

# Central Otago District Council

# **Trade Waste Bylaw, 2001**

### **CONTENTS**

Chapter 1 :	Bylaw	2
1.1 Intro	oductionoduction	2
1.2 Inter	rpretation	2
1.3 Clas	ssification of Trade Waste Discharges	5
1.4 Stor	age of Hazardous Materials	6
1.5 App	lication for a Trade Waste Consent	6
1.5.1	Application Form	
1.5.2	Acknowledgement	
1.5.3	Information and Analysis	
1.5.4	Consideration of an Application	
1.5.5	Consideration Criteria	8
1.6 Con	ditions of Trade Waste Consent	8
1.7 Dur	ation	9
1.7.1	Permitted Consents	9
1.7.2	Conditional Consents	9
1.8 Tech	nnical Review and Variation	10
1.8.1		10
1.8.2		10
1.8.3		11
1.9 Acce	eptance Standards	11
1.9.1	Occupiers Own On-Site Pre-Acceptance Treatment	
1.9.2	Mass Limits	
1.9.3	Flow Metering	12
1.9.4	Estimating Discharge	13
1.9.5	Sampling and Analysis	13
1.9.6	Monitoring	14
1.9.7	Dilution	14
1.9.8	Stormwater, Condensing and Cooling Water	14
1.10 L	Disputes	15
1.10.1	Sampling and Analysis	15
1.10.2	Review of Decisions	
1.10.3	Emergency Provisions	15
1.11 A	accidents and Non Compliance	15
1.12 P	Payment	16
1.12.1	Charges	
1.12.2	Invoicing	
1.12.3	Cease to Discharge	
1.12.4	Failure to pay	

1.13 Authorised Officers	
1.13.1 Delegation	18
1.14 Transfer or Termination of Rights and Responsibilities	
1.14.1	18
1.14.2	18
1.14.3	18
1.15 Cancellation	
1.15.1 Summary Cancellation	
1.15.2 Grounds for Cancellation	19
1.16 Service of Documents	
1.16.1 Delivery or Post	
1.16.2 Deemed Service	20
1.16.3 Service Date	20
1.16.4 Signature	20
1.17 Offences	
1.18 Transitional Provisions	
1.18.1 Existing Trade Waste Discharges	
1.16.1 Laisting Trade Waste Discharges	20
1A.1 Introduction	2
1A.1.1	2
1A.1.2	
1A.1.3	
1A.2 Physical Characteristics	2
1A.2.1 Temperature	2
IA.2.2 Solids	3
1A.2.3 Oil and grease	3
1A.2.4Solvents and other organic liquids	4
1A.2.5 Emulsions of paint, adhesive, rubber, plastic	4
IA.2.6 Radioactivity	
·	
1A.2.7 Colour	5
1A.3 Chemical Characteristics	5
1A.5 Chemical Characteristics	٠
1A.3.1 pH value	5
1A.3.2 Organic strength	5
1A.3.2.1	
1A.3.3 Maximum Concentrations	
1A3.3.2 General chemical characteristics	
LES J. J. & VICHICIAN CHICHNICAL CHARACTERISTICS	7
1A3.3.3 Heavy Metals	9

### **SCHEDULES**

Schedule 1A	Council's Trade Waste Criteria
Schedule 1B	Prohibited Characteristics
Schedule 1C	Guide to Types of Trade Activities and Processes included in Permitted and Conditional Consents
Schedule 1D	Application Forms
Schedule 1E	Sampling Procedure
Schedule 1F	Trade Waste Charges
Schedule 2A	Permitted Trade Waste Acceptance Form
Schedule 2B	Conditional Trade Waste Consent Form

### **RELATED DOCUMENTS**

Reference is made in this document to the following:

#### **NEW ZEALAND STANDARDS**

NZS 4303:1990 Health care waste management

NZS 10012: Quality assurance requirements for measuring equipment Part 1:1993 Meteorological confirmation system for measuring equipment

#### **BRITISH STANDARDS**

BS 3680: Measurement of liquid flow in open channels

Part 11A:1992 Free surface flow in closed conduits - Methods of measurement

Part 11B:1992 Free surface flow in closed conduits - Specification for performance and installation of equipment for measurement of free surface flow in closed conduits

BS 5728: Measurement of flow of cold potable water in closed conduits

Part 3:1984 Methods for determining principal characteristics of single meters

BS 6068: Water quality

Part 6: Sampling

Section 6.1:1981 Guidance on the design of sampling programmes

Section 6.2:1991 Guidance on sampling techniques

Section 6.3:1986 Guidance on the preservation and handling of samples

Section 6.10:1993 Guidance on sampling of wastewaters

#### **NEW ZEALAND LEGISLATION**

Dangerous Goods Regulation 1980 and 1985 Health Act 1956 Local Government Act 1974 Resource Management Act 1991

### OTHER PUBLICATIONS

AWWA Standard methods for the examination of water and wastewater (Latest Edition).

Code of safe practice for the use of unsealed radioactive materials, NRL.C1; National Radiation Laboratory.

Draft guidelines for sewerage systems: Acceptance of trade wastes (industrial wastes), by the Australian Water Resources Council, 1992.

Public heath guidelines for the safe use of sewage effluent and sewage sludge on land. Department of Health New Zealand, 1992.

Chapter 1: Bylaw

### 1.1 Introduction

This Bylaw covers the discharge of trade waste to the Central Otago District Council's Wastewater system.

### 1.2 Interpretation

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

ACCESS POINT 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.

APPROVAL or APPROVED means approved in writing by the wastewater authority, either by resolution of the Council or by an officer of the wastewater authority authorized for that purpose.

BIOSOLIDS means wastewater sludge treated sufficiently so as to be suitable for beneficial re-use.

CHARACTERISTIC means any of the physical or chemical characteristics of a trade waste.

CLEANER PRODUCTION means the implementation at trade premises, of operations, methods and processes appropriate to the goal of reducing or eliminating the quantity and toxicity of wastes.

CONDENSING WATER or COOLING WATER means 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.

CONDITIONAL is waste that meets all conditions of Schedule A. This waste is likely to be accepted by Council, however, Council reserves the right to refuse Conditional Trade Waste. A consent is issued for this discharge.

CONSENT means a consent in writing given by Central Otago District Council authorising an occupier to discharge wastewater to the sewer system.

CONTAMINANTS includes any substance (including gases, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy or heat

- (a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
- (b) when discharged onto or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto ir into which is discharged.

COUNCIL means the Central Otago District Council.

DISCHARGE MANAGEMENT PLAN means the plan agreed between the Council and the occupier for the monitoring, programming and controlling by the occupier, of the sources of trade waste from the occupier's premises, so that the discharge to the wastewater system complies with the Council's requirements. These shall adequately cover the planned responses and facilities in place to allow appropriate management of unscheduled, unexpected or accidental events.

DISCONNECTION means the physical cutting and/or sealing of the drain from a premises.

DOMESTIC WASTEWATER means either that wastewater which is discharged from premises used solely for residential activities or the human wastewater discharged from other premises.

DRAIN means that section of private drain between the occupier's premises and the point of discharge through which wastewater is conveyed from the premises. This section of drain is owned and maintained by the occupier.

MASS LIMIT means the total mass of any characteristic that may be discharged to the wastewater authority wastewater system over any stated period from any single point of discharge or collectively from several points of discharge.

MAXIMUM CONCENTRATION means the instantaneous peak concentration that may be discharged at any instant in time.

OCCUPIER means the person occupying trade premises who discharges, or has obtained a consent to discharge or direct the manner of discharge of wastewater from any premises to the Council's Wastewater System.

PERMITTED DISCHARGE is a trade waste discharge that meets all of the requirements of the Council's standard as defined in Schedule A of this Bylaw but does not include the exclusions listed in Section 1.3.1. A Consent is not required for this type of discharge although an application must be made. This discharge is permitted on confirmation that it has been registered with Council.

PERSON includes a corporation sole and also a body of persons whether corporate or incorporate.

POINT OF DISCHARGE is the boundary between the public sewer and a private drain.

### PREMISES means either:

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

or

- 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
- c) Land held in public ownership (e.g. reserve) for a particular purpose, or
- d) Individual units in buildings which are separately leased.

PROHIBITED TRADEWASTE is waste that has, or is likely to have prohibited characteristics as defined in Schedule B and does not meet the conditions of Schedule A. The waste is not acceptable for discharge into Council's Wastewater System unless specifically approved by Council.

PUBLICLY NOTIFIED means published on at least one occasion in a newspaper circulating in the specific wastewater system drainage area, or under emergency conditions by the most practical means available at that time.

SCHEDULE OF RATES AND CHARGES means the list of items, terms and prices for services associated with the discharge of wastewater as approved by the Council.

SEWER means that section of public sewer downstream of the point of discharge. This section of sewer is owned and maintained by the Council or its agent.

SLUDGE means the solid material settled out from wastewater during the treatment process.

STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER means the 19<sup>th</sup> edition (including the Supplement) as published by the American Water Works Association (ACOUNCIL)/American Public Health Association, or the most current subsequent edition of this publication.

STORMWATER means all surface water run-off resulting from precipitation.

TANKERED WASTE is water or other liquid, including waste matter in solution or suspension, which is conveyed by vehicle for disposal.

TRADE PREMISES means any premises used or intended to be used for carrying on any trade or industry, and includes any land or premises wholly or mainly used for agricultural or horticultural purposes.

TRADE WASTE is any liquid, with or without matter in suspension or solution, that is or may be discharged from a trade premises in the course of any trade or industrial process or operation, or in the course of any activity or operation of a like nature; but does not include condensing or cooling waters; stormwater, or domestic sewage.

WASTEWATER means water or other liquid, including waste matter in solution or suspension, discharged from a premises to Council's Wastewater System.

WASTEWATER SYSTEM means Council's infrastructure that collects, conveys, treats and discharges the wastewater. This infrastructure includes the public sewers, trunk mains, pumping stations, oxidation ponds and other facilities at the wastewater treatment and disposal system. The Wastewater System shall also include any

future Council owned and operated reticulated sewerage schemes that may be installed for communities within Council's territorial area.

### 1.3 Classification of Trade Waste Discharges

### 1.3.1

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

- a) Permitted
- b) Conditional
- c) Prohibited
- a) Permitted Trade Waste is a trade waste discharge that meets all of the requirements of the Council's standard as defined in Schedule A of this Bylaw and does not include:
  - a discharge with an average 24 hour flow volume of greater than 5m<sup>3</sup>,
     calculated over a six month period
  - a discharge with a maximum instantaneous flow rate greater than 2.0 L/s
  - tankered waste
  - discharge which includes solid waste from refuse, garbage grinders or waste masters
  - stormwater, condensing or cooling water
  - waste from a trade activity and/or process that are of such a complexity or size; or employ such chemicals, raw materials, or feedstock; that the risks of producing a trade waste which is not permitted are considered significant by Council
  - a discharge that because of previous compliance issues that the risk of producing a trade waste which is not permitted are considered significant by Council.

This discharge is permitted on written confirmation that it has been registered with Council.

- b) Conditional Trade Waste is waste that meets all conditions of Schedule A. This waste is likely to be accepted by Council, however, Council reserves the right to refuse Conditional Trade Waste. A consent is issued for this discharge.
- c) Prohibited Trade Waste is waste that has, or is likely to have prohibited characteristics as defined in Schedule B and does not meet the conditions of Schedule A. The waste is not acceptable for discharge into Council's Wastewater System unless specifically approved by Council.

### 1.3.2

No person shall discharge, or cause to be discharged, any trade waste to the Council's Wastewater System except in accordance with the provisions of this Bylaw.

### **1.4** Storage of Hazardous Materials

The occupier shall not store raw material, products or wastes containing corrosive, toxic, biocidal, radioactive, flammable, or explosive materials, nor any material which when mixed with the wastewater stream is likely to generate toxic, flammable, explosive or corrosive materials in quantities likely to be hazardous, nor any other material likely to be deleterious to the Wastewater System or the health and safety of Council staff and the public, without taking all reasonable steps to prevent entry into the Wastewater System from leakage, spillage or other mishap.

The occupier must also comply with requirements of the Dangerous Goods Act and Regulations and/or Hazardous Substances and New Organisms Act.

### **1.5** Application for a Trade Waste Consent

### 1.5.1 Application Form

#### 1.5.1.1

Every occupier of trade premises who wishes to:

- a) Discharge into the wastewater system any trade waste, or
- b) Vary the characteristics of trade waste discharge that has previously been registered or granted a consent, or
- c) Vary the conditions of a conditional consent to discharge that has previously been granted.

Shall, if required by Council, complete an application in the form provided in Schedule 1D (or any other application form as required by Council) for the consent of the Council, to the discharge of that trade waste, or to the proposed variations.

### 1.5.1.2

The Council reserves the right to deal with the owner of a premises instead of the occupier.

### 1.5.1.3

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.

### 1.5.1.4

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

### 1.5.1.5

The Council may require an application to be supported by an independent and external auditor to verify any or all information supplied by the occupier, and/or a "Discharge Management Plan".

#### 1.5.1.6

Any discharge of an intermittent or short duration shall be applied for on the separate "Temporary discharge" form provided in Schedule 1D (or any other application form as required by Council). Such discharges include the short term discharge of an unusual waste from an occupier with an existing trade waste consent, and the discharge of tankered wastes to designated points in the Council's Wastewater System.

### 1.5.1.7

Every application shall be accompanied by a trade waste application fee in accordance with the Council's schedule of rates and charges.

### 1.5.2 Acknowledgement

The Council shall acknowledge the application in writing within 10 working days of the receipt of the occupier's application and fee.

### 1.5.3 Information and Analysis

#### 1.5.3.1

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

- (a) Require the applicant to submit any additional information which it considers necessary to reach an informed decision, and
- (b) Council may require an applicant to provide analytical details of the contaminant to be discharged. This information shall be determined in accordance with the provisions of 9.4, 9.5 and 9.6 of this Bylaw.

The Council shall notify the applicant of any requirement under this clause within 10 working days of receipt of the application.

### 1.5.4 Consideration of an Application

Within 15 working days of receipt of an application complying with this Bylaw and/or all requirements under 1.5.3, whichever is the later, the Council shall, after considering the matters in 1.5.5 do one of the following:

- (a) Decline the application and notify the applicant of the decision giving a statement of the reasons for refusal, or
- (b) Grant the application as a permitted trade waste and inform the applicant of the decision by issuing the appropriate notice of registration of the discharge, 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 a draft consent for consideration by the applicant.

### 1.5.5 Consideration Criteria

In considering any application for a trade waste consent to discharge from any trade premises into the Wastewater System and in imposing any conditions on such a consent, the Council shall take into consideration the quality, volume, and rate of discharge of the trade waste from such premises in relation to:

- (a) The health and safety of Council staff, Council's agents and the public, and
- (b) The limits and/or maximum values for characteristics of trade waste as specified in Schedules 1A and 1B of this Bylaw, and
- (c) The extent to which the trade waste may react with other trade waste or domestic wastewater to produce an undesirable effect, e.g.: settlement of solids, production of odours etc., accelerated corrosion, and
- (d) The flows and velocities in the sewer, or sewers and the material or construction of the sewer or sewers, and
- (e) The capacity of the sewer or sewers and the capacity of any wastewater treatment works and other facilities, and the timing of the trade discharge into the Wastewater System, and
- (f) The nature of any wastewater treatment process and the degree to which the trade waste is capable of being treated in the wastewater treatment works, and
- (g) The possibility of unscheduled, unexpected or accidental events and the degree of risk these could cause to humans, the Wastewater System and the environment.
- (h) Any statutory requirements relating to the discharge of raw or treated wastewater to receiving waters, the disposal of sewage sludges, and any discharge to air, (including the necessity for compliance with any resource consent, discharge permit or water classification), and
- (i) Consideration for other existing or future discharges.

### **1.6** Conditions of Trade Waste Consent

Any trade waste consent to discharge may be granted subject to such conditions the Council may 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 1.9.3, 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 and maintenance by the occupier, at the occupier's expense, of screens, grease traps, silt traps or other treatment and flow control works to control the discharge, and
- (h) The provision and maintenance at the occupier's expense of inspection chambers, manholes or other apparatus or devices to provide reasonable access to drains for sampling and inspection, and
- (i) A sampling and testing program and flow measurement requirements, and
- (j) Which of the methods set out in 1.9.4, 1.9.5, and 1.9.6 are to be used for measuring flow rates 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 occupier of such meters or devices as may be required to measure the volume or flow rate of any trade waste being discharged from the premises, and for the certification of such meters, and
- (I) The provision and maintenance, at the occupier's expense of such services, (whether electricity, water or compressed air or otherwise), which may be required, in order to operate meters and similar devices, and
- (m) The provision in a Council approved electronic form by the occupier to the Council of all flow and/or volume records and results of analyses.
- (n) The provision and maintenance by the occupier at the occupier's expense of partial, preliminary or other treatment processes, equipment or storage facilities, to regulate the quality, quantity and rate of discharge or other characteristics prior to the point of discharge.

### 1.7 Duration

### 1.7.1 Permitted Consents

Permitted Trade Waste shall remain in force indefinitely until either:

- a) the quantity and nature of the discharge changes significantly, or
- b) the discharge changes to such an extent it becomes a conditional trade waste, or
- c) the occupier of the premises changes, or
- d) the owner of the premises changes, or
- e) Council change the trade waste management procedures by implementation of changed Trade Waste Bylaw conditions.

In any of these cases the Occupier shall apply within 14 days of the change occurring, a new permitted or if applicable a new conditional trade waste consent.

### 1.7.2 Conditional Consents

Conditional trade waste consents under this bylaw shall expire at the end of a term fixed by the Council subject to the following.

Conditional trade waste consents may be given for a term not exceeding 5 years to an occupier who at the time of application satisfies the Council that:

- (a) The nature of the trade activity, or the process design and/or management of the premises are such that the occupier has a demonstrated ability to meet the conditions of the trade waste consent during its term, and/or
- (b) Cleaner production techniques are successfully being utilised, or that a responsible investment in cleaner production equipment or techniques is being made, and/or
- (c) Significant investment in pretreatment facilities has been made, such that a long period of certainty for the amortising of this investment is considered reasonable.

Notwithstanding the above the Council retains the right to review the conditions at an earlier time. The reasons for such an earlier review could include:

- · the level of compliance
- matters pertaining to Council's resource consents
- matters pertaining to Council's environmental policies and outcomes
- new control and treatment technologies and processes
- matters pertaining to Council's legal obligations.

In all other cases the term of the trade waste consent shall not exceed 2 years.

In all cases where either the occupier, or the owner of the premises changes a new application for renewal of the conditional trade waste consent shall be made. It shall be the responsibility of the occupier to lodge the new application.

### 1.8 Technical Review and Variation

### 1.8.1

The Council may at any time during the term of a trade waste consent, by written notice to the occupier (following a reasonable period of consultation), vary any condition to such extent as the Council considers necessary to meet any new resource consent, or new resource consent condition imposed on the discharge or discharges from the Council's treatment plant, or change in Council's environmental policies and procedures, or with any other legal requirements imposed on the Council.

#### 1.8.2

The holder of a trade waste consent to discharge may at any time during the term of a consent, by written application to the Council, seek to vary any condition of consent, as provided for in 1.5.1 of this Bylaw.

#### 1.8.3

The Council may at any time during the term of a trade waste consent, by written notice to the occupier (following a reasonable period of consultation) vary any condition of consent following a review of the technical issues considered when setting conditions of consent, due to new information becoming available and/or changes in the Council's resource consent conditions.

### 1.9 Acceptance Standards

### 1.9.1 Occupiers Own On-Site Pre-Acceptance Treatment

The Council may grant a trade waste consent to discharge subject to the provision and maintenance by the occupier at the occupiers expense, of screens, grease traps, silt traps or other partial, preliminary, or more extensive treatment processes, equipment or storage facilities, to regulate the quality, quantity and rate of discharge or other characteristic prior to the point of discharge.

The inclusion of such provisions in a consent, and in Schedule 1A, shall not relieve the occupier of their obligations to meet the specific contaminant levels specified.

Such provisions and maintenance requirements may include those required as part of contingency management procedures that shall be put into place to safeguard against unscheduled, unexpected or accidental activities that present a higher risk to humans, the Wastewater System or the environment.

#### 1.9.2 Mass Limits

#### 1.9.2.1

A conditional trade waste consent may impose specific mass limits for any contaminant.

#### 1.9.2.2

Mass limits may be imposed for any characteristic. Any characteristic controlled by mass limit shall also have its maximum concentration limited to the value scheduled unless approved otherwise.

#### 1.9.2.3

#### 1.9.2.4

When setting mass limit allocations for a particular characteristic the Council shall consider:

- (a) Conditions in the wastewater system near the trade waste discharge point and elsewhere in the wastewater system, and
- (b) 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
- (c) Whether or not the applicant uses cleaner production techniques, and

- (d) Whether or not the applicant has established to the satisfaction of the Council a programme to achieve cleaner production techniques within a satisfactory period, and
- (e) 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
- (f) Any requirements of the Council to reduce the contaminant discharge of the Wastewater System, and
- (g) 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
- (h) The total mass of the characteristic allowable in the wastewater system, and the proportion (if any) to be reserved for future allocations, and
- (i) 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).

### 1.9.3 Flow Metering

### 1.9.3.1

Flow metering shall be required:

- (a) On conditional 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 the occupier and the Council cannot agree on a suitable method of wastewater flow estimation.

### 1.9.3.2

The occupier shall be responsible for the supply, installation, maintenance and calibration of any meter required by the Council for the measurement of the rate or quantity of discharge of trade waste. These devices shall be subject to the approval of the Council, but shall remain the property of the occupier. Measurement of flow shall be carried out by the occupier in accordance with BS 3680: Part 11A, BS 3680: Part 11B and BS 5728:Part 3.

### 1.9.3.3

Records of flow and/or volume shall be available for viewing at any time by the Council, and shall be submitted to the Council at prescribed intervals in a Council approved electronic form advised by Council.

#### 1.9.3.4

Meters shall be located in a position which is readily accessible for reading and maintenance, and as close as practicable to the point of discharge.

#### 1.9.3.5

The occupier shall arrange for confirmation of the flow metering equipment and instrumentation by a company in accordance with NZS 10012:Part 1 upon installation

and at least once a year thereafter to ensure performance within ±10 % of its reading. A copy of independent certification of each calibration result shall be submitted to the Council.

#### 1.9.3.6

Should any meter, after being calibrated, be found to register a greater or lesser discharge than the quantity of wastewater actually passed, the Council may make an adjustment in accordance with the results shown by such tests backdated for a period at the discretion of the Council but not exceeding 12 months, and the occupier shall pay a greater or lesser amount according to such adjustment.

### 1.9.4 Estimating Discharge

Where water meters are used as a basis of estimating discharge, confirmation of the validity of these meters shall be provided where the meters are not provided by Council. This procedure shall follow the provisions of section 1.9.3 or other Council approved means.

#### 1.9.4.1

Where no meter or similar apparatus is warranted, the Council 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.

#### 1.9.4.2

Should any meter be out of repair or cease to register, or be removed, the Council shall estimate the discharge for the period since the previous reading of such meter, (based on the average of the previous 4 billing periods charged to the occupier) and the occupier 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 4 billing periods would be an unreasonable estimate of the discharge then the Council may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the occupier shall pay according to such estimate.

#### 1.9.4.3

Where a meter has been tampered with, the Council (without prejudice to the other remedies available) may declare the reading void and estimate discharge as provided above.

### 1.9.5 Sampling and Analysis

#### 1.9.5.1

Sampling shall be in accordance with the procedure contained in Schedule 1E or some other procedure approved by Council and designed in accordance with BS 6068: Section 6.10.

#### 1.9.5.2

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 for the purpose by Telmark IANZ Registration, or alternatively a laboratory approved in writing by the Council.

### 1.9.6 Monitoring

### 1.9.6.1

The Council shall monitor the compliance of the occupier in discharging trade waste under the terms of its consent.

### 1.9.6.2

If required by the occupier, all official samples taken by an authorised officer of the Council shall be split as follows:

- (a) On completion of sampling each of the samples or the composite sample(s) as the case may be, shall be divided into 3 equal parts, and
- (b) The first portion of each sample or composite sample shall be delivered to the occupier, and
- (c) The second and third portions of each sample or composite sample shall be retained by Council.

### 1.9.6.3

Where any portion of a sample or composite sample is to be delivered in accordance with this Bylaw, it shall be delivered within 4 hours of the sampling being completed.

### 1.9.6.4

The third portion of any sample or composite sample retained by an authorised officer of the Council in accordance with this Bylaw, shall be retained in the custody of the Council for a period of not less than 20 working days from the date of receipt, and in such a manner which preserves as far as is reasonably possible the characteristics of the sample being tested.

### 1.9.7 Dilution

The occupier shall not (unless approved by Council) add, or permit the addition of, any water whatsoever to any waste stream solely in order to vary the level of any characteristic of the tradewaste being discharged.

### 1.9.8 Stormwater, Condensing and Cooling Water

Storm water, condensing and cooling water will be accepted at Council's discretion.

If it is accepted, this shall be identified in the conditional consent conditions.

### 1.10 Disputes

### 1.10.1 Sampling and Analysis

Where a dispute arises as to the validity of the methods or procedures used for sampling or analysis, the dispute may be submitted to a mutually agreed independent arbitrator. The arbitrator's ruling shall be final.

### 1.10.2 Review of Decisions

### 1.10.2.1

If any person is dissatisfied with any decision of an authorised officer of the Council made under this Bylaw, that person may, by notice delivered to the Chief Executive Officer of the Council not later than 20 working days after the decision of the authorized officer is served upon that person, request the Chief Executive Officer to review any such decision.

#### 1.10.2.2

On the receipt of such a notice, the decision of an authorised officer shall be suspended provided that the occupier complies with the provisions of this Bylaw at all times. A decision relating to the matter in the request shall be made within 20 working days by the Chief Executive Officer in accordance with the relevant provisions of this Bylaw. Where a decision which is the subject of a request for a review imposes a time limit, the time shall not begin to run until such time (if any) as the Chief Executive Officer notifies the occupier of his or her decision.

Nothing in this clause shall affect any right of appeal under the Local Government Act.

### 1.10.3 Emergency Provisions

Further to 1.10.2, summary cancellation of a trade waste consent in accordance with 1.15.1 shall not be suspended on receipt by the Council of a notice to review any such cancellation.

### 1.11 Accidents and Non Compliance

The occupier shall inform the Council immediately on discovery of any accident including spills or process mishaps which may cause a breach of their trade waste consent in particular, or this Bylaw in general.

In the event that an accident occurs from a premise where the occupier does not have a conditional consent then the Council will consider the nature and consequences of the accident and may require a conditional consent to be applied for by that occupier.

### 1.12 Payment

### **1.12.1** Charges

### 1.12.1.1 General

### 1.12.1.1.1

The consent holder shall be liable to pay for the discharge of trade wastes and any related material in accordance with Schedule 1F which covers rates and charges.

### 1.12.1.1.2

The items included in Schedules 1F are covered by s. 494 of the Local Government Act and will be set by special order.

### 1.12.1.2 Treatment charges

### 1.12.1.2.1

The amount of trade waste charges payable in respect of the treatment of a particular trade waste discharge shall be the sum of:

- (a) The excess Biochemical Oxygen Demand treatment charge, and
- (b) The excess suspended solids treatment charge.

The excess Biochemical Oxygen Demand treatment charge is determined by multiplying the excess biochemical oxygen demand (BOD) of the discharge by the number of operational days in the charge period and by the BOD treatment charge rate using the formula contained in Schedule 1F.

### 1.12.1.2.2

The BOD treatment charge rate ( $C_b$ ) is set out in table 1F.1 of Schedule 1F and is calculated by dividing the estimated total annual cost of treating all BOD within the district, by the total annual mass of BOD treated within the district, and is calculated according to the formula set out in Schedule 1F.

#### 1.12.1.2.3

The excess suspended solids treatment charge is determined by multiplying the excess suspended solids (SS) of the discharge by the number of operational days in the charge period and by the SS treatment charge rate using the formula contained in Schedule 1F.

### 1.12.1.2.4

The SS treatment charge rate, ( $C_s$ ) as set out in table 1F.1 of Schedule 1F, is calculated by dividing the estimated total annual cost of treating all SS within the district, by the estimated total annual mass of SS treated within the district, and is calculated according to the formula set out in Schedule 1F.

### 1.12.1.3 Excess Sewage Reception and Disposal Charges

### 1.12.1.3.1

The amount of the excess volume charge payable in respect of a particular discharge, shall be determined by multiplying the excess volume of the discharge by the number of operational days in the charge period and by the 4 hour flow volume charge rate using the formula contained in Schedule 1F.

### 1.12.1.3.2

The 4 hour flow volume charge rate ( $C_4$ ) is set out in table 1F.1 of Schedule 1F and is calculated by dividing the estimated total annual cost of receiving and disposing of all wastewater within the district, as shown in table 1F.2 of Schedule 1F, by the estimated total 4 hour flow volume of all wastewater received within the district in a year, and is calculated by the method set out in Schedule 1F.

### 1.12.1.4 Operational Days

The number of operational days in a charge period shall be as set out in the notice of consent to discharge; or, where an authorised officer has reasonable cause to believe discharges are occurring on additional days, shall include a reasonable assessment of the number of such additional days.

### 1.12.2 Invoicing

All charges for Conditional consents Trade Wastes shall be determined in accordance with Schedule 1F and shall be invoiced every three months on the 20<sup>th</sup> day of that month in respect of the trade waste discharge occurring during the immediately preceding charge period. The occupier shall pay this invoice by the 20<sup>th</sup> day of the next month.

The invoice shall provide each occupier with a copy of the information and calculations used to determine the extent of any charges and fees due in regard to a discharge.

Annual charge for Permitted Wastes shall be charged once annually as part of Council's rate invoicing system. Any further inspection will be charged separately in accordance with 1.12.1.1.

### 1.12.3 Cease to Discharge

The occupier shall be deemed to be continuing the discharge of trade waste and shall be liable for all charges, until such time as he/she gives notice of disconnection in accordance with 1.14.3.

### 1.12.4 Failure to pay

All sums payable for charges and rates for wastewater services under this Bylaw shall be recoverable as a debt and failing recovery such monies shall become a charge on the land.

### **1.13** Authorised Officers

### 1.13.1 Delegation

All authorised officers of the Council shall possess and display on demand, formal proof of identification and rights of entry.

Any authorised officer of the Council may at any reasonable time enter any premise believed to be discharging trade wastes 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
- (c) observing accidental occurrences and clean-up.

The extent and level of delegation to authorised officers will be in accordance with the Council's Delegations Manual.

### **1.14** Transfer or Termination of Rights and Responsibilities

### 1.14.1

A trade waste consent to discharge shall be issued in the name of the given occupier. The occupier shall not, unless written approval is obtained from the Council:

- (a) Transfer to any other party the rights and responsibilities provided for under this Bylaw, and under their 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) In particular and not in limitation of the above allow wastewater from any other party to be discharged at their point of discharge.

### 1.14.2

Transfer of a trade waste consent on change of ownership of a premises shall not be unreasonably withheld if the characteristics of the wastewater remain unchanged.

### 1.14.3

The occupier shall give 5 working days notice in writing to the Council of his/her 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. The occupier shall notify the Council of the new address details for final invoicing.

### 1.15 Cancellation

### 1.15.1 Summary Cancellation

Any trade waste consent may at any time be cancelled by the Council on giving to the occupier written notice of summary cancellation if:

- (a) The Council is lawfully directed to withdraw or otherwise to terminate the trade waste consent summarily, or
- (b) The occupier discharges any trade waste unlawfully and in the opinion of the Council damage to any part of the sewer system or danger to the health or safety of any person is likely to occur as a result of the discharge, or
- (c) Is a threat to the environment; or
- (d) May result in a breach of a Council Resource Consent; or
- (e) The occupier discharges any prohibited substance.

### 1.15.2 Grounds for Cancellation

Further to 1.15.1 the Council may cancel any trade waste consent at any time following 25 working days' notice to the occupier for:

- (a) Failure to comply with any condition of the consent, or
- (b) Failure to maintain effective control over the discharge, or
- (c) Failure to limit in accordance with the requirements of a consent the volume, nature, or composition of trade waste being discharged, or
- (d) Any negligence of the occupier which, in the opinion of the Council, threatens the safety of, or threatens to cause damage to any part of the waste water system or threatens the health or safety of any person, or
- (e) An occurrence that provides a serious threat to the environment, or
- (f) An occurrence that results in a breach to a Council resource consent as issued under the Resource Management Act 1991, or
- (g) The existence of any other circumstances which, in the opinion of the Council, render it necessary in the public interest to cancel the consent.

### **1.16** Service of Documents

### 1.16.1 Delivery or Post

Any notice or other document required to be given, served or delivered under this Bylaw to an occupier may (in addition to any other method permitted by law) be given or served by delivery using a trackable delivery system addressed to:

(a) The occupier of the trade premises at the occupier's last known place of residence or business, or

- (b) The occupier of the trade premises at any address for service specified in a trade waste consent to discharge, or
- (c) In the case of an occupier which is a body corporate, sent to its registered office.

### 1.16.2 Deemed Service

Further to 1.16.1, if any notice or other document is left at a conspicuous place at the trade premises or is handed to an employee of the occupier at those premises then such delivery shall be deemed to be served or delivered to the occupier.

### 1.16.3 Service Date

Any document given or served in accordance with 1.16.1 or 1.16.2 shall be deemed to have been served upon the occupier one day after the date of posting or delivery.

However, summary cancellation notices that are handed to an employee of the occupier, or the occupier, are deemed to be delivered immediately.

### 1.16.4 Signature

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

### 1.17 Offences

Every occupier of trade premises commits an offence and is liable to a fine as specified in s. 493 of the Local Government Act who:

- (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.

### **1.18** Transitional Provisions

### 1.18.1 Existing Trade Waste Discharges

All discharges not consented or permitted under this bylaw shall not be allowed after:

- 30 November 2001 for wastes classified as conditional under this bylaw
- 30 July 2002 for wastes classified as permitted under this bylaw.

However, not withstanding these dates, Council may encourage individual complying discharges to apply at an earlier date to enable Council to manage the number of applications handled at one time.

Between the time of that this Bylaw becomes operative and the dates above, present discharges will be allowed to continue as long as conditions of this Bylaw are met (except the application and consenting process part of the Bylaw). If the discharge does not presently comply with this Bylaw then the application required under this bylaw must be expedited.

### **SCHEDULES**

### 1. GENERAL SCHEDULES

- 1A Council's Trade Waste Criteria
- 1B Prohibited Characteristics
- 1C Guide to Types of Trade Activities and Processes included in Permitted and Conditional Consents
- **1D** Application Forms
- 1E Sampling Procedure
- 1F Trade Waste Charges

### 2. PROFORMA MODEL CONSENT FORMS

- **2A** Permitted Trade Waste Acceptance Form
- 2B Conditional Trade Waste Consent Form

# SCHEDULE 1A COUNCIL'S TRADE WASTE CRITERIA 1A.1 Introduction

### 1A.1.1

The nature and levels of the characteristics of any wastewater discharged to the Council system shall comply with the following requirements, except where the nature and levels of such characteristics are varied by the Council as part of a Conditional Consent.

Permitted trade waste meets the criteria in this Schedule and does not include the exclusion listed in Section 3.

Conditional Trade waste meets the criteria in this Schedule.

#### 1A.1.2

The Council shall take into consideration the combined effects of wastewater discharges and may make any modifications to the following acceptable characteristics for individual discharges the Council believes are appropriate.

### 1A.1.3

The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the Council – refer 8 of the Bylaw.

### 1A.2 Physical Characteristics

### 1A.2.1 Temperature

The temperature shall not exceed 50° C.

Higher temperatures:

- cause increased damage to sewer structures.
- increase the potential for anaerobic conditions to form in the wastewater.
- promote the release of gases such as  $H_2S$  and  $NH_3$ .
- can adversely affect the safety of operations and maintenance personnel.

A lower maximum temperature may be required for large volume discharges.

### 1A.2.2 Solids

- (a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15mm and gross solids shall have a quiescent settling velocity which shall not exceed 50mm/minute
- (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 approval of the Council 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.

Gross solids can cause sewer blockages

High suspended solids contents can cause sewer blockages and overload the treatment processes. Where potential for such problems exists, a limit of 1000 g/m<sup>3</sup> may be more appropriate.

High total dissolved solids reduces effluent disposal options and may contribute to soil salinity. Where potential for such problems exists, a limit of 10,000 g/m 3 may be used as a guideline.

### 1A.2.3 Oil and grease

- (a) There shall be no free or floating layer.
- (b) A trade waste with mineral oil, fat or grease unavoidably emulsified, which in the opinion of the Council is not biodegradable shall not exceed 200 g/m³ 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.
- c) A trade waste with oil, fat or grease unavoidably emulsified, which in the opinion of the Council is biodegradable shall not exceed 500 g/m³ 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.

Oils and greases can cause sewer blockages, may adversely effect the treatment process, and may impair the aesthetics of the receiving water. Where the treatment plant discharges to a sensitive receiving water, lower values should be considered.

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.

In terms of oil and greases, biodegradable

(d) Emulsified oil, fat or grease shall not exceed 100 g/m 3 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.

### 1A.2.4Solvents and other organic liquids

There shall be no free layer (whether floating or settled) of solvents or organic liquids.

Refer Schedule B.3.2.5 for information on dissolved solvents and other organic liquids.

## 1A.2.5 Emulsions of paint, adhesive, rubber, plastic

For the purposes of this sub-clause: 'Latex emulsion' means an emulsion containing paint, adhesive, rubber, plastic, or similar material.

'Treatable' in relation to emulsion wastewater, means the Total Organic Carbon content of the waste decreases by 90 % or more when the wastewater is subjected to a simulated wastewater treatment process which matches the Council treatment system.

- (a) Latex emulsions which are not treatable may be discharged into the sewer subject to the total suspended solids not exceeding 1000 g/m<sup>3</sup>.
- (b) The Council may require pretreatment of latex emulsions if the emulsion wastewater unreasonably interferes with the operation of the COUNCIL treatment plant.
- (c) Latex 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.

If quick break detergents are being used, it should be ensured that proper separation systems are being used by the occupier. If not, oil will reappear in drainage systems as a free layer.

Some organic liquids are denser than water and will settle in sewers and traps.

Latex emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of latex to be treated.

Latex emulsions will coagulate when unstable and can sometimes cause sewer blockage. Latex emulsions are stable when dilute or in t correct pH range.

### 1A.2.6 Radioactivity

Radioactivity levels shall not exceed National Radiation Laboratory guidelines.

### **1A.2.7 Colour**

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.

### 1A.3 Chemical Characteristics

### 1A.3.1 pH value

The pH shall be between 6.0 and 10.0 at all times.

### 1A.3.2 Organic strength

### 1A.3.2.1

The Biochemical Oxygen Demand (BOD) of any waste shall be a BOD restriction may be related to mass limits.

The BOD shall not exceed 1000 g/m<sup>3</sup>.

Refer National Radiation Laboratory Code of safe practice for the use of unsealed radioactive materials NRL. C1

Colour may cause aesthetic impairment of receiving waters, and adverse affects on lagoon treatment processes and ultraviolet 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.

In the setting of restrictions for chemical characteristics the COUNCIL must be mindful of the production of harmful or noxious wastestreams 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.

### Extremes of pH:

- can adversely affect biological treatment processes.
- can adversely affect the safety of operations and/or maintenance personnel.
- cause corrosion of sewer structures.
- increase the potential for the release of toxic gases such as H 2 S and HCN.

Relaxation of these limits to 5.5 and 11.0 is acceptable for low volume premises which discharge into a large flow.

The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD. For domestic wastewater it is about 2.5:1 (COD: BOD), but can range

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 and COD can be established the discharge may be monitored using the COD test. If the treatment plant BOD capacity is not limited, and sulphides are unlikely to cause problems, there may be no need to limit BOD. High COD may increase the potential for the generation of sulphides in the wastewater.

from 1:1 to 100:1 for trade waste.

A BOD limit which is too stringent may require the installation of pretreatment systems by some occupiers, imposing unnecessary costs because the most cost effective treatment method is likely to be the Council treatment plant.

### **1A.3.3 Maximum Concentrations**

### 1A.3.3.1 Introduction

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

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

### 1A3.3.2 General chemical characteristics

**Table 1A.1 General chemical characteristics** 

Characteristic Maximum Mass			-
Characteristic	Concentration	Limit	
	Concentration	(kg/day)	
MBAS (Methylene	500 g/m <sup>3</sup>	(itg/ day)	MBAS is a measure of anionic surfactants.
blue active	] = ==================================		High MBAS can:
substances)			- adversely effect the efficiency of activated
,			sludge plants.
			- Impair the aesthetics of receiving waters
Ammonia (measured			High ammonia:
as N)			- may adversely effect the safety of
- free ammonia	50 g/m <sup>3</sup>		operations and maintenance personnel.
- ammonium salts	200 g/m <sup>3</sup>		- May significantly contribute to the nutrient
			load to the receiving environment.
Kjeldahl nitrogen	500 g/m <sup>3</sup>		High Kjeldahl nitrogen may significantly
			contribute to the nutrient load of the receiving
			environment.
Total phosphorus	150 g/m <sup>3</sup>		High phosphorus may significantly contribute to
(as P)			the nutrient loading of the receiving
			environment.
Sulphate (measured	500 g/m <sup>3</sup>		Sulphate:
as SO <sub>4</sub> )	1500 g/m <sup>3</sup> (with		- may adversely affect sewer structures.
	good mixing)		- May increase the potential for the
			generation of sulphides in the wastewater
			if the sewer is prone to become anaerobic.
Sulphite (measured	15 g/m <sup>3</sup>		Sulphite has potential to release SO <sub>2</sub> gas and
as SO <sub>2</sub> )			thus adversely affect the safety of operations
			and maintenance personnel. It is a strong
			reducing agent and removes dissolved oxygen
			thereby increasing the potential for anaerobic to
			form in the wastewater.
Sulphide – as H <sub>2</sub> S	5 g/m <sup>3</sup>		Sulphide in wastewater may:
on acidification			- 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
			and maintenance personnel.
Chlorine (measured			Chlorine:
as Cl <sub>2</sub> )			- can adversely affect the safety of
- free chlorine	3 g/m <sup>3</sup>		operations and maintenance personnel.
- hypochlorite	30 g/m <sup>3</sup>		- Can cause corrosion of sewer structures.
Dissolved aluminium	300 g/m <sup>3</sup>		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	300 g/m <sup>3</sup>	Iron salts may precipitate and cause a sewer
		blockage. High concentrations of ferric iron may
		also present colour problems depending on
		local conditions.
Boron (as B)	25 g/m <sup>3</sup>	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>	High concentrations of bromine may adversely
		affect the safety of operations & maintenance
		personnel.
Fluoride (as F)	30 g/m <sup>3</sup>	Fluoride is not removed by conventional
		wastewater treatment.
Cyanide – weak acid	5 g/m <sup>3</sup>	Cyanide may produce toxic atmospheres in the
dissociable (as CN)		sewer and adversely affect the safety of
		operations and maintenance personnel

Mass limits are not set in this bylaw but may be set for relevant criteria in conditional consents.

### 1A3.3.3 Heavy Metals

Table 1A.2 – Limits for Toxic pollutants – Heavy metals for Permitted Trade Waste			
Metal	Maximum Concentration (g/m³)	Mass limit (kg/day)	
Antimony	10		Heavy metals have the potential to:
Arsenic	5		- impair the treatment process
Barium	10		- impact on the receiving environment
Beryllium	0.005		- limit the reuse of sludge and effluent.
Cadmium	0.5		Where any of these factors are critical it is
Chromium	5		important that local acceptance limits should be
Cobalt	10		developed.
Copper	10		The concentration for chromium includes all
Lead	10		valent forms of the element. Chromium (VI) is
Manganese	20		considered to be more toxic than chromium
Mercury	0.005		(III), and for a discharge where chromium (III)
Molybdenum	10		makes up a large proportion of the
Silver	2		characteristic, higher concentration limits may
Nickel	10		be acceptable. Specialist advice should be
Selenium	10		sought.
Thallium	10		
Tin	20		
Zinc	10		

<sup>&</sup>lt;sup>†</sup> Heavy metals shall be accepted up to the maximum concentrations given only when specifically approved.

Mass limits are not set in this bylaw but may be set for relevant criteria in conditional consents.

### 1A.3.3.4 Organic Compounds

Table1A.3 – Limits for Toxic pollutants – Organic compounds and pesticides for Permitted Trade Waste

Compound	Maximum Concentration	Mass limit (kg/day)
Formaldehyde (as HCHO)	50 g/m <sup>3</sup>	
Phenolic compounds (as phenols) – excluding chlorinated phenols	50 g/m <sup>3</sup>	

Formaldehyde in the sewer atmosphere can adversely affect the safety of operations and maintenance personnel.

Phenols may adversely affect biological treatment processes. They may not be completely removed by conventional treatment and subsequently impact on the environment.

Chlorinated phenols	0.02 g/m <sup>3</sup>	Chlorinated phenols can adversely affect biological treatment process and may impair
Petroleum hydrocarbons	30 g/m <sup>3</sup>	the quality of the receiving environment.  Petroleum hydrocarbons may adversely affect the safety of operations and maintenance personnel.
Halogenated aliphatic compounds <sup>†</sup>	1 g/m <sup>3</sup>	Because of their stability and chemical properties these compounds:  - may adversely affect the treatment processes.  - may impair the quality of the receiving environment.  - may adversely affect the safety of operations and maintenance personnel.
Monocyclic aromatic hydrocarbons	5 g/m <sup>3</sup>	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>	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 byphenyls (PBBs)	0.002 g/m <sup>3</sup>	Because of their stability, persistence and ability to bioaccumulate in animal tissue these compounds have been severely restricted by health and environmental regulators.
Pesticides (general) <sup>†</sup> (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticides not registered for use in New Zealand.	0.2 g/m <sup>3</sup>	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 and maintenance personnel.
Organophosphate pesticides*†	0.1 g/m <sup>3</sup> t registered for use in New	

\* Excludes pesticides not registered for use in New Zealand.

Mass limits are not set in this bylaw but may be set for relevant criteria in conditional consents.

<sup>&</sup>lt;sup>†</sup> These compounds shall be accepted up to the given maximum concentration only when specifically approved.

### 1A.3.3.5 Inhibitory chemicals

At the choice of the Council no waste being diluted at a fixed ratio to wastewater, nominated by the Council, shall inhibit the performance of the wastewater treatment process such that the Council is significantly at risk or prevented from achieving its environmental statutory requirements.