed by Council and has been determined to be within the acceptable physical and chemical characteristics as defined in Schedule 1 of this bylaw. No consent is required for trade waste that is classified as a permitted discharge.

<b>Person</b>	includes a corporation, sole and also a body of persons whether incorporated or unincorporated
<b>Point of discharge</b>	is the boundary between the public wastewater system and a private drain and/or for the purposes of monitoring, sampling and testing, may be as designated in the trade waste consent.
<b>Pre-treatment</b>	any processing of trade waste designed to reduce or vary any characteristic in a waste before discharge to the wastewater system
<b>Premises</b>	<ul style="list-style-type: none"> <li>(a) A property or allotment which is held under a separate certificate of title or for which a separate certificate of title may be issued, or</li> <li>(b) 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, or</li> <li>(c) Land held in public ownership (e.g. reserve) for a particular purpose, or</li> <li>(d) Individual units in buildings, which are separately leased or separately occupied.</li> </ul>
<b>Private drain</b>	the section of drain between the premises and the point of discharge to the Council wastewater system. (This section of drain is owned and maintained by the customer or with Council's express approval a group of customers).
<b>Prohibited trade waste</b>	trade waste that has prohibited characteristics as defined in Schedule 2 of this Bylaw, and has physical and chemical characteristics that do not comply with the acceptable physical and chemical characteristics as defined in Schedule 1 of this Bylaw. The waste is not acceptable for discharge into the Council wastewater system. A consent cannot be obtained for prohibited trade waste.
<b>Schedule of fees and charges</b>	the list of items, terms and prices for services associated with the discharge of trade waste as approved by Council.
<b>Sewage</b>	wastewater and may include trade waste
<b>Sewage sludge</b>	the material settled out and removed from sewage during the treatment process.
<b>Sewer</b>	the public sewer and lateral connections that carry away wastewater from the point of discharge. The public sewer is owned, administered and maintained by Council.
<b>Stormwater</b>	surface water run-off resulting from precipitation
<b>Tanker waste</b>	is water or other liquid, including waste matter in solution or suspension, which is conveyed by vehicle for disposal, excluding domestic sewage discharged directly from house buses, caravans, buses and similar vehicles
<b>Temporary discharge</b>	any discharge of an intermittent or short duration. Such discharges include the short-term discharge of an unusual waste from premises subject to an existing consent
<b>Trade premises</b>	<ul style="list-style-type: none"> <li>(a) Any premises used or intended to be used for any industrial or trade purpose; or</li> <li>(b) 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; or</li> <li>(c) Any other premises from which a contaminant is discharged</li> </ul>

	<p>in connection with any industrial or trade process; or</p> <p>(d) Any other premises discharging other than domestic sewage and includes any land or premises wholly or mainly used for agricultural or horticultural purposes.</p>
<b>Trade waste</b>	is any liquid, with or without matter in suspension or solution, that is or may be discharged from a trade premises to the Council wastewater system in the course of any trade 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; stormwater which cannot be practically separated, or domestic wastewater
<b>Wastewater system</b>	the collection, treatment and disposal of sewage and trade wastes, including all sewers, pumping stations, storage tanks, wastewater treatment plants, outfalls, and other related structures operated by Council and used for the reception, treatment and disposal of trade wastes
<b>Working day</b>	<p>any day of the week other than-</p> <p>(a) A Saturday, a Sunday, Waitangi Day, Good Friday, Easter Monday, Anzac Day, the Sovereign's birthday, Labour Day, and</p> <p>(b) A day in the period commencing with the 25th day of December in a year and ending with the 2<sup>nd</sup> day of January in the following year.</p>

## 2 COMPLIANCE WITH THE BYLAW

### 2.1 CONTROL OF DISCHARGES

#### 2.1.1 No person shall:

- (a) Discharge, or cause to be discharged, any trade waste to the wastewater system except in accordance with the provisions of this Bylaw, or a trade waste consent;
- (b) Discharge, or cause to be discharged, a prohibited trade waste into the wastewater system;
- (c) Add or permit the addition of condensing or cooling water to any trade waste which discharges into the wastewater system except in accordance with a trade waste consent;
- (d) Add or permit the addition of stormwater to any trade waste which discharges into the wastewater system except in accordance with a trade waste consent.

2.1.2 In the event of failure to comply with subclause 2.1.1 Council may physically prevent discharge to the wastewater system if a reasonable alternative action cannot be established with the discharging party or parties.

### 2.2 STORAGE, TRANSPORT, HANDLING AND USE OF HAZARDOUS OR HARMFUL MATERIALS

2.2.1. All persons on trade premises shall take all reasonable steps to prevent the accidental entry of any of the materials listed in subclause 2.2.3 of this Bylaw from entry into the wastewater system as a result of leakage, spillage or other mishap.

2.2.2. No person shall store, transport, handle or use, or cause to be stored, transported, handled or used any hazardous substance as defined by Hazardous Substances and New Organisms Act 1996 or any of



the materials listed in subclause 2.2.3, in a manner that may cause the material to enter the wastewater system and cause harmful effects.

2.2.3. Materials referred to in subclauses 2.2.1 and 2.2.2 are those:

- (a) Products or wastes containing corrosive, toxic, biocidal, radioactive, flammable or explosive materials
- (b) Likely to generate toxic, flammable, explosive or corrosive materials in quantities likely to be hazardous, when mixed with the wastewater stream
- (c) Likely to be deleterious to the health and safety of Council staff and the public or be harmful to the wastewater system.

### **3 TRADE WASTE DISCHARGES AND CONSENTS**

#### **3.1 CLASSIFICATION OF TRADE WASTE DISCHARGES**

3.1.1. Trade waste discharges shall be classified as one of the following types:

- (a) Permitted Discharge
- (b) Controlled Trade Waste
- (c) Conditional Trade Waste
- (d) Prohibited Trade Waste

3.1.2. Council is not obliged to accept any trade waste. No application for a trade waste consent shall be approved where the trade waste discharge would contain or is likely to contain prohibited characteristics as outlined in Schedule 2 of this Bylaw.

#### **3.2 APPLICATION FOR A TRADE WASTE CONSENT<sup>1</sup>**

3.2.1. Every person who does, proposes to, or is likely to:

- (a) Discharge into the wastewater system any trade waste (either continuously, intermittently or temporarily), or
- (b) Vary the characteristics of a consent to discharge that has previously been granted, or
- (c) Vary the conditions of a consent to discharge that has previously been granted, or
- (d) Change the method or means of pre-treatment for discharge under an existing consent

shall apply using the appropriate application form for the consent of Council, to the discharge of that trade waste, or to the proposed variations.

3.2.2. A Council authorised officer may require the owner as well as the occupier of any trade premises to be a party to the application.

3.2.3. Where the trade premises produces trade waste from more than one area, a separate copy of the “description of trade waste and premises” shall be included in any application for trade waste discharge for each area. This applies whether or not the separate areas are part of a single or separate trade process.

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<sup>1</sup> Refer to Appendix 2 – Flow chart for the application process

3.2.4. The applicant shall ensure that the application and every other document conveying required information is accurate and properly executed.

3.2.5. Council may require an independent report/statement by a suitably experienced auditor on any or all of the information supplied by the applicant. All costs incurred shall be paid by the applicant/consent holder.

### **3.3 ASSESSMENT OF APPLICATIONS**

3.3.1. On the receipt of any application for a trade waste consent to discharge from any premises or to alter an existing discharge, a Council authorised officer may:

- (a) Require the applicant to submit any additional information, which it considers necessary;
- (b) Require the applicant to submit a management plan to the satisfaction of the Council authorised officer; and

Whenever appropriate have the discharge investigated and analysed as provided for in clauses 5.1 and 5.3 of this Bylaw.

### **3.4 MATTERS FOR CONSIDERATION OF AN APPLICATION**

3.4.1. In considering any application for a trade waste consent to discharge from any trade premises or tankered waste into the wastewater system and in imposing any conditions on such a consent, the Council authorised officer may take into consideration any matter it considers relevant including without limitation;

- (a) The quality, volume, and rate of discharge of the trade waste from such premises or tanker, and
- (b) The health and safety of Council staff, Council's agents and the public, and
- (c) The limits and/or maximum values for characteristics of trade waste as specified in Schedules 1 and 2 of this bylaw, and
- (d) The extent to which the trade waste may react with other trade waste or wastewater to produce an undesirable effect, for example settlement of solids, production of odours, accelerated corrosion and deterioration of the wastewater system etc., and
- (e) The flows and velocities in the sewer or sewers and the material or construction of the sewer or sewers, and
- (f) The capacity of the sewer or sewers and the capacity of any wastewater treatment plants, and other facilities, and
- (g) The nature of any wastewater treatment process and the degree to which the trade waste is capable of being treated in the wastewater treatment plants, and
- (h) The timing and balancing of flows into the wastewater system, and
- (i) Any statutory requirements relating to the discharge of raw or treated wastewater to receiving waters, the disposal of sewage sludges beneficial use of biosolids, and any discharge to air, (including the necessity for compliance with any resource consent, discharge permit or water classification), and
- (j) The effect of the trade waste discharge on the ultimate receiving environment, and
- (k) The conditions on resource consents for the wastewater system and the residuals from it, and
- (l) The possibility of unscheduled, unexpected or accidental events and the degree of risk these could cause to humans, the wastewater system and the environment, and
- (m) Consideration for other existing or future discharges, and

- (n) Amenability of the trade waste to pre treatment, and
- (o) Existing pre treatment works on the premises and the potential for their future use, and
- (p) Cleaner-production techniques and waste minimisation practices, and
- (q) Requirements and limitations related to sewage sludge disposal and reuse, and
- (r) Control of stormwater, and
- (s) Any management plan, and
- (t) Tankered waste being discharged at an approved location/s.

### **3.5 DECISIONS ON APPLICATIONS**

3.5.1. Within 15 working days (or extended as necessary by the Council authorised officer) of receipt of an application complying with this Bylaw and/or all requirements under clause 3.3, whichever is the latter, the Council authorised officer shall, after considering the matters in clause 3.4 do one of the following in writing:

- (a) Grant the application as a permitted trade waste and inform the applicant of the decision by issuing the appropriate notice, or
- (b) Grant the application as a controlled trade waste consent and inform the applicant of the decision and the conditions imposed on the discharge by issuing the appropriate consent, or
- (c) Grant the application as a conditional trade waste consent and inform the applicant of the decision and the conditions imposed on the discharge by issuing the appropriate consent, or
- (d) Decline the application and notify the applicant of the decision giving a statement of the reasons for refusal.

### 3.6 CONDITIONS OF TRADE WASTE CONSENT

3.6.1. Any trade waste consent to discharge (and any variation) may be granted subject to such conditions Council may see fit to impose, including but not limited to:

- (a) The particular public sewer or sewers to which the discharge will be made, and
- (b) The maximum daily volume of the discharge and the maximum rate of discharge, and the duration of maximum discharge, and
- (c) The maximum limit or permissible range of any specified characteristics of the discharge, including concentrations and/or mass limits determined in accordance with clause 4.2, and
- (d) The period or periods of the day during which the discharge, or a particular concentration, or volume of discharge may be made, and
- (e) The degree of acidity, or alkalinity of the discharge at the time of discharge, and
- (f) The temperature of the trade waste at the time of discharge, and
- (g) The provision by or for the consent holder, at the consent holder's expense, of screens, grease traps, silt traps or other pre treatment works to control trade waste discharge characteristics to the consented levels, and
- (h) The provision and maintenance expense of inspection chambers, manholes or other apparatus or devices to provide reasonable access to drains for sampling and inspection at the consent holder's expense, and
- (i) The provision and maintenance of a sampling, analysis and testing programme and flow measurement requirements, at the consent holder's expense, and
- (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 the amount of any trade waste charges applicable to that discharge, and
- (k) The provision and maintenance by and at the expense of the consent holder 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 testing of such meters, and
- (l) The provision and maintenance, at the consent holder'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, and
- (m) At times specified, the provision in a Council approved format by the consent holder to Council of all flow and/or volume records and results of analyses (including pre treatment by-products, for example sewage sludge disposal), and
- (n) The provision and implementation of a management plan, and
- (o) Risk assessment of damage to the environment due to an accidental discharge of a chemical, and
- (p) Waste minimisation and management, and
- (q) Cleaner production techniques, and
- (r) Remote control of discharges, and
- (s) Third party treatment, carriage, discharge or disposal of by-products of pre treatment of trade waste (including sewage sludge disposal), and
- (t) Requirement to provide a bond, insurance or other security in favour of Council, where failure to comply with the Consent could result in damage to the Council wastewater system, its treatment plants, or could result in Council being in breach of any statutory obligation, and

(u) Remote monitoring of discharges.

3.6.2. Council's authorised officer retains the right to review trade waste consent conditions and to add or amend such conditions should it be deemed necessary by a Council authorised officer.

### **3.7 DURATION**

#### **3.7.1. Permitted Discharges**

3.7.1.1 Subject to the provisions of this Bylaw a permitted discharge may continue for as long as it complies with the criteria for such a discharge and provided always that a Council authorised officer may at any time require a person-undertaking a permitted discharge to apply for a trade waste consent which may be required in the following circumstances:

- (a) Cancellation under clauses 2.1.2 or 3.9, or
- (b) The quantity and nature of the discharge changes significantly, or
- (c) If in the opinion of a Council approved officer the discharge changes or is likely to change to such an extent that it becomes a controlled, conditional or prohibited trade waste, or
- (d) Council changes the trade waste management procedures by implementation of changed trade waste bylaw conditions or any amendment to or replacement of its trade waste bylaw, as required due to amended resource consent conditions for Council as the resource consent holder.

3.7.1.2 In all cases, after appropriate consultation, the customer shall apply within 10 working days of this change occurring for the appropriate consent, in accordance with clause 3.2 of this Bylaw. This application shall be approved in writing by a Council authorised officer prior to the occurrence of any new discharge.

#### **3.7.2. Controlled Consents**

3.7.2.1 Subject to clauses 3.9 and 6.1, controlled consents under this Bylaw shall expire at the end of a term fixed by the Council authorised officer subject to the following:

- (a) Controlled consents may be given for a term not exceeding 5 years to a consent holder who at the time of application satisfies a Council authorised officer that:
  - (i) The nature of the trade activity, or the process design and/or management of the premises are such that the consent holder has a demonstrated ability to meet the conditions of the consent during its term, and/or
  - (ii) Cleaner production techniques are successfully being utilised or that a responsible investment in cleaner production equipment techniques is being made, and/or
  - (iii) Significant investment in pre treatment facilities has been made, such that a longer period of certainty for the amortising of this investment is considered reasonable, and/or
  - (iv) The reissuing of a consent can not be unreasonably withheld.

- 3.7.2.2 Notwithstanding the above outlined in subclause 3.7.2.1 Council retains the right to review the conditions at an earlier time. The reasons for such an earlier review could include:
- (a) The level of consent holder compliance, including any accidents including spills or process mishaps.
  - (b) Matters pertaining to Council's resource consents for the wastewater system.
  - (c) Matters pertaining to Council's environmental policies and outcomes.
  - (d) The quantity and nature of the discharge changes significantly.
  - (e) If in the opinion of a Council authorised officer the discharge changes or is likely to change to such an extent that it becomes a conditional or prohibited trade waste.
  - (f) Any of the matters outlined in Clause 4.
  - (g) Any Bylaw requirements or amendments to the Bylaw.
- 3.7.2.3 In all cases where either the consent holder or the owner of the premises changes, or there is a change of use, a new application for a controlled trade waste consent shall be made. It shall be the responsibility of the consent holder to lodge the new application.
- 3.7.2.4 In all cases, after appropriate consultation, the person shall apply within 10 working days of this change occurring for the appropriate consent, in accordance with clause 3.2 of this bylaw. This application shall be approved in writing prior to the occurrence of any new discharge.

### **3.7.3. Conditional Consents**

- 3.7.3.1 Subject to clauses 3.9 and 6.1, conditional consents under this Bylaw shall expire at the end of a term fixed by Council subject to the following:
- (a) Conditional consents may be given for a term not exceeding 5 years to a consent holder who at the time of application satisfies the Council authorised officer that:
    - (i) The nature of the trade activity, or the process design and/or management of the premises are such that the consent holder has a demonstrated ability to meet the conditions of the consent during its term, and/or
    - (ii) Cleaner production techniques are successfully being utilised, or that a responsible investment in cleaner production equipment or techniques is being made, and/or
    - (iii) Significant investment in pre treatment facilities has been made, such that a longer period of certainty for the amortising of this investment is considered reasonable and/or
    - (iv) The reissuing of a consent can not be unreasonably withheld.
- 3.7.3.2 Notwithstanding the above outlined in subclause 3.7.3.1, the Council authorised officer retains the right to review the conditions at an earlier time. The reasons for such an earlier review could include:
- (a) The level of consent holder compliance, including any accidents including spills or process mishaps.
  - (b) Matters pertaining to Council resource consents for the wastewater system.
  - (c) Matters pertaining to Council environmental policies and outcomes.
  - (d) New control and treatment technologies and processes, or new information becoming available.

- (e) Any of the matters outlined in clause 4.
- (f) Matters pertaining to Council's legal obligations.

3.7.3.3 In all other cases the term of a conditional trade waste consent should not exceed 2 years.

3.7.3.4 In all cases where either the consent holder or the owner of the premises changes, or there is a change of use, a new application for a conditional trade waste consent shall be made. It shall be the responsibility of the consent holder to lodge the new application.

### **3.8 TECHNICAL REVIEW AND VARIATION**

3.8.1 A Council authorised officer at any time may require a person undertaking a permitted discharge to apply for a Consent in accordance with subclause 3.7.1.

3.8.2 A Council authorised officer may at any time during the term of a trade waste consent, by written notice to the consent holder (following a reasonable period of consultation), vary any condition to such an extent as the Council authorised officer considers necessary following a review of the technical issues considered when setting conditions of consent, due to new information becoming available or to meet any amended resource consent imposed on the discharge from Council treatment plants, or with any other legal requirements imposed on Council.

3.8.3 A consent holder may at any time during the term of a consent, by written application to Council, seek to vary any condition of consent, as provided for in clause 3.6 of this Bylaw.

### **3.9 CANCELLATION OF THE RIGHT TO DISCHARGE**

#### **3.9.1 Suspension or Cancellation on Notice**

3.9.1.1 A Council authorised officer may suspend or cancel any consent or right to discharge at any time following 20 working days' notice in writing to the consent holder or person discharging any trade waste:

- (a) For the failure to comply with this Bylaw or any condition of a consent, or
- (b) For the failure to maintain effective control over the discharge, or
- (c) For the failure to limit in accordance with the requirements of this Bylaw or of a consent the volume, nature, or composition of trade waste being discharged, or
- (d) In the event of any negligence which, in the opinion of a Council authorised officer, threatens the safety of, or threatens to cause damage to any part of the wastewater system or the treatment plants or threatens the health or safety of any person, or
- (e) If any occurrence happens that, in the opinion of a Council authorised officer, poses a serious threat to the environment, or
- (f) In the event of any breach of a resource consent held by Council issued under the Resource Management Act 1991, or
- (g) Failure to provide and when appropriate update a management plan as required for a conditional consent, or
- (h) Failure to follow the management plan provisions, or
- (i) Failure to pay any charges under this Bylaw or otherwise, or
- (j) If new information becomes available, or

- (k) If any other circumstances arise which, in the opinion of Council, render it necessary in the public interest to cancel the right to discharge.

### **3.9.2. Summary Cancellation**

3.9.2.1 Further to subclause 3.9.1 any trade waste consent or discharge may at any time be summarily cancelled by a Council authorised officer on giving to the consent holder or person discharging written notice of summary cancellation if:

- (a) They discharge any prohibited substance, or
- (b) Council is lawfully directed to withdraw or otherwise to terminate the consent summarily, or
- (c) Trade waste is discharged unlawfully, or
- (d) If the continuance of discharge is, in the opinion of Council, a threat to the environment or public health, or
- (e) If the continuance of discharge may, in the opinion of a Council authorised officer, result in a breach of a resource consent held by Council.

3.9.2.2 In the opinion of a Council authorised officer the continuance of the discharge puts at risk the ability of Council to comply with conditions of a resource consent and/or requires identified additional treatment measures or costs to seek to avoid a breach of any such resource consent.

## **4 OTHER TRADE WASTE APPROVAL MATTERS**

### **4.1 PRE-TREATMENT**

4.1.1. A Council authorised officer may approve a trade waste discharges subject to the provision of appropriate pre treatment systems. Such pre treatment systems shall be provided, operated and maintained by the consent holder or person discharging at their expense.

4.1.2. Refuse or garbage grinders, and macerators shall not be used to dispose of solid waste from trade premises to the wastewater system unless approved in writing by a Council approved officer.

4.1.3. The consent holder or person discharging shall not, unless approved by a Council authorised officer in writing, add or permit the addition of any potable, condensing, cooling water or stormwater to any trade waste stream in order to vary the level of any characteristics of the waste.

4.1.4. Any premises preparing food shall be required to install a grease trap or alternative grease removal system

4.1.5 Grease traps shall:

- (a) have a functional capacity of no less than 500 litres
- (b) be sized according to the greatest volume as determined by Table 1 contained in Schedule 4



- (c) be cleaned out a minimum of once every 6 months or more frequently as determined by a Council authorised officer. The frequency with which grease traps are required to be cleaned out shall be determined through visual inspection and/or sample testing from the device outlet by a Council authorised officer.
- 4.1.6 Any exceptions to the requirements stated in clause 4.1.5 shall be assessed on a case by case basis and shall be determined by a Council authorised officer.
- 4.1.7 Existing grease traps with a functional capacity of less than 500 litres may be required to be upgraded or replaced at the consent holders expense unless compliance can be demonstrated to the satisfaction of a Council authorised officer.
- 4.1.8 Shared grease traps, such as those operated by a body corporate or food court, shall be sized appropriate to the total inputs. This shall be no less than a functional capacity of 500 Litres for each connected premises. A Council authorised officer may require existing shared grease traps to be upgraded or replaced to meet the requirements of these Bylaw.
- 4.1.9 Alternative grease removal systems shall be:
  - (a) installed and operated in accordance with the manufacturer’s instruction.
  - (b) cleaned out by a contractor approved by Council as required during the 6 month service check.
  - (c) sized according to manufacturers recommendation and are subject to written approval by a Council authorised officer.
- 4.1.10 Alternative grease removal devices which do not meet the requirements contained in this Bylaw may be required to be replaced at the consent holder’s expense.
- 4.1.11 The frequency with which alternative grease removal systems are required to be cleaned out in accordance with sub clause 4.1.9 (b) may vary. This will be determined by a Council authorized officer after a through visual inspection and/or sample testing from the device outlet.
- 4.1.12 Businesses are expected to be compliant with the requirements stated in clauses 4.1.5 and 4.1.6 of this Bylaw. Failure to undertake upgrades to become compliant with subclause 4.1.7 within 12 months of Council’s adoption of this Bylaw may result in a Council authorised officer physically preventing discharge to the wastewater system if a reasonable alternative action cannot be established with the discharging party or parties.

## **4.2 MASS LIMITS**

- 4.2.1. A conditional trade waste consent to discharge may impose controls on a trade waste discharge by specifying mass limits for any characteristic. Any characteristic permitted by mass limit may also have its maximum concentration limited to the value scheduled unless approved in writing otherwise.

- 4.2.2. When setting mass limit allocations for a particular characteristic a Council authorised officer may consider any relevant matter including without limitation:
- (a) The operational requirements of and risk to the wastewater system, and risks to occupational health and safety, public health, and the ultimate receiving environment, and
  - (b) Whether or not the levels proposed pose a threat to the planned or actual beneficial re-use of biosolids or sewage sludge, and
  - (c) Conditions in the wastewater system near the trade waste discharge point and elsewhere in the wastewater system, and
  - (d) The extent to which the available industrial capacity was used in the last financial period and is expected to be used in the forthcoming period, and
  - (e) Whether or not the applicant uses cleaner production techniques within a period satisfactory to a Council authorised officer, and
  - (f) Whether or not there is any net benefit to be gained by the increase of one characteristic concurrently with the decrease of another to justify any increased application for industrial capacity, and
  - (g) Any requirements of Council to reduce the pollutant discharge to the wastewater system, and
  - (h) How great a proportion the mass flow of a characteristic of the discharge will be of the total mass flow of that characteristic in the wastewater system, and
  - (i) The total mass of the characteristic allowable in the wastewater system, and the proportion (if any) to be reserved for future allocations, and
  - (j) Whether or not there is an interaction with other characteristics, which increases or decreases the effect of either characteristic on the sewer reticulation, treatment process, or receiving water (or land).

## **5 SAMPLING, TESTING AND MONITORING**

### **5.1 FLOW METERING**

- 5.1.1. Flow metering may be required by a Council authorised officer:
- (a) On discharges when there is not a reasonable relationship between a metered water supply to the premises, and the discharge of trade waste, or
  - (b) When a Council authorised officer will not approve a method of flow estimation, or
  - (c) When the discharge represents a significant proportion of the total flow/load received by Council, or
  - (d) In any other circumstances where flow metering is deemed necessary by a Council authorised officer for the purpose of monitoring the discharge.
- 5.1.2. The consent holder shall be responsible for the supply, installation, reading and maintenance of any meter required by a Council authorised officer for the measurement of the rate or quantity of discharge of trade waste. These devices shall be subject to the written approval of a Council authorised officer, but shall remain the property of the consent holder.
- 5.1.3. Records of flow and/or volume shall be available on request, at a frequency and in a format approved/requested by a Council authorised officer.

- 5.1.4. Meters shall be located in a position approved by a Council authorised officer, which provides the required level of accuracy and should be readily accessible for reading and maintenance. The meters must be located in the correct position according to the manufacturers installation instructions.
- 5.1.5. The consent holder shall arrange for in-situ calibration of the flow metering equipment and instrumentation by a person and method approved by a Council authorised officer upon installation and at least once a year thereafter to ensure its performance. The meter accuracy should be +/- 10% but with no greater a deviation from the previous meter calibration of +/- 5%. A copy of independent certification of each calibration result shall be submitted to a Council approved officer.
- 5.1.6. Should any meter, after being calibrated, be found to have an error greater than that specified in subclause 5.1.5 as a repeatable measurement, the Council authorised officer may make an adjustment in accordance with the results shown by such tests backdated for a period at the discretion of the Council authorised officer but not exceeding 12 months, and the consent holder shall pay or be credited a greater or lesser amount according to such adjustment.

## **5.2 ESTIMATING DISCHARGE**

- 5.2.1. Where no meter or similar apparatus is required, a Council approved officer may require that a percentage of the water supplied to the premises, or other such basis as seems reasonable, be used for estimating the rate or quantity of flow for the purposes of charging.
- 5.2.2. Should any meter be out of repair or cease to register, or be removed, a Council authorised officer shall estimate the discharge for the period since the previous reading of such meter, (based on the average of the previous 12 months charged to person discharging) and they shall pay according to such estimate. Provided that when by reason of a large variation of discharge due to seasonal or other causes, the average of the previous 12 months would be an unreasonable estimate of the discharge then the Council authorised officer may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the person discharging shall pay according to such estimate.
- 5.2.3. Where in the opinion of a Council authorised officer, a meter has been tempered with, the Council authorised officer (without prejudice to the other remedies available) may declare the reading void and estimate discharge as provided above in subclause 5.2.2.

## **5.3 SAMPLING AND ANALYSIS**

- 5.3.1. As determined by a Council authorised officer sampling, testing and monitoring may be undertaken to determine if:
- (a) A discharge complies with provisions of this Bylaw
  - (b) A discharge is to be classified as a permitted, controlled, conditional, or prohibited, refer to clause 3.1
  - (c) a discharge complies with the provisions of Schedule 1 for permitted discharge and any consent to discharge
  - (d) Trade waste consent charges are applicable to that discharge.

- 5.3.2. The taking, preservation, transportation and analysis of the sample shall be undertaken by an authorised officer or agent of Council, or the person discharging in accordance with the procedures contained in Appendix 1.
- 5.3.3. Any analysis shall use methods or procedures in accordance with, or validated against, the AWWA Standard methods for the examination of water and wastewater by a laboratory accredited by International Accreditation New Zealand (IANZ), or a laboratory approved by Council.
- 5.3.4. The person discharging shall be 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 arbitrator.

## **5.4 MONITORING**

### **5.4.1. Monitoring for Compliance**

- 5.4.1.1 The consent holder shall monitor the discharge of the trade waste. All flow and/or volume records and results of analyses shall be provided to the Council authorised officer in a format approved as set out in the terms of their trade waste consent. The consent holder shall pay all costs associated with the monitoring work.
- 5.4.1.2 A Council authorised officer may independently monitor and audit any trade waste discharge for compliance as follows:
- (a) take a sample and arrange for this sample to be analysed in accordance with-subclause 5.3.1;
  - (b) The sampling procedure will be appropriate to the trade waste and the analysis;
  - (c) auditing the sampling and analysis carried out by a self-monitoring trade waste discharger,
  - (d) auditing the sampling and analysis carried out by an analyst,
  - (e) auditing the trade waste consent conditions including any management plans.
- 5.4.1.3 At the discretion of the Council authorised officer the person discharging shall meet all costs of monitoring.

### **5.4.2. Tankered Wastes**

- 5.4.2.1 Any person or consent holder not compliant with the Liquid and Hazardous Waste Code of Practice shall not discharge tankered waste into the Council wastewater system.
- 5.4.2.2 Tankered waste may be accepted for disposal at a location approved by Council in writing. Tankered wastes shall be discharged subject to the following:
- (a) Loads will only be accepted during working hours on working days, or as advised by Council.
  - (b) Council must be notified 24 hours prior to the disposal of waste other than that sourced from domestic septic tanks.
  - (c) Material safety data sheets (MSDS) must be supplied to Council detailing the contents of a waste.

- (d) Loads will be tested to determine its character for compliance. Specialist advice on pre treatment or acceptance may be required. The cost of all testing and advice shall be borne by the consent holder.
  - (e) To prevent cross contamination between tanker loads, the tankers shall be thoroughly washed, prior to collecting a different load for disposal into the wastewater system.
  - (f) Loads that have not been consented for disposal shall not be picked up and transported to the wastewater system for disposal unless appropriate prior arrangements have been made with Council.
  - (g) Loads with hazardous substances that have not been given specific written approval, shall not be accepted.
  - (h) Loads with characteristics that breach those as set out in the trade waste consent are not acceptable unless specifically approved in writing by a Council authorised officer.
- 5.4.2.3 Costs for the acceptance and treatment of tankered waste shall be invoiced to the consented discharger as specified in Schedule 3 of this bylaw and in Council’s Schedule of Fees and Charges; non payment of which forfeits the right to continue to discharge tankered waste into the wastewater system.
- 5.4.2.4 Any person illegally disposing of, or causing to be disposed, tankered waste either by incorrect disclosure of contents (characteristics and/or amount) or dumping into the Council wastewater system other than at the prescribed location will be in breach of the Bylaw.

**5.4.3. Disinfected/Chlorinated Water**

- 5.4.3.1 Any water used during the repair and construction of water mains shall be de-chlorinated prior to the discharge into the wastewater system. Such water shall not be disposed of to stormwater or adjacent watercourses without appropriate approvals. Application for a temporary discharge consent shall be made.

**6 REVIEW OF DECISIONS**

- 6.1 If any person is dissatisfied with any decision of an authorised officer made under this Bylaw, that person may, by notice delivered to the Chief Executive Officer of Council no later than 20 working days after the decision of the authorised officer is served upon that person, request the Chief Executive Officer to review any such decision and such decision shall be final.
- 6.2 Nothing in this clause shall affect any right of appeal under the Local Government Act 2002.

**7 ACCIDENTS AND NON-COMPLIANCE**

- 7.1 Any person discovering any accident including spills or process mishaps, which may cause a breach of this Bylaw, shall inform Council immediately.
- 7.2 In the event of any accident occurring when the person holds a trade waste consent, then a Council authorised officer may review the consent under Section Clause 3.8 or may require the consent holder, within 20 working days of the date such requirement is notified to the consent holder in writing, to review the contingency management procedures and re-submit for approval the management plan with the Council.
- 7.3 In the event of an accident occurring on the premises of a permitted discharge, a Council authorised officer may require the person discharging to apply for a trade waste consent.

## **8 ACCESS TO PREMISES**

- 8.1 Authorised officers of Council shall possess and produce on request warrants of authority given under the Local Government Act 2002 and evidence of identity. Entry shall be in compliance with the health and safety policies of that particular site.
- 8.2 Authorised officers may at any reasonable time enter any premises from which trade wastes are believed to be discharging to determine any characteristic of any discharge by:
- (a) Taking readings and measurements; or
  - (b) Taking samples or any solids, liquids or gaseous material or any combination or mixtures of such materials being discharged; or
  - (c) Observing accidental occurrences and clean up.

## **9 TRANSFER OR TERMINATION OF RIGHTS AND RESPONSIBILITIES**

- 9.1 A trade waste consent to discharge shall be issued in the name of the given consent holder. The consent holder shall not, unless written approval is obtained from a Council authorised officer :
- (a) Transfer to any other party the rights and responsibilities provided for under this Bylaw and under the trade waste consent,
  - (b) Allow a point of discharge to serve another premises, or the private drain to that point to extend by pipe or any other means to serve another premises,
  - (c) Allow sewage from any other party to be discharged at their point of discharge.
- 9.2 Renewal of a trade waste consent on change of ownership of premises, shall not be unreasonably withheld if the characteristics of the wastewater remain unchanged.
- 9.3 The person discharging shall give 48 hours notice in writing to the Council of their requirement for disconnection of the discharge connection and/or termination of the discharge consent, except where demolition or relaying of the discharge drain is required, in which case the notice shall be 7 working days.
- 9.4 The person discharging shall notify the Council of the new address details for final invoicing. On permanent disconnection and/or termination the person discharging shall be liable for trade waste charges to the end of the current charging period.
- 9.5 When a person discharging ceases to occupy premises from which trade wastes are discharged into the wastewater system any consent granted shall terminate but without relieving the person discharging from any obligations existing at the date of termination.

## **10 SERVICE OF DOCUMENTS**

### **10.1 Delivery or Post**

- 10.2.1 Any notice or other document required to be given, served or delivered under this Bylaw to a person discharging may (in addition to any other method permitted by law) be given or served or delivered by being:
- (a) Sent by pre paid ordinary mail, courier, or facsimile, or email to the person discharging at the person discharging's last known place of residence or business, or
  - (b) Sent by pre paid ordinary mail, courier, or facsimile, or email to the person discharging at any address for service specified in a consent to discharge, or

- (c) Where the person discharging is a body corporate, sent by pre paid ordinary mail, courier, or facsimile, or email to or left at its registered office, or
- (d) Personally served on the person discharging.

## **10.2 Service**

10.2.1 If any notice or other document is:

- (a) Sent by post it will be deemed received on the first day (excluding weekends and public holidays) after posting, or
- (b) Sent by facsimile or email and the sender's facsimile or email machine produces a transmission report indicating that the facsimile or email was sent to the addressee, the report will be prima facie evidence that the facsimile or email was received by the addressee in legible form at the time indicated on that report, or
- (c) Sent by courier and the courier obtains a receipt or records delivery on a courier run sheet, the receipt or record of delivery on a courier run sheet will be prima facie evidence that the communication was received by the addressee at the time indicated on the receipt or courier run sheet, or left at a conspicuous place at the trade premises or is handed to a designated person(s) nominated by the then that shall be deemed to be service on or delivery to the consent holder at that time.

## **10.3 Signature**

10.3.1 Any notice or document to be given, served or delivered shall be signed by an authorised officer.

## **11 AGREEMENTS**

11.1 A Council authorised officer may at any time and in its complete discretion enter into an agreement for the discharge and reception of trade wastes in addition to or in substitution for a trade waste consent.

## **12 OFFENCES**

12.1 Every person or consent holder or owner or occupier of trade premises which:

- (a) Fails to comply with or acts in contravention of any provision of this Bylaw, or
- (b) Breaches the conditions of any consent to discharge granted pursuant to this Bylaw, or
- (c) Fails to comply with a notice served under this Bylaw

commits an offence under section 239 of the Local Government Act 2002, and is liable to a fine as specified in section 242 of that Act, or the issue of an infringement notice under section 245 of that Act.

## **13 CHARGES AND PAYMENTS**

### **13.1 Fees and charges**

- 13.1.1. Fees and Charges may be prescribed by Council in relation to this Bylaw, as provided for in Sections 150 and 151 of the Local Government Act 2002. Schedule 1C of this Bylaw outlines a regime of how possible charges may be calculated and current fees and charges are included in Council's Schedule of Fees and Charges .

All charges shall be invoiced in accordance Council's standard practice. The invoice shall provide each person discharging with a copy of the information and calculations used to determine the extent of any charges and fees due in regard to a discharge.

### **13.2 FAILURE TO PAY**

- 13.2.1. All fees and charges payable under this Bylaw shall be recoverable as a debt. If the person discharging fails to pay any fees and charges under this bylaw a Council authorised officer may cancel the right to discharge in accordance with clause 3.9.

## **14 RECOVERY OF COSTS**

- 14.1 Council may recover costs under the Local Government Act 2002 Sections 150 and 151, willful damage or negligent behaviour (Section 175) and remedying damage arising from breach of this Bylaw (Section 176).

## **15 CEASE TO DISCHARGE**

- 15.1 The person discharging shall be deemed to be continuing the discharge of trade waste and shall be liable for all charges, until notice of disconnection is given, in accordance with clause 6.5.



## SCHEDULE 1 PERMITTED DISCHARGE CHARACTERISTICS

### 1.1 INTRODUCTION

- 1.1.1 The nature and levels of the characteristics of any wastewater discharged to Council wastewater system as a “permitted discharge or controlled consent” shall comply at all times with the following requirements.
- 1.1.2 Conditional discharge consents may allow for wastewater discharges where the nature and levels of such characteristics as those listed in this section are varied by Council as part of a specific approval in writing from a Council authorised officer to discharge wastewater not complying with the characteristics listed in this section.
- 1.1.3 A Council authorised officer shall take into consideration the combined effects of wastewater discharges and may make any modifications to the following acceptable characteristics for individual discharges that the Council authorised officer believes are appropriate.
- 1.1.4 The nature and levels of any characteristic may be varied to meet any new or other legal requirements imposed on Council as the resource consent holder. Refer clause 3.8.

### 1.2 PHYSICAL CHARACTERISTICS

Bylaw Requirements    Commentary from NZS 9201

<p>1.2.1. Flow</p> <p>a) The 24-hour flow volume shall be less than 5 m<sup>3</sup>.</p> <p>b) The maximum instantaneous flow rate shall be less than 2.0 L/s.</p>	<p>Flows larger than the guideline values should be a “conditional” trade waste consent.</p>
<p>1.2.2. Temperature</p> <p>The temperature shall not exceed 40 °C.</p>	<p>Higher temperatures:</p> <ul style="list-style-type: none"> <li>- cause increased damage to sewer structures.</li> <li>- increase the potential for anaerobic conditions to form in the wastewater.</li> <li>- promote the release of gases such as H<sub>2</sub>S and NH<sub>3</sub>.</li> <li>- can adversely affect the safety of operations and maintenance personnel.</li> <li>- reflect poor energy efficiency.</li> </ul> <p>A lower maximum temperature may be required for large volume discharges.</p>

1.2.3. Solids

- a) Non-faecal gross solids shall have a maximum dimension, which shall not exceed 15 mm.
- b) The suspended solids content of any wastewater shall have a maximum concentration, which shall not exceed 2000 g/m<sup>3</sup>.
- c) The settleable solids content of any wastewater shall not exceed 50 mL/L.
- d) The total dissolved solids concentration in any wastewater shall be subject to the written approval of a Council authorised officer having regard to the volume of the waste to be discharged, and the suitability of the drainage system and the treatment plant to accept such waste.
- e) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the drainage system or treatment plant shall not be present.
- f) The use of waste disposal units (intended to pulverise otherwise unacceptable wastes) shall only be permitted if specifically authorised as a condition of a “conditional discharge consent”:-

Gross solids can cause sewer blockages.

High-suspended solids contents can cause sewer blockages and overload the 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<sup>3</sup> and 600 g/m<sup>3</sup>.

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<sup>3</sup> may be used as a guideline.

<p>1.2.4. Oil and grease</p> <p>a) Management, storage and disposal of waste oil, including cooking oil shall be performed in such a manner to ensure that no oil shall be discharged into any stormwater or wastewater drains. There shall be no free or floating layer.</p> <p>b) A trade waste with mineral oil, fat or grease unavoidably emulsified, which in the opinion of a Council authorised officer is not biodegradable shall not exceed 200 g/m<sup>3</sup> as petroleum ether extractable matter when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage, throughout the range pH 6.0 to pH 10.0.</p> <p>c) A trade waste with oil, fat or grease unavoidably emulsified, which in the opinion of Council is biodegradable shall not exceed 500 g/m<sup>3</sup> when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 4.5 to pH 10.0.</p> <p>d) Emulsified oil, fat or grease shall not exceed 100g/m<sup>3</sup> as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 4.5 to pH 10.0.</p>	<p>Oils and greases can cause sewer blockages, may adversely affect the treatment process, and may impair the aesthetics of the receiving water.</p> <p>Where the treatment plant discharges to a sensitive receiving water, lower values should be considered.</p> <p>In terms of oil and greases, biodegradable refers to the bio-availability of the oil and greases and the biochemicals thereby produced, and means the oil and grease content of the waste decreases by 90 % or more when the wastewater is subjected to a simulated wastewater treatment process which matches the Council treatment system.</p> <p>If quick break detergents are being used, it should be ensured that the occupier is using proper separation systems. If not, oil will reappear in drainage systems as a free layer.</p>
<p>1.2.5. Solvents and other organic liquids There shall be no free layer (whether floating or settled) of solvents or organic liquids.</p> <p>(Refer to clause 2.6 for information on dissolved solvents and other organic liquids).</p>	<p>Some organic liquids are denser than water and will settle in sewers and traps.</p>
<p>1.2.6. Emulsions of paint, latex, adhesive, rubber, plastic or similar material</p> <p>a) Where such emulsions are not treatable they may be discharged into the sewer subject to the total suspended solids not exceeding 1000 g/m<sup>3</sup>.</p> <p>b) A Council authorised officer may require pre-treatment of such emulsions if the emulsion wastewater unreasonably interferes with the operation of the Council wastewater treatment plant.</p>	<p>‘Treatable’ in relation to emulsion wastewater, means the total organic carbon (TOC) content of the waste decreases by 90 % or more when the wastewater is subjected to a simulated wastewater treatment process, which matches the Council treatment system.</p> <p>Emulsions vary considerably in their properties</p>

<p>Eg. reduces %UVT (ultra violet transmission)</p> <p>c) Such emulsions of both treatable and non treatable types, shall be discharged to the sewer only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public sewer.</p>	<p>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.</p> <p>Emulsions will coagulate when unstable and can sometimes cause sewer blockage. Emulsions are stable when dilute or in the correct pH range.</p> <p>Emulsion may colour the wastewater treatment plant influent such that %UVT is unacceptably reduced.</p>
<p>1.2.7. Radioactivity</p> <p>Radioactivity levels shall not exceed National Radiation Laboratory guidelines.</p>	<p>Refer National Radiation Laboratory Code of safe practice for the use of unsealed radioactive materials NRL. C1</p>
<p>1.2.8. Transmissivity</p> <p>Due to the use of UV light disinfection at the Council's Wastewater Treatment Plant, the acceptability of discharges will be based on transmissivity testing at 254 nm. The discharge will be diluted at 10:1 with distilled water and tested at 254 nm. The result must have a transmissivity of 50% or more, equivalent to an absorbance of 0.3010 or less.</p>	
<p>1.2.9. Colour</p> <p>No waste shall have colour or colouring substance that causes the discharge to be coloured to the extent that it impairs wastewater treatment processes or compromises the final effluent discharge consent.</p>	<p>Colour may cause aesthetic impairment of receiving waters, and adverse effects on lagoon treatment processes and ultra-violet disinfection. Where potential for such problems exists, a level of colour which is rendered not noticeable after 100 dilutions may be used as a guideline. Where UV disinfection is used special conditions may apply.</p>
<p>1.2.10 Inhibitory Substances</p> <p>Should any characteristic of a discharge be found to inhibit the performance of the wastewater treatment process, such that Council is significantly at risk or prevented from achieving the environmental statutory requirements, then the Council authorised officer reserves the right to amend the corresponding consent summarily.</p>	

### 1.3 CHEMICAL CHARACTERISTICS

Bylaw Requirements    Commentary from NZS 9201

	<p>In the setting of restrictions for chemical characteristics the Council must be mindful of the production of harmful or noxious waste streams from some tests, such as chemical oxygen demand and total Kjeldahl nitrogen. The need to set such restrictions and therefore the requirement to undertake the associated testing must be determined by the Council.</p>
<p>1.3.1. pH value The pH shall be between 6.0 and 10.0 at all times.</p>	<p>Extremes of pH:</p> <ul style="list-style-type: none"> <li>- can adversely affect biological treatment processes.</li> <li>- can adversely affect the safety of operations and/or maintenance personnel.</li> <li>- cause corrosion of sewer structures.</li> <li>- increase the potential for the release of toxic gases such as H<sub>2</sub>S and HCN.</li> </ul>
<p>1.3.2. Organic strength The Biochemical Oxygen Demand (carbonaceous BOD<sub>5</sub>) shall be less than 10 kg/day.</p>	<p>The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD<sub>5</sub>) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD<sub>5</sub>. For domestic wastewater it is about 2.5:1 (COD : BOD<sub>5</sub>), but can range from 1:1 to 100:1 for trade waste. Therefore BOD 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<sub>5</sub> and COD can be established the discharge may be monitored using the COD test.</p> <p>High COD may increase the potential for the generation of sulphides in the wastewater.</p>

### 1.3.3. Maximum concentrations

The maximum concentrations permissible for the chemical characteristics of a permitted discharge are set out in the following tables:

Table 1 - General chemical characteristics

Table 2 - Toxic Pollutants - Heavy metals

Table 3 - Toxic Pollutants - Organic compounds and Pesticides

Where appropriate, maximum daily limits (kg/day) for mass limit permitted discharges are also given.

**TABLE 1 - GENERAL CHEMICAL CHARACTERISTICS**

Characteristic	Maximum Concentration	Mass Limit (kg/day)	Reasons for Limits
MBAS (Methylene blue active substances)	300 g/m <sup>3</sup>	1.5	MBAS is a measure of anionic surfactants. High MBAS can: - adversely affect the efficiency of activated sludge plants. - impair the aesthetics of receiving waters.
Ammonia (measured as N) - free ammonia - ammonium salts	50 g/m <sup>3</sup> 200 g/m <sup>3</sup>	1.0	High ammonia: - may adversely affect the safety of operations & maintenance personnel. - may significantly contribute to the nutrient load to the receiving environment.
Kjeldahl nitrogen	150 g/m <sup>3</sup>	1.0	High Kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment. A value of 50 g/m <sup>3</sup> should be used as a guideline for sensitive receiving waters.
Total phosphorus (as P)	50 g/m <sup>3</sup>	0.75	High phosphorus may significantly contribute to the nutrient loading of the receiving environment. A value of 10 g/m <sup>3</sup> should be used as a guideline for sensitive receiving waters.
Sulphate (measured as SO <sub>4</sub> )	500 g/m <sup>3</sup> 1500 g/m <sup>3</sup> (with good mixing)	2.5	Sulphate: - may adversely affect sewer structures. - may increase the potential for the generation of sulphides in the wastewater if the sewer is prone to

			become anaerobic.
Sulphite (measured as SO <sub>2</sub> )	15 g/m <sup>3</sup>	0.075	Sulphite has potential to release SO <sub>2</sub> gas and thus adversely affect the safety of operations & 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 – (measured as H <sub>2</sub> S on acidification)	5 g/m <sup>3</sup>	0.025	Sulphides in wastewater may: - cause corrosion of sewer structures, particularly the top non-wetted part of a sewer. - generate odours in sewers which could cause public nuisance. - release the toxic H <sub>2</sub> S gas which could adversely affect the safety of operations & maintenance personnel. Under some of the conditions above sulphide should be <2.0g/m <sup>3</sup> .
Chlorine (measured as Cl <sub>2</sub> ) - free chlorine - hypochlorite	3 g/m <sup>3</sup> 30 g/m <sup>3</sup>	0.015	Chlorine: - can adversely affect the safety of operations & maintenance personnel. - can cause corrosion of sewer structures.
Dissolved aluminium	100 g/m <sup>3</sup>	1.5	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate as a scale, which may cause a sewer blockage.
Dissolved iron	100 g/m <sup>3</sup>	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 total B)	25 g/m <sup>3</sup>	0.125	Boron is not removed by conventional treatment. High concentrations in effluent may restrict irrigation applications. Final effluent use and limits should be taken into account.
Bromine (as Br <sub>2</sub> )	5 g/m <sup>3</sup>	0.025	High concentrations of bromine may adversely affect the safety of operations & maintenance personnel.
Fluoride (as F)	30 g/m <sup>3</sup>	0.15	Fluoride is not removed by conventional

			wastewater treatment, however pre-treatment can easily and economically reduce concentrations to below 20 g/m <sup>3</sup> .
Cyanide - weak acid dissociable (as CN)	5 g/m <sup>3</sup>	0.005	Cyanide may produce toxic atmospheres in the sewer and adversely affect the safety of operations & maintenance personnel.

**TABLE 2 – TOXIC POLLUTANTS - HEAVY METALS**

Metal	Maximum † Concentration (g/m <sup>3</sup> )	Mass Limit ‡ (kg/day)	Reasons for Limits
Antimony	10.0	0.025	<p>Heavy metals have the potential to:</p> <ul style="list-style-type: none"> <li>- impair the treatment process</li> <li>- impact on the receiving environment</li> <li>- limit the reuse of sludge and effluent.</li> </ul> <p>Where any of these factors are critical it is important that local acceptance limits should be developed.</p> <p>The concentration for 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.</p> <p>Specialist advice should be sought.</p> <p>If sludge is used as a biosolid then metal concentrations/mass are important such that the Biosolids Guidelines are met.</p>
Arsenic	5.0	0.025	
Barium	10.0	0.025	
Beryllium	0.005	0.0001	
Cadmium	0.5	0.001	
Chromium	5.0	0.050	
Cobalt	10.0	0.025	
Copper	10.0	0.050	
Lead	10.0	0.025	
Manganese	20.0	0.025	
Mercury	0.05	0.0001	
Molybdenum	10.0	0.025	
Silver	2.0	0.010	
Nickel	10.0	0.050	
Selenium	10.0	0.025	
Thallium	10.0	0.025	
Tin	20.0	0.025	
Zinc	10.0	0.050	

† It is intended that these maximum concentrations refer to the total metal fraction.

‡ It is intended that these mass limits refer to the total metal fraction.



**TABLE 3 – TOXIC POLLUTANTS - ORGANIC COMPOUNDS AND PESTICIDES**

Compound	Maximum . Concentration	Mass Limit . (kg/day)	Reasons for Limits
Formaldehyde (as HCHO)	50 g/m <sup>3</sup>	0.25	Formaldehyde in the sewer atmosphere can adversely affect the safety of operations & maintenance personnel.
Phenolic compounds (as phenols) (- excluding chlorinated phenols)	50 g/m <sup>3</sup>	0.25	Phenols may adversely affect biological treatment processes. They may not be completely removed by conventional treatment and subsequently impact on the receiving environment.
Chlorinated phenols	0.02 g/m <sup>3</sup>	0.001	Chlorinated phenols can adversely affect biological treatment processes and may impair the quality of the receiving environment.
Petroleum Hydrocarbons	30 g/m <sup>3</sup>	0.15	Petroleum hydrocarbons may adversely affect the safety of operations & maintenance personnel.
Halogenated aliphatic compounds	1 g/m <sup>3</sup>	0.001	Because of their stability and chemical properties these compounds: <ul style="list-style-type: none"> <li>- may adversely affect the treatment processes.</li> <li>- may impair the quality of the receiving environment.</li> <li>- may adversely affect the safety of operations &amp; maintenance personnel.</li> </ul>

Monocyclic aromatic hydrocarbons	5 g/m <sup>3</sup>	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)	0.05 g/m <sup>3</sup>	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.
Halogenated aromatic hydrocarbons (HAHs) Polychlorinated biphenyls (PCBs) Polybrominated biphenyls (PBBs)	0.002 g/m <sup>3</sup> each	0.0001 each	Because of their stability, persistence and ability to bio-accumulate in animal tissue these compounds have been severely restricted by health and environmental regulators.
Pesticides (general) (includes insecticides, herbicides, fungicides and excludes organophosphate, organo-chlorine and any pesticides not registered for use in New Zealand)	0.2 g/m <sup>3</sup> in total	0.001	The category covers all pesticides other than those that are specifically listed below. Pesticides: - may adversely affect the treatment processes. - may impair the quality of the receiving environment. - may adversely affect the safety of operations & maintenance personnel.
Organophosphate pesticides	0.1 g/m <sup>3</sup>	0.0005	

## SCHEDULE 2 PROHIBITED CHARACTERISTICS

### 2.0 INTRODUCTION

Prohibited characteristics are present if their concentration exceeds background levels. The background level in relation to any substance means the extent to which that substance is present (if at all) in the municipal water supply used on the trade premises, or in any other water supply that is approved in writing by a Council authorised officer for the purpose of discharging waste.

### 2.1 PROHIBITED CHARACTERISTICS

2.1.1 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 system, or
- (b) Damage any part of the wastewater system, or
- (c) In any way, directly or indirectly, cause the quality of the effluent 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 Resource Management Act 1991, or water right, permit or other governing legislation, or
- (d) Prejudice the occupational health and safety risks faced by wastewater workers, or
- (e) After treatment be toxic to fish, animals or plant life in the receiving waters, or
- (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 of any wastewater treatment plant to receiving waters to be coloured.

2.1.2 A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in Schedule 1 unless specifically approved for that particular consent.

2.1.3 A discharge has a prohibited characteristic if it has any amount of:

- (a) Harmful solids, including dry solid wastes and materials, which 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 1), 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 and other organotin compounds)
  - (ii) Chromium (as organic compounds).
- (e) Any organochlorine pesticides.

- (f) Genetic wastes.  
All wastes that contain or are likely to contain material from genetically modified organism that is not in accordance with an approval under the Hazardous Substances and New Organisms (HSNO) Act 1996. The material concerned may be from premises where the genetic modification of any organism is conducted or where a genetically modified organism is processed.
- (g) Any health care waste prohibited for discharge to a wastewater system by NZS 4304 or any pathological or histological wastes.
- (h) Radioactivity levels in excess of National Radiation Laboratory guidelines.

## SCHEDULE 3 TRADE WASTE CHARGES

### 3.0 CHARGING SYSTEM

The charging methods involve assessing the full life costs of the sewerage infrastructure, treatment plant, the disposal system and costs associated with the administration, management and monitoring of trade wastes. Charges are then allocated from either a uniform annual charge or unit costs for volume and the various pollutants that are removed. The total treatment costs are built up by allocating costs to the reticulation network, individual treatment process units, the disposal system, administration and management.

### 3.1 CHARGING CATEGORIES

There are three charging categories, which are based on a customer's wastewater contribution to a wastewater system.

Annual Trade Waste Consent Fee - All trade waste customers will pay an annual trade waste consent fee in relation to their discharge. The consent fee will be reviewed on an annual basis and published annually as part of Council's budget process.

Volume Only Based Charges - This charging mechanism will apply to trade waste customers with a significant volumetric discharge. Charges will be based on metered water use.

Flow and Load Based Charges with Council Monitoring - This charging mechanism will apply to trade waste customers who have a significant pollutant load discharging into the wastewater system. Results of monitoring will be used to determine trade waste charges on a flow and pollutant load basis. Self-monitoring may be acceptable for some trade waste discharges.

### 3.2 CHARGING FORMULA

The formula for calculation of the load based trade waste charge is as set out below. Volume measurement and sample results will be used for the purposes of calculating the trade waste charge using this formula.

$$(V \times V_c) + (SS \times SS_c) + (BOD \times BOD_c) + (TKN \times TKN_c) + (TP \times TP_c)$$

V	The volume discharged.
$V_c$	The unit volume charge \$ / m <sup>3</sup> .
SS	The mass of suspended solids discharged.
$SS_c$	The unit SS charge \$ / kg.
BOD	The mass of BOD discharged.
$BOD_c$	The unit BOD charge \$ / kg.
TKN	The mass of Total Kjeldahl Nitrogen (TKN) discharged.
$TKN_c$	The unit TKN charge \$ / kg.
TP	The mass of Total Phosphorus (TP) discharged.
$TP_c$	The unit TP charge \$ / kg.

Volume ( <i>V</i> )	Payment based on the volume discharged - \$ / m <sup>3</sup>
Flow Rate	Payment based on the flow rate discharged - \$ / l / sec
Suspended Solids ( <i>SS</i> )	Payment based on the mass of suspended solids - \$ / kg
Organic Loading ( <i>BOD</i> )	Payment based on the mass of Biochemical oxygen demand – \$ / kg
Nitrogen ( <i>TKN</i> )	Payment based on the defined form(s) of nitrogen - \$ / kg
Phosphorus ( <i>TP</i> )	Payment based on the defined form(s) of phosphorus - \$ / kg
Depreciation	Operating cost related to capital and normally spread across the volume and mass charges.
Capital	Apportioned upfront or term commitment capital cost of specific infrastructure required to accommodate a conditional consent.

In the following table Council states what categories they will charge, or may charge, under the tenure of this Bylaw. Charges will be reviewed as part of the Council's annual review of fees and charges.

### 3.3 ADMINISTRATIVE CHARGES

CATEGORY	DESCRIPTION
Connection fee	Payable on application for connection to discharge trade waste
Disconnection fee	Payable following a request for disconnection from the wastewater system
Compliance monitoring	The cost of sampling and analysis of trade waste discharges
Trade Waste application fee	Payable on an application for a trade waste discharge
Re-inspection fee	Payable for each re-inspection visit by a Council authorised officer where a notice served under this Bylaw has not been complied with by the trade waste discharger
Temporary discharge fee	Payable prior to receipt of temporary discharge
Annual trade waste consent charges	An annual management fee for a trade waste discharge to cover Council costs associated with: <ul style="list-style-type: none"> <li>- Administration</li> <li>- General compliance monitoring</li> <li>- General inspection of trade waste premises</li> <li>- Use of the wastewater system</li> </ul> This charge varies depending on the classification of trade waste consent
Rebates for Trade Premises within the Waipa District	Reduction in fees are provided for in s section150(2) of the Local Government Act 2002. Section 150(4) Local Government Act 2002 states that the fees prescribed by the Council must not provide for the Council to recover more than the reasonable cost incurred by the Council for the matter for which the fee is charged. <p>In no event shall the resultant charge be less than the Council's wastewater charge for the equivalent period.</p>

### 3.4 TANKERED WASTE CHARGES

Tankered Wastes	Payment based on the above Trade Waste Charges
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#### SCHEDULE 4 CONVENTIONAL TANK TYPE GREASE TRAP SIZING GUIDE

To meet the Council's Trade Waste Bylaw Schedule 1 discharge standard of less than 500 g/m<sup>3</sup> of fat, oil or grease, any conventional tank type grease trap may have a functional capacity of no less than 500 litres.

The functional capacity shall have at least the greater of:

- (a) 40 litres capacity per served meal per hour, or
- (b) 5 litres capacity per seated person/served meals per day

PLUS

- (c) an additional 25% capacity for peak flushes, and
- (d) an additional 250 litres capacity for each connected dishwasher

Retention time within the grease trap must be a minimum of one hour in all cases.

**Table 1: Grease Trap Sizing Guide**

Example grease trap sizing guide	100 seated persons or meals per day	200 seated persons or meals per day
5 Litres per seated person or meals served per day	500 litres	1000 litres
Plus and additional 25% for peak flushes	125 litres	250 litres
Plus an additional 250 litres per dishwasher	250 litres	250 litres
Total calculated liquid capacity required	875 litres	1500 litres
Minimum functional capacity grease trap required	875 litres	1500 litres
Equivalent number of meals served per hour	25	38

## APPENDIX 1: SAMPLING PROCEDURE

### 1.1 Sampling equipment

#### 1.1.1. Sample Containers

1.1.1.1 The laboratory responsible for analysing the samples should be consulted about the type of container that should be used for sample collection and subsequent sample, storage and transportation.

1.1.1.2 Desirable factors to be considered when selecting sample containers are:

- (a) High resistance to breakage;
- (b) Good sealing efficiency;
- (c) Ease of reopening;
- (d) Good resistance to temperature extremes;
- (e) Practical size, shape and mass;
- (f) Good potential for cleaning and re-use;
- (g) Availability and cost;
- (h) Ability to be clearly labelled.

1.1.1.3 The sample container needs to prevent losses due to absorption, volatilisation and contamination by foreign substances.

1.1.1.4 Approved plastic containers are recommended for most characteristics. Some exceptions exist where glass containers only should be used, when for example the following analyses are to be made:

- (a) Oil and grease;
- (b) Hydrocarbons;
- (c) Detergents;
- (d) Pesticides.

#### 1.1.2. Apparatus

1.1.2.1 The sampling procedures set out in this section assume the use of manual sampling equipment. The simplest equipment used for taking effluent samples consists of a bucket, ladle, or wide-mouthed container that may be mounted on a handle of a suitable length. The volume should not be less than 100 ml. Where manual samples are to be used for the preparation of composite samples, the volume of the bucket, ladle or container should be well defined and known to a precision of within  $\pm 5\%$ . Manual samples can also be taken with a Ruttner or Kemmerer sampler, consisting of a 1-litre to 3-litre volume tube with a hinged lid at each end of the tube, or other samplers operating on a similar principle.

1.1.2.2 Manual sampling equipment should be made of an inert material that does not influence the analyses that will be carried out on the samples.



1.1.2.3 Before starting sampling, the equipment should be cleaned with detergent and water, or as directed by the equipment manufacturer, and finally rinsed with water. The sampling equipment may be washed before use in the wastewater stream from which the sample is taken in order to minimise the risk of contamination. Special attention should be paid to rinsing after cleaning, if the analyses under study are detergents. The sampling equipment cannot be washed in the waste stream where this will influence the analysis carried out later (e.g. analysis of oil and grease, and microbiological analysis).

### **1.1.3. Sampling Location**

1.1.3.1 Safety precautions: In all cases when selecting sampling locations site health and safety implications should be considered.

1.1.3.2 The sampling location shall be the first manhole or other access point upstream of the point of discharge, unless, because of poor mixing or some other reason, a location giving more representative samples can be found.

1.1.3.3 The sampling location should be kept clean by removing scale, sludge, bacterial film etc. from the walls.

1.1.3.4 If turbulent flow conditions do not exist at the sampling location they shall be induced by restricting the flow, for example with a baffle or weir. The restriction should be made in such a way that sedimentation upstream of the restriction does not occur. The sampling intake point should always be located downstream of the restriction. The inlet of the sampling equipment should preferably face the direction of flow, but may face downstream if too many blockages result. If mixing is good just upstream of the obstacle, then the intake can be located there, taking care that sediment is not sampled and ensuring that the intake remains below liquid level.

1.1.3.5 As a general rule, the sampling point should be one-third of the wastewater depth below the surface.

1.1.3.6 It may be necessary to sample the surface by skimming, in order that qualitative information about emulsified and floating material can be obtained. Guidance on the choice of suitable containers for this sampling technique should be sought from the receiving laboratory.

### **1.1.4. Types of Sampling methods**

- Spot (or grab) samples;
- Composite samples.

#### **1.1.4.1 Spot Sample**

- (i) A spot sample is defined as a discrete sample taken randomly (with regard to time and/or location) from the trade waste.
- (ii) In a spot sample, the whole sample volume is taken at one time. Spot samples are useful for determining the wastewater composition at a certain time. In cases with small variations in the volume and composition of the waste stream, a spot sample can be representative of the composition during a longer period.
- (iii) For certain determinations, spot samples only can be used. For example, oil and grease, dissolved oxygen, chlorine and sulphide. Here the result will differ if the analyses are not carried out (or started) immediately after collection of the sample, and if the whole sample volume is not used at a time.

#### **1.1.4.2 Composite Sample**

- (i) A composite sample is defined as 2 or more samples or sub-samples, mixed together in appropriate known proportions (either discretely or continuously), from which the average result of a desired characteristic may be obtained. The proportions are usually based on time or flow measurements.
- (ii) Composite samples are prepared by mixing a number of spot samples or by collection of a continuous fraction of the waste stream. In sampling, each of the spot samples should be greater than 50 ml in volume. Often it is advisable that spot samples are 200 ml to 300 ml in volume, to ensure the collection of representative samples.

#### **(a) Instantaneous Composite Sample**

- (i) An instantaneous sample is a composite sample taken using the following method:
- (ii) Three spot samples of the discharge shall be taken at intervals of not less than 1 minute nor more than 5 minutes. The 3 spot samples must be combined using equal volumes of all 3 samples to obtain the instantaneous sample.
- (iii) An instantaneous sample shall be used for all routine compliance monitoring unless otherwise specified.

#### **(b) Four-Hour Average Composite Sample**

- (i) A 4-hour average sample is a composite sample taken using the following method:
  - No less than 12 spot samples shall be taken from the discharge at reasonably even intervals over the whole period. The intervals between the samples must not be less than 5 minutes nor more than 30 minutes. The samples shall be mixed using equal volumes of all samples to obtain the 4-hour average sample.
  - The 4-hour flow period used when taking a 4-hour average sample shall be a continuous period of 4 hours during which the discharge is occurring and:
    - I. Shall as far as practical be representative of the discharge occurring on a typical working day, and
    - II. Shall exclude periods of decreased discharge prior to or after the day's operations.

#### **(c) Twenty-Four Hour Flow Proportionate Sample**

- (i) A 24-hour flow proportionate sample is obtained using the following method:
  - Spot samples shall be taken from the discharge over a continuous 24-hour period. The samples shall be taken at reasonably even intervals over the whole period. The intervals between the samples must not be less than 15 minutes nor more than 60 minutes. Whenever more than one sample is taken within a 60 minute period the samples must be of equal quantity and may be stored with other samples taken during that 60 minute period in a common container.
  - If the discharge usually flows for a period less than 24 hours then no less than 18 spot samples shall be taken as described in paragraph a) above, to represent the nominated 24-hour period.
  - The 24-hour flow proportionate sample is then obtained by taking a part of the contents of each container and mixing all such samples together. The size of the part of each container sample that is used shall be in direct proportion to the volume of discharge that occurred from the time a sample was first placed in the particular container to the time a sample was first placed in the next container.

**(d) Automatic Sampling**

- (i) Automatic sampling machines facilitate recovery of time proportional samples during the entire working day. Typically a sampler machine is able to collect at least 24 samples. The sample period is determined by consideration of the daily duration of the trade waste discharge and the number of samples able to be collected by the sampler machine. The volume of each sample is sized such that the total volume collected during the sampling period is 5 litres or more.
- (ii) Flow proportional samples are obtained by taking samples each time a pre-set wastewater volume is measured as passing through the sample point. The pre-set wastewater volume is usually determined by dividing the expected total daily discharge by the number of samples to be taken (minimum typically 24). The volume of each sample is sized such that the total volume collected during the sampling period is 5 litres or more.

**1.1.5. Frequency, Number and Timing for Samples**

**1.1.5.1 Frequency and Number of Samples**

Analyses shall be based on sampling discharge periods that are representative of peak discharge. Such analyses shall be undertaken at a frequency of at least once per year unless otherwise specified in the Trade Waste Discharge Consent. The samples should be composite samples, unless the determinations to be carried out prohibit the use of a composite sample. The choice of the necessary number of samples taken during each year should be decided on the basis of when the peak discharge occurs and the size of the discharge in relation to the total discharge from all industry.

**1.1.5.2 Sampling Programme**

The objective of a sampling programme often dictates when and how a sample is collected.

When sampling trade waste, allowance should be made for the following sources of variation in quality:

- (a) Diurnal variations (i.e. within-day variability);
- (b) Variations between days of the week;
- (c) Variations between seasons (if applicable).

If the identification of the nature and magnitude of peak load are important, sampling should be restricted to those periods when peak loads are known to occur. The most appropriate type of sampling method (grab or composite) may be dependent on the magnitude of the variation in quality.

Relating the times of sampling to the particular process being monitored may be very important when considering discharges that are either seasonal or operated on a batch basis. In either case, the discharge will not be continuous and the sampling programme will need to take this fact into account.

**1.1.5.3 Sampling Period**

The overall sampling period may vary from a few hours, where tracing studies on volatile organics are being monitored, to several days, where stable inorganic species are being monitored.

This sub clause deals with the selection of the period over which a composite sample has to be taken. When selecting the period, the following two factors should be considered:

- (a) The objective of the sampling. For example, it may be necessary to assess the average organic load in a flow over several 24-hour periods, in which case diurnal flow proportional composite samples will be adequate.
- (b) The stability of the sample. In the example given in (a), it would not necessarily be practical to extend the sampling period to longer than 24 hours, since the organic component in the sample under study may deteriorate.
- (c) The stability of the sample may often limit the duration of the sampling period. In such cases, reference should be made to the specific analytical techniques to be employed and the receiving laboratory should be consulted, so correct preservative measures can be used. BS 6068:Section 6.3 gives further details on the preservation and storage of samples.

#### **1.1.5.4 Sample Preservation, Transportation and Storage**

The most common way of preserving wastewater samples is to cool to a temperature between 0 oC and 4 oC. When cooled to this temperature and stored in the dark, most samples are normally stable for up to 24 hours. For some determinants, long-term stability may be obtained by deep freezing (below -18 oC).

When collecting composite samples during extended periods, preservation should be an integral part of the sampling operation.

It may be necessary to use more than one sampling device, to allow both preserved and unpreserved samples to be taken.

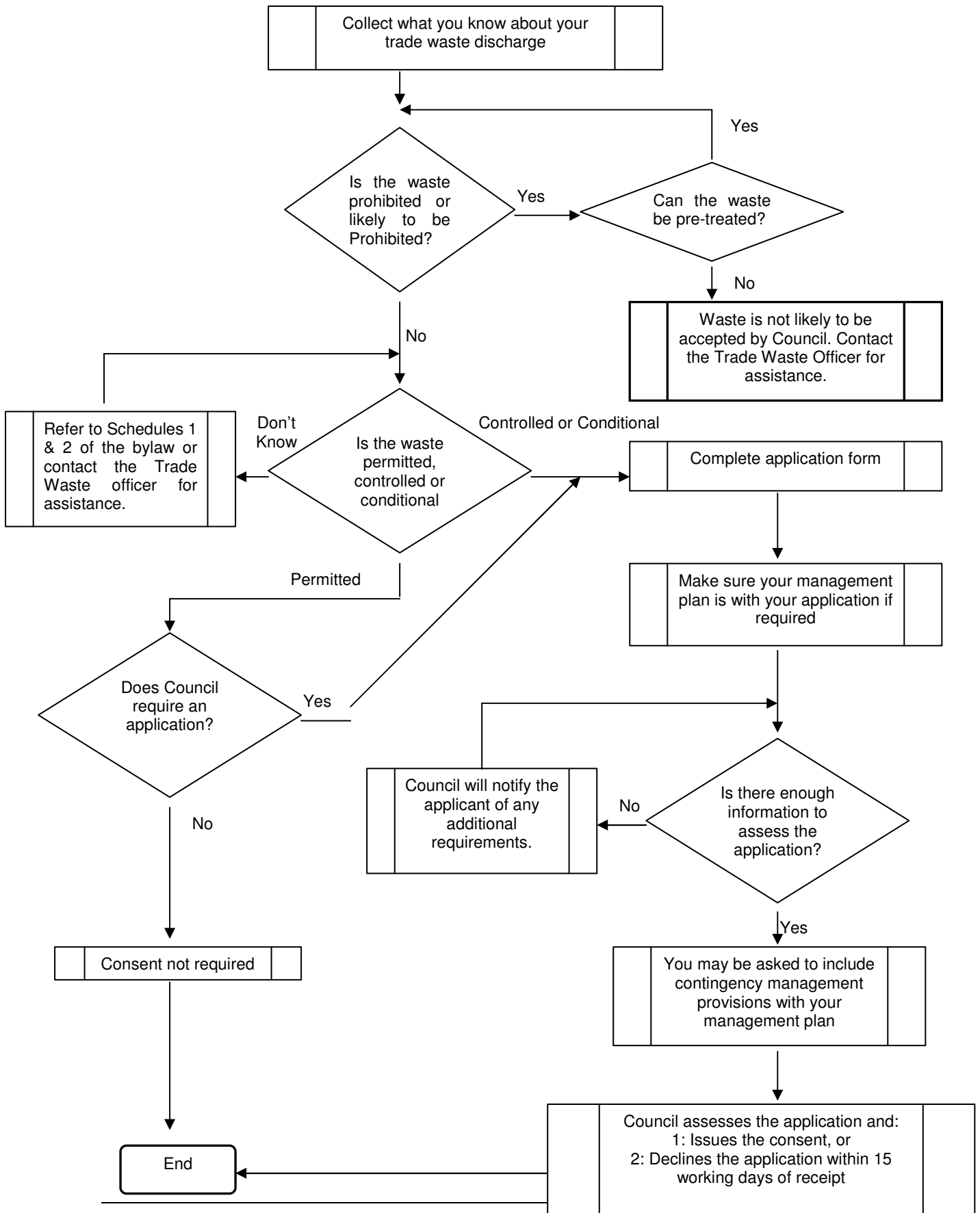
The laboratory responsible for analysing the samples should always be consulted with regard to the selection of the preservation method and subsequent transport and storage. Further details may be found in BS 6068:Section 6.3.

#### **1.1.5.5 Sample Identification and Records**

A printed form for the sampling report should as a minimum include at least the following information:

- (a) Name of the trade premises;
- (b) Trade waste consent number;
- (c) Sampling point;
- (d) Date, start and stop of sampling;
- (e) Time, start and stop of sampling;
- (f) Duration of the sampling period;
- (g) Details of the sampling method;
- (h) Preservation method;
- (i) Details of any field tests;
- (j) Name of the person who carried out the sampling;
- (k) Information required for a complete chain of custody.

## APPENDIX 2 – FLOW CHART FOR THE APPLICATION PROCESS



The foregoing Bylaw was made by the **WAIPA DISTRICT COUNCIL** by Special Consultative Procedure and confirmed at a meeting of Council held on the 14 December 2010 . This Bylaw becomes operative on the 10 January 2011.

**IN WITNESS WHEREOF** the Common Seal of the **WAIPA DISTRICT COUNCIL** was hereunto affixed pursuant to a resolution of Council passed on the 14 December 2010 in the presence of:

..... Mayor

..... Chief Executive