



## Wairarapa Consolidated Bylaw 2019

### Part Nine Trade Waste

## Commencement

The Wairarapa Consolidated Bylaw 2019 came into force throughout the Masterton, Carterton and South Wairarapa districts on 8 July 2019.

## Adoption

Council	Bylaw/Amendments	Adoption Date
Masterton District Council	Consolidated Bylaw 2012: Parts One to Eighteen	14 August 2013
South Wairarapa District Council	Consolidated Bylaw 2012: Parts One to Six, Parts 8 and 9, Parts Eleven to Sixteen	31 July 2013
Masterton District Council Carterton District Council South Wairarapa District Council	Wairarapa Consolidated Bylaw 2019: Part Nine – Trade Waste	26 June 2019

# Wairarapa Consolidated Bylaw 2019

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## Part 9 – Trade Waste

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### Contents

1. Foreword .....	4
2. Scope .....	4
3. Definitions and Abbreviations .....	5
4. Control of Discharges.....	9
5. Classification of Trade Waste Discharges .....	10
6. Application for a Trade Waste Permit .....	10
7. Conditions of Trade Waste Permit .....	13
8. Cancellation of the Right to Discharge .....	16
9. Trade Waste Approval Criteria .....	17
10. Flow Metering.....	18
11. Estimating Discharge .....	18
12. Sampling, Analysis and Monitoring .....	19
13. Accidents and Non-compliance .....	21
14. Charges and Payments .....	21
15. Authorised Officers.....	21
16. Transfer or Termination of Rights and Responsibilities .....	22
17. Service of Documents .....	22
18. Offences and Penalties .....	23

## Referenced Documents

Reference is made in this document to the following:

### New Zealand Standards

- NZS 4304:2002: Management of Healthcare Waste
- NZS 5465:2001: Self Containment for Motor Caravans and Caravans
- NZS 9201: Model Trade Waste Bylaw
- Part 22:1999: Wastewater Drainage

### Joint Australian/New Zealand Standards

- AS/NZS 5667: Water quality – Sampling
- Part 1: 1998: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples
- Part 10: 1998: Guidance on sampling of wastewaters

### 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 3:1997: Methods for determining principal characteristics of single mechanical water meters (including test equipment)
- BS 6068: Water quality
  - Part 6: Sampling
  - Section 6.10:1993: Guidance on sampling of wastewaters
- BS EN 25667-1:1994: Water quality. Sampling. Guidance on the design of sampling programmes  
BS 6068-6.1:1981
- BS EN 25667-2:1993: Water quality. Sampling. Guidance on sampling techniques  
BS 6068-6.2:1991
- BS EN 5667-3:2003: Water quality. Sampling. Guidance on the preservation and handling of water samples  
BS 6068-6.3:2003

### New Zealand Legislation

- Building Act 2004
- Hazardous Substances and New Organisms Act (HSNO) 1996 and associated Regulations

- Health Act 1956
- Health and Safety at Work Act 2015
- Land Transport Rule Dangerous Goods (Rule 45001) 2005
- Local Government Act 2002
- Resource Management Act 1991 and associated regulations

### **Other Publications**

- Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ)
- Australia New Zealand Environment and Conservation Council (ANZECC)
- Guidelines for Sewerage Systems: Acceptance of Trade Wastes (industrial waste) 12 (1994)
- Document available from Australian Water Association (AWA) [www.awa.asn.au](http://www.awa.asn.au)
- American Water Works Association  
Standard methods for the examination of water and wastewater 20th Edition (1999)  
Document available from American Water Works Association [www.awwa.org](http://www.awwa.org)
- Building Industry Authority  
New Zealand Building Code (NZBC) 1992 and Approved Documents  
Document available from Building Industry Authority (BIA) [www.bia.govt.nz](http://www.bia.govt.nz)
- Ministry for the Environment (MfE)  
Landfill Acceptance Criteria (2004)  
The New Zealand Waste Strategy (2002)  
Documents available from Ministry for the Environment New Zealand [www.mfe.govt.nz](http://www.mfe.govt.nz)
- National Radiation Laboratory (NRL)  
NRL C1 Code of safe practice for the use of unsealed radioactive materials (1996).  
Document available from National Radiation Laboratory [www.nrl.moh.govt.nz](http://www.nrl.moh.govt.nz)
- New Zealand Water and Wastes Association (NZ WWA)  
Guidelines for the Safe Application of Biosolids to Land in New Zealand (2003)  
Liquid and Hazardous Wastes Code of Practice (2003)  
Documents available from New Zealand Water & Wastes Association (NZ WWA) [www.nzwwa.org.nz](http://www.nzwwa.org.nz)
- New Zealand Water Environment Research Foundation (NZWERF)  
New Zealand Municipal Wastewater Monitoring Guidelines (2002)  
Document available from New Zealand Water Environment Research Foundation (NZWERF) [www.nzwerf.org](http://www.nzwerf.org)
- Sydney Water Corporation  
Trade Waste Policy (2004)  
Document available from Sydney Water Corporation [www.sydneywater.com.au](http://www.sydneywater.com.au)
- United States Environment Protection Agency (US EPA)  
Method 9095A Paint Filter Liquids Test (1996)  
Document available from United States Environmental Protection Agency [www.epa.gov](http://www.epa.gov)

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## 1. Foreword

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This Part of the bylaw is made under section 146 of the Local Government Act 2002 (LGA). This bylaw draws on New Zealand Standards 9201 series Trade Waste Bylaw.

Reference should be made to the Wairarapa Consolidated Bylaw 2019: Part 1 Introductory for any definitions not included in this Part.

If any provision of this Part is inconsistent with Part 1 – Introductory, the provisions of this Part prevail.

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## 2. Scope

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- 2.1. This part of the bylaw regulates the discharge of trade waste to a sewerage system operated by a wastewater authority.
- 2.2. The bylaw provides for the:
  - a) acceptance of long-term, intermittent, or temporary discharge of trade waste to the sewerage system;
  - b) establishment of three grades of trade waste (controlled, conditional and prohibited);
  - c) evaluation of individual trade waste discharges to be against specified criteria;
  - d) correct storage of materials in order to protect the sewerage system from spillage;
  - e) installation of flow meters, samplers or other devices to measure flow and quality of the trade waste discharge;
  - f) pre-treatment of waste before it is accepted for discharge to the sewerage system;
  - g) sampling and monitoring of trade waste discharges to ensure compliance with the bylaw;
  - h) Wastewater Authority (WWA) to accept or refuse a trade waste discharge;
  - i) charges to be set to cover the cost of conveying, treating and disposing of, or reusing, trade waste and the associated costs of administration and monitoring;
  - j) administrative mechanisms for the operation of the bylaw; and
  - k) establishment of waste minimisation and management programmes (including sludges) for trade waste producers.
- 2.3. Nothing in this bylaw shall derogate from any of the provisions of the Health Act 1956, the Health and Safety at Work Act 2015, the Resource Management Act 1991, the Building Act 2004, the Hazardous Substances and the New Organisms Act 1996 and its regulations or any other relevant statutory or regulatory requirements. In the event of any inconsistency between legislation the more stringent requirement applies.

### **Trade premises and other users to which the bylaw applies**

- 2.4. This bylaw shall apply to all trade premises within the Masterton, Carterton and South Wairarapa districts where trade wastes are discharged or sought or likely to be discharged to the sewerage system operated by the WWA or its agents. The bylaw shall also apply to tankered wastes collected for the purpose of discharge to the sewerage systems operated by the WWA or its agents.
- 2.5. Pursuant to Section 196 of the LGA, the WWA may refuse to accept any type of trade waste, which is not in accordance with this Part of the bylaw.

- 2.6. This Part of the bylaw does not preclude any agreement with a neighbouring authority for a licensed trade waste agreement.

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### 3. Definitions and Abbreviations

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**Access Point:** 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 and Part 8 of this bylaw – Wastewater Drainage.

**Analyst:** A testing laboratory approved in writing by an authorised officer on behalf of the WWA.

**Batch Discharge:** Any discharge of accumulated trade waste over a short duration that has not been approved for discharge under any existing permit and can include the discharge of tankered waste to designated points into the wastewater system.

**Best Management Practice Plan:** A plan as part of a trade waste permit submitted by a trade premises occupier, showing how the occupier is to mitigate against the effects of the trade's operational impacts on drainage discharge. This can include emergency management, environmental management, and a spill management plan.

**Biosolid:** Sewage sludge derived from a sewage treatment plant that has been treated and/or stabilised to the extent that it is able to be safely and beneficially applied to land and does not include products derived solely from industrial wastewater treatment plants. The term biosolid is used generically throughout this document to include products containing biosolids (e.g. composts).

**Cleaner Production:** 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. This is required to minimise and manage trade waste by:

- using energy and resources efficiently, avoiding or reducing the amount of wastes produced;
- producing environmentally sound products and services;
- achieving less waste, fewer costs and higher profits.

**Condensing Water or Cooling Water:** 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 Trade Waste:** A trade waste that does not comply with the conditions in Schedule 1C of this Part of the bylaw or is not a controlled trade waste.

**Contaminant:** Includes any substance (including gases, odorous compounds, 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:

- when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
- when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged; or
- as described or contained in the Resource Management Act 1991.

**Contingency Management Procedures:** Those procedures developed and used to avoid, remedy, or mitigate the actual and/or potential adverse effects of these activities on the environment from an unexpected or unscheduled event resulting in discharge, or potential discharge of contaminants of concern into the sewerage system.

**Controlled Trade Waste:** A trade waste discharge that has been approved by, or is acceptable to, the WWA and as long as it has the physical and chemical characteristics which comply with the requirements of the WWA standard as defined in Schedule 1C of this Part of the bylaw which has conditions placed upon the permit holder by the WWA.

**Destination:** The exact location at which the liquid or solid waste is discharged or dispatched from the vehicle that has collected and transported the liquid or solid waste.

**Discharge Management Plan:** A plan agreed between 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 Council's requirements

**Disconnection:** The physical cutting and sealing of any of the WWA's water services, utilities, drains or sewer for use by any person.

**Domestic Sewage:** Foul water or wastewater (with or without matter in solution or suspension therein) which is 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 may not lawfully be discharged into the sewerage system and may include geothermal water.

**Foul Water:** The discharge from any sanitary fixtures (any fixture which is intended to be used for sanitation – the term used to describe activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection) or sanitary appliance (an appliance which is intended to be used for sanitation which is not a sanitary fixture – included are machines for washing dishes and clothes).

**Hazardous Wastes:** Means, unless expressly provided otherwise by regulations, any substance:

- with one or more of the following intrinsic properties:
  - explosiveness;
  - flammability;
  - a capacity to oxidise;
  - corrosiveness;
  - toxicity (including chronic toxicity);
  - ecotoxicity, with or without bioaccumulation; or
- which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased), generates a substance with any one or more of the properties specified under the bullet point above.

**Management Plan:** The plan for management of operations on the premises from which trade wastes come, and may include provision for cleaner production, waste minimisation, discharge, contingency management procedures, and any relevant industry code of practice.

**Mass Limit:** The total mass of any characteristic that may be discharged to the WWA sewerage system over any stated period from any single point of discharge or collectively from several points of discharge.

**Maximum Concentration:** The instantaneous peak concentration that may be discharged at any instant in time.

**Pathological Waste:** Waste materials that are offensive to the senses or hazardous to public health. This applies mainly to anatomical wastes such as human tissue and organs or animal tissue organs and carcasses. Other wastes deemed to be pathological are materials that may be contaminated by highly infectious organisms.



**Permitted Discharge:** A trade waste discharge that has been approved by, or is acceptable to, the WWA and as long as it has the physical and chemical characteristics which comply with the requirements of the WWA standard as defined in Schedule 1A of this bylaw.

**Point of Discharge:** The boundary between the public sewer and a private drain but for the purposes of monitoring, sampling and testing, shall be as designated in the trade waste permit.

**Premises:** 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;
- 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;
- land held in public ownership (e.g. reserve) for a particular purpose; or
- individual units in buildings which are separately leased or separately occupied.

**Pre-Treatment:** Any processing of trade waste designed to reduce or vary any characteristic in a waste before discharge to the sewerage system in order to comply with a trade waste permit.

**Private Drain:** The section of drain between the premises and the point of connection to the WWA's sewerage system. See Wairarapa Consolidated Bylaw 2018: Part 8 – Wastewater Drainage.

**Prohibited Trade Waste:** A trade waste that has or is likely to have any prohibited characteristics or substances as defined in Schedule 1D and does not meet the conditions of Schedule 1C. The waste is not acceptable for discharge into the WWA's system unless specifically approved by them as a conditional trade waste.

**Sewage:** Foul water, wastewater and may include trade wastes.

**Sewage Sludge:** The material settled out and removed from sewage during the treatment process.

**Sewerage System:** The collection, treatment and disposal of sewage and trade wastes, including all sewers, pumping stations, storage tanks, sewage treatment plants, outfalls, and other related structures operated by the WWA and used for the reception, treatment and disposal of trade wastes.

**Significant Industry:** Indicates the relative size of a given industry compared to the capacity of the sewerage system (including sewage treatment plants) which services that industry. Industry size relates to volume and/or loads discharging into the sewerage system. Loads can be the conventional loadings of BOD5 and SS or some other particular contaminant (e.g. boron, chromium) which will have an effect or the propensity to have an effect on the sizing of the sewerage system, the on-going system operation and/or the quality of the treated effluent that is discharged.

**Spill Management Plan:** A plan to mitigate against accidental spillage of prohibited materials, or prohibited trade wastes entering drains.

**Stormwater:** Surface water run-off resulting from precipitation.

**Tankered Waste:** 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.

**Temporary Discharge:** 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 permit.

**Trade Premises:** Either:

- any premises used or intended to be used for any industrial or trade purpose; or
- 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
- any other premises from which a contaminant is discharged in connection with any industrial or trade process;
- any other premises discharging other than domestic sewage; and
- includes any land or premises wholly or mainly used for agricultural or horticultural purposes.

**Trade Waste:** Any liquid, with or without matter in suspension or solution, that is or may be discharged from a trade premises to the WWA’s sewerage system from batch discharge, or 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; and may include condensing or cooling waters; stormwater which cannot be practically separated, or domestic sewage.

## Abbreviations

<b>°C</b>	degrees celsius
<b>ANZECC</b>	Australian New Zealand Environment and Conservation Council
<b>B</b>	boron
<b>BOD5</b>	Biochemical Oxygen Demand
<b>Br</b>	bromine
<b>CN</b>	cyanide
<b>COD</b>	Chemical Oxygen Demand
<b>DP</b>	deposited plan
<b>DS</b>	dry solids
<b>F</b>	fluoride
<b>g/m<sup>3</sup></b>	grams per cubic metre
<b>GST</b>	goods and services tax
<b>H<sub>2</sub>S</b>	hydrogen sulphide
<b>HAHs</b>	halogenated aromatic hydrocarbons
<b>HCHO</b>	formaldehyde
<b>HCN</b>	hydrogen cyanide
<b>hr</b>	hour
<b>HSNO</b>	Hazardous Substances and New Organisms Act 1996
<b>kg/day</b>	kilogram per day
<b>L</b>	litre
<b>L/s</b>	litre per second
<b>LGA</b>	Local Government Act 2002
<b>LTP</b>	Long Term Plan
<b>m<sup>3</sup></b>	cubic metre
<b>max</b>	maximum

<b>MBAS</b>	methylene blue active substances
<b>MFE</b>	Ministry for the Environment
<b>mg/L</b>	milligram per litre
<b>mL/L</b>	millilitre per litre
<b>mm</b>	millimetres
<b>MSDS</b>	material safety data sheets
<b>N</b>	nitrogen
<b>NH3</b>	ammonia
<b>NH3N</b>	ammoniacal nitrogen
<b>P</b>	phosphorus
<b>PAHs</b>	polycyclic (or polynuclear) aromatic hydrocarbons
<b>PBBs</b>	polybrominated biphenyls
<b>PCBs</b>	polychlorinated biphenyls
<b>pH</b>	measure of acidity/alkalinity
<b>RMA</b>	Resource Management Act 1991
<b>sec</b>	second
<b>s</b>	section
<b>ss</b>	sections
<b>SO4</b>	sulphate
<b>SS</b>	suspended solids concentration
<b>UV</b>	ultra violet
<b>UVT</b>	ultra violet transmission
<b>WC</b>	water closet
<b>WWA</b>	wastewater authority

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## 4. Control of Discharges

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4.1. No person shall:

- a) discharge, or allow to be discharged, any trade waste to the sewerage system except in accordance with the provisions of this bylaw;
- b) discharge, or allow to be discharged, a prohibited trade waste into the sewerage system;
- c) add or permit the addition of condensing or cooling water to any trade waste which discharges into the sewerage system unless specific approval is given in a permit; or
- d) add or permit the addition of stormwater to any trade waste which discharges into the sewerage system unless specific approval is given in a permit.

4.2. In the event of failure to comply with clause 4.1 a) to d), the WWA may physically prevent discharge to the sewerage system if a reasonable alternative action cannot be established with the discharging party or parties.

- 4.3. Any person discharging to the WWA sewerage system shall also comply with requirements of the Hazardous Substances and New Organisms Act 1996 (HSNO) and the Resource Management Act 1991 (RMA).
- 4.4. All persons on trade premises and batch dischargers shall take all reasonable steps to prevent the accidental entry of any of the materials listed in clause 4.6 from entry into the sewerage system as a result of leakage, spillage or other mishap and shall produce and maintain a Spill Management Plan as part of the Trade Waste Permit Conditions.
- 4.5. No person shall store, transport, handle or use, or cause to be stored, transported, handled or used any hazardous substance as defined by HSNO or any of the materials listed in clause 4.6 in a manner that may cause the material to enter the sewerage system and cause harmful effects.
- 4.6. Materials referred to in clauses 4.4 and 4.5 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; or
  - c) likely to be deleterious to the health and safety of the WWA's staff, approved contractors and the public or be harmful to the sewerage system.

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## 5. Classification of Trade Waste Discharges

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- 5.1. Trade waste discharges shall be classified as either controlled, conditional or prohibited and each classification shall be subject to the following action:
  - a) Controlled Trade Waste – Council shall grant a permit (Controlled Permit) to discharge subject to the general conditions contained in Schedule 1C of this Part of the bylaw. It may also contain specific conditions in addition to the general conditions.
  - b) Conditional Trade Waste – Council may decide to grant a permit (Conditional Permit) to discharge subject to specific conditions additional to the general conditions. Council reserves the right to decline a conditional permit to discharge.
  - c) Prohibited (not permissible).
- 5.2. The WWA is not obliged to accept any trade waste. No application for a trade waste permit shall be approved where the trade waste discharge would contain, or is likely to contain, characteristics which are prohibited. Unless satisfied that the applicant has demonstrated, by way of a report prepared pursuant to clause 6.8 b)(ii) that the discharge of contaminated wastes will not result in harm to Council's system.
- 5.3. No person shall discharge, or cause to be discharged, any trade waste to the WWA sewer that contains or is likely to contain prohibited characteristics, except in accordance with the provisions of this Part of the bylaw.

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## 6. Application for a Trade Waste Permit

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- 6.1. Every person who does, proposes to, or is likely to:
  - a) discharge into the sewerage system any trade waste (either continuously, intermittently or temporarily);

- b) vary the characteristics of a permit to discharge that has previously been granted;
- c) vary the conditions of permit to discharge that has previously been granted; or
- d) significantly change the method or means of pre-treatment for discharge under an existing permit;

shall, if required by the WWA, complete an application in the prescribed form for the permit of the WWA, to the discharge of that trade waste, or to the proposed variations.

- 6.2. The WWA reserves the right to deal with the owner as well as the occupier of any trade premises.
- 6.3. 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.
- 6.4. The applicant shall ensure that the application and every other document conveying required information is properly executed and any act done for, or on behalf of, the eventual permit holder (whether for reward or not) in making any such application shall be deemed to be an act of the permit holder.
- 6.5. The WWA may require an application to be supported by an independent report/statement completed by a suitably experienced and external auditor to verify any or all information supplied by the applicant, and this may include a management plan, and/or a "discharge management plan".
- 6.6. Every application shall be accompanied by a trade waste application fee in accordance with the WWA's schedule of rates and charges.

#### **Processing of an Application**

- 6.7. The WWA shall acknowledge the application in writing within 10 working days of the receipt of the application.

#### **Information and Analysis**

- 6.8. On the receipt of any application for a trade waste permit to discharge from any premises or to alter an existing discharge, the WWA may:
  - a) require the applicant to submit any additional information which it considers necessary to reach an informed decision;
  - b) require the applicant to submit either:
    - (i) a management plan to the satisfaction of the WWA; or
    - (ii) a wastewater system impact investigation report, at the applicant's cost, on the effects of any trade discharges specified characteristics, and more particularly prohibited trade wastes on the wastewater system's operation, treatment process biosolids, and the quality of the dewatered and/or composted biosolids, subject to the following:
      - an independent qualified person, as approved by Council, shall carry out the investigation and produce the report;
      - the scope of the investigation shall establish:
        - the existing background level of the specified characteristics already contained in the influent into the treatment plant, and in the process treatment biosolids and in the dewatered and composted biosolids;

- the impact and effect of receiving the specified characteristics on the background levels and the effect of this potential discharge on the function of the treatment plant and the quality of the composted biosolids;
  - the impact and effect of receiving the applicant's trade waste discharge on the ability of future applicants to discharge to the sewer.
- (iii) require the applicant to submit any additional information, at the applicant's cost, which it considers necessary to reach an informed decision;
- (iv) have the discharge investigated and analysed, at the applicant's cost, as provided for in this bylaw.
- c) whenever appropriate have the discharge investigated and analysed as provided for in sections 10 and 12 of this Part of the bylaw.
- 6.9. The WWA shall notify the applicant of any requirement under this section within 10 working days of receipt of the application.

### **Consideration of an Application**

- 6.10. Within 15 working days (or extended as necessary by the WWA) of receipt of an application complying with this bylaw and/or all requirements under clause 6.8 whichever is the later, the WWA shall, after considering the matters in clause 6.12, action one of the following in writing:
- a) grant the application as a controlled trade waste permit and inform the applicant of the decision by issuing the appropriate notice;
  - b) grant the application as a conditional trade waste discharge permit and inform the applicant of the decision and the conditions imposed on the discharge by issuing the appropriate notice of permit to the permit holder; or
  - c) decline the application and notify the applicant of the decision giving a statement of the reasons for refusal.
- 6.11. Notwithstanding clause 6.10 a) of this Part of the bylaw, Council reserves the right to make the final decision on what conditions shall be imposed.

### **Consideration Criteria**

- 6.12. In considering any application for a trade waste permit to discharge from any trade premises or tankered waste into the sewerage system and in imposing any conditions on such a permit, the WWA shall take into consideration the quality, volume, and rate of discharge of the trade waste from such premises or tanker in relation to:
- a) the health and safety of WWA staff, Council's officers and the public;
  - b) the limits and/or maximum values for characteristics of trade waste as specified in Schedule 1C of this Part of the bylaw;
  - c) the extent to which the trade waste may react with other trade waste or foul water to produce an undesirable effect, e.g. settlement of solids, production of odours, accelerated corrosion and deterioration of the sewerage system etc.;
  - d) the flows and velocities in the sewer, or sewers and the material or construction of the sewer or sewers;
  - e) the capacity of the sewer or sewers and the capacity of any sewage treatment works, and other facilities;
  - f) the nature of any sewage treatment process and the degree to which the trade waste is capable of being treated in the sewage treatment works;

- g) the timing and balancing of flows into the sewerage system;
- h) 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);
- i) the effect of the trade waste discharge on the ultimate receiving environment;
- j) the conditions on resource consents for the sewerage system and the residuals from it;
- k) the possibility of unscheduled, unexpected or accidental events and the degree of risk these could cause to humans, the sewerage system and the environment;
- l) consideration for other existing or future discharges;
- m) amenability of the trade waste to pre-treatment;
- n) existing pre-treatment works on the premises and the potential for their future use;
- o) cleaner production techniques and waste minimisation practices;
- p) requirements and limitations related to sewage sludge disposal and reuse;
- q) control of stormwater;
- r) management plan; and
- s) tankered waste being discharged at an approved location/s.

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## 7. Conditions of Trade Waste Permit

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- 7.1. Any trade waste permit to discharge may be granted subject to such conditions that the WWA may impose, including but not limited to:
- a) the particular public sewer or sewers to which the discharge will be made;
  - b) the maximum daily volume of the discharge and the maximum rate of discharge, and the duration of maximum discharge;
  - c) the maximum limit or permissible range of any specified characteristics of the discharge, including concentrations and/or mass limits determined in accordance with Sections 5 to 8;
  - d) the period or periods of the day during which the discharge, or a particular concentration, or volume of discharge may be made;
  - e) the degree of acidity, or alkalinity of the discharge at the time of discharge;
  - f) the temperature of the trade waste at the time of discharge;
  - g) the provision by, or for the permit holder, at the permit holder's expense, of screens, grease traps, silt traps or other pre-treatment works to control trade waste discharge characteristics to the permitted levels of solids or grease; and
  - h) the provision and maintenance by the permit holder, at the permit holder's expense, of partial or preliminary treatment processes, equipment or storage facilities, to regulate the quality, quantity and rate of discharge or other characteristics prior to the point of discharge.
  - i) the provision and maintenance at the permit holder's expense of inspection chambers, manholes or other apparatus or devices to provide reasonable access to drains for sampling and inspection;
  - j) the provision and maintenance of a sampling, analysis and testing programme and flow measurement requirements, at the permit holder's expense;

- k) 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;
- l) the provision and maintenance by, and at the expense of, the permit holder of such meters or devices as may be required to measure the volume, strength, discharge characteristics, or flow rate of any trade waste being discharged from the premises, and for the testing of such meters;
- m) the provision and maintenance, at the permit 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;
- n) at times specified, the provision in a WWA approved format by the permit holder to the WWA of all flow and/or volume records and results of analyses (including pre-treatment by-products e.g. sewage sludge disposal);
- o) the provision and implementation of a management plan; "Cleaner Production Programme" to reduce and improve the trade waste quality or quantity; and
- p) risk assessment of damage to the environment due to an accidental discharge of a chemical;
- q) waste minimisation and management;
- r) cleaner production techniques;
- s) remote control of discharges;
- t) third party treatment, carriage, discharge or disposal of by-products of pre-treatment of trade waste (including sewage sludge disposal);
- u) requirement to provide a bond or insurance in favour of the WWA where failure to comply with the permit could result in damage to the WWA's sewerage system, its treatment plants, or could result in the WWA being in breach of any statutory obligation;
- v) remote monitoring of discharges; and
- w) treatment and disposal charges as described in clause 15.1 of this bylaw.

## **Duration**

### *Controlled Discharges*

- 7.2. Permits for controlled discharges shall be renewed annually and may remain in force until either:
- a) cancellation under clause 4.2 or section 8;
  - b) the quantity and nature of the discharge changes significantly;
  - c) if in the opinion of the WWA the discharge changes or is likely to change to such an extent that it becomes a conditional or prohibited trade waste;
  - d) the WWA 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; or
  - e) the conditions on resource consents for the sewerage system and the residuals from it change.
- 7.3. In all cases, the person shall apply within 10 working days of this change occurring for a conditional permit, in accordance with Section 6. This application shall be approved prior to the occurrence of any new discharge.



### *Conditional Permits*

7.4. Subject to sections 8 and 13, conditional permits under this Part of the bylaw may remain in force subject to the following:

- a) conditional permits shall be renewed annually and be granted to a permit holder who at the time of application satisfies the WWA that:
  - (i) the nature of the trade activity, or the process design and/or management of the premises are such that the permit holder has a demonstrated ability to meet the conditions of the permit 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 permit cannot be unreasonably withheld.

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

- the level of permit holder compliance, including any accidents including spills or process mishaps;
  - matters pertaining to the WWA's resource permits for the sewerage system;
  - matters pertaining to the WWA's environmental policies and outcomes;
  - new control and treatment technologies and processes;
  - any of the matters outlined in sections 7 to 10; and
  - matters pertaining to the WWA's legal obligations.
- b) In all cases where either the permit holder or the owner of the premises changes, or there is a change of use, a new application for a conditional trade waste permit shall be made. It shall be the responsibility of the permit holder to lodge the new application; and
  - c) The conditions on resource permits for the sewerage system and the residuals from it change.

### **Technical Review and Variation**

7.5. The WWA at any time may require a person undertaking a controlled discharge to apply for a permit in accordance with clauses 7.2 and 7.3.

7.6. The WWA may at any time during the term of a trade waste permit, by written notice to the permit holder (following a reasonable period of consultation), vary any condition to such an extent as the WWA considers necessary following a review of the technical issues considered when setting conditions of permit. This is due to new information becoming available or to meet any new resource consent imposed on the discharge from the WWA's treatment plant, or with any other legal requirements imposed on the WWA.

7.7. A permit holder may at any time during the term of a permit, by written application to the WWA, seek to vary any condition of permit, as provided for in section 7.

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## 8. Cancellation of the Right to Discharge

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### Suspension or Cancellation on Notice

- 8.1. The WWA may suspend or cancel any permit or right to discharge at any time following 20 working days' (during which consultation has occurred) notice to the permit holder or person discharging any trade waste:
- a) for the failure to comply with any condition of the permit;
  - b) for the failure to maintain effective control over the discharge;
  - c) for the failure to limit in accordance with the requirements of a permit the volume, nature, or composition of trade waste being discharged;
  - d) in the event of any negligence which, in the opinion of the WWA, threatens the safety of, or threatens to cause damage to any part of the sewer system or the treatment plant or threatens the health or safety of any person;
  - e) if any occurrence happens that, in the opinion of the WWA, poses a serious threat to the environment;
  - f) in the event of any breach of a resource consent held by the council issued under the RMA;
  - g) failure to provide and when appropriate update a management plan as required for a conditional permit;
  - h) failure to follow the management plan provisions at the time of an unexpected, unscheduled or accidental occurrence;
  - i) failure to pay any charges rates or fees for wastewater services under this bylaw; or
  - j) if any other circumstances arise which, in the opinion of the WWA, render it necessary in the public interest to cancel the right to discharge.
- 8.2. If any process changes require more than 20 working days, reasonable time may be given to comply with the permit conditions.

### Summary Cancellation

- 8.3. Further to clause 8.1 any trade waste permit or discharge may at any time be summarily cancelled by the WWA on giving to the permit holder or person discharging written notice of summary cancellation if:
- a) they discharge any prohibited substance;
  - b) the WWA is lawfully directed to withdraw or otherwise to terminate the permit summarily;
  - c) they discharge any trade waste unlawfully;
  - d) the continuance of discharge is, in the opinion of the WWA, a threat to the environment or public health;
  - e) the continuance of discharge may, in the opinion of the WWA, result in a breach of a resource consent held by the WWA; or
  - f) in the opinion of the WWA the continuance of the discharge puts at risk the ability of the WWA 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.

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## 9. Trade Waste Approval Criteria

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### Pre-treatment

- 9.1. The WWA may approve a trade waste discharge subject to the provision of appropriate pre-treatment systems to enable the person discharging to comply with the bylaw. Such pre-treatment systems shall be provided, operated and maintained by the person discharging at their expense.
- 9.2. Refuse or garbage grinders, and macerators shall not be used to dispose of solid waste from trade premises to the sewerage system unless approved by the WWA.
- 9.3. The person discharging shall not, unless approved by the WWA, 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.

*NOTE: Condensing and cooling water should not be discharged as of right to a stormwater drain or natural waterway without the permit of the appropriate authority.*

### Mass Limits

- 9.4. A conditional trade waste permit to discharge may impose controls on a trade waste discharge by specifying mass limits for any characteristic.
- 9.5. Mass limits may be imposed for any characteristic. Any characteristic permitted by mass limit shall also have its maximum concentration limited to the value scheduled unless approved otherwise.
- 9.6. When setting mass limit allocations for a particular characteristic the WWA shall consider:
  - a) the operational requirements of and risk to the sewerage system, and risks to occupational health and safety, public health, and the ultimate receiving environment;
  - b) whether or not the levels proposed pose a threat to the planned or actual beneficial reuse of biosolids or sewage sludge;
  - c) conditions in the sewerage system near the trade waste discharge point and elsewhere in the sewerage system;
  - 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;
  - e) whether or not the applicant uses cleaner production techniques within a period satisfactory to the WWA;
  - 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;
  - g) any requirements of the WWA to reduce the pollutant discharge of the sewerage system;
  - 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 sewerage system;
  - i) the total mass of the characteristic allowable in the sewerage 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).

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## 10. Flow Metering

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- 10.1. Flow metering may be required by the WWA:
- 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;
  - b) when the WWA will not approve a method of flow estimation; or
  - c) when the discharge represents a significant proportion of the total flow/load received by the WWA.
- 10.2. The permit holder shall be responsible for the supply, installation, reading and maintenance of any meter required by the WWA for the measurement of the rate or quantity of discharge of trade waste. These devices shall be subject to the approval of the WWA, but shall remain the property of the permit holder.
- 10.3. Records of flow and/or volume shall be available for viewing at any time by the WWA, and shall be submitted to the WWA at prescribed intervals by the permit holder in a format approved by the WWA.
- 10.4. Meters shall be located in a position approved by the WWA which provides the required degree of accuracy and should be readily accessible for reading and maintenance. The meters shall be located in the correct position according to the manufacturer's installation instructions.
- 10.5. The permit holder shall arrange for in situ calibration of the flow metering equipment and instrumentation by a person and method approved by the WWA upon installation and at least once a year thereafter to ensure its performance. The meter accuracy should be  $\pm 10\%$  but with no greater a deviation from the previous meter calibration of  $\pm 5\%$ . A copy of independent certification of each calibration result shall be submitted to the WWA.
- 10.6. Should any meter, after being calibrated, be found to have an error greater than that specified in clause 10.5 as a repeatable measurement, the WWA may make an adjustment in accordance with the results shown by such tests back-dated for a period at the discretion of the WWA but not exceeding 12 months, and the permit holder shall pay or be credited a greater or lesser amount according to such adjustment.

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## 11. Estimating Discharge

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- 11.1. Where no meter or similar apparatus is warranted, the WWA 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.
- 11.2. Should any meter be out of repair or cease to register, or be removed, the WWA shall estimate the discharge for the period since the previous reading of such meter, (based on the average of the previous 12 months (four billing periods charged to the person discharging) and they shall pay according to such estimate.
- 11.3. Notwithstanding clause 11.2 when, by reason of a large variation of discharge due to seasonal or other causes, the average of the previous 12 months (four billing periods) would be an unreasonable estimate of the discharge, then the WWA may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the person discharging shall pay according to such an estimate.

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

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## 12. Sampling, Analysis and Monitoring

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- 12.1. As determined by the WWA sampling, testing and monitoring may be undertaken to determine if:
- a) a discharge complies with the provisions of this bylaw;
  - b) a discharge is to be classified as a controlled, conditional, or prohibited, refer to Section 5;
  - c) a discharge complies with the provisions of Schedule 1C for controlled discharge and any permit to discharge; and
  - d) trade waste permit charges are applicable to that discharge.
- 12.2. The taking, preservation, transportation and analysis of the sample shall be undertaken by an authorised officer or agent of the WWA, or the person discharging in accordance with accepted industry standard methods, or by a method specifically approved by the WWA. 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 independent arbitrator.
- 12.3. All authorised officers or authorised agents of the WWA, or any analyst may enter any premises believed to be discharging trade waste, at any reasonable time, in order to determine any characteristics of any actual or potential discharge by:
- a) taking readings and measurements;
  - b) carrying out an inspection; and/or
  - c) taking samples for testing of any solid, liquid, or gaseous material or any combination or mixture of such materials being discharged.
- 12.4. Authorisation for entry to premises is given under the section 171 of the LGA and entry shall be in compliance with the health and safety policies of the particular site.

### **Monitoring**

#### *Monitoring for Compliance*

- 12.5. The WWA is entitled to monitor and audit any trade waste discharge for compliance. Whether for a controlled discharge or a conditional permit discharge monitoring may be carried out as follows:
- a) the WWA or its authorised agent will take the sample and arrange for this sample to be analysed in an approved laboratory by agreed/approved analytical methods;
  - b) the sampling procedure will be appropriate to the trade waste and the analysis;
  - c) the WWA will audit the sampling and analysis carried out by a self-monitoring trade waste permit holder. Analysis will be performed by an approved laboratory. Inter-laboratory checks are to be part of this process;
  - d) the WWA will audit the sampling and analysis carried out by an analyst. Analysis will be performed by an approved laboratory. Inter-laboratory checks are to be part of this process; and
  - e) the WWA will audit the trade waste permit conditions including any management plans.

12.6. At the discretion of the WWA all costs of monitoring shall be met by the permit holder either through direct payment to the laboratory or to the WWA.

#### *Sampling Methodology*

12.7. Normally a single grab or composite sample is sufficient. If required, the grab or composite sample can be split equally into three as follows:

- a) one portion of the sample goes to the trade waste permit holder for appropriate analysis and/or storage;
- b) a second portion of the sample shall be analysed at a laboratory approved by the WWA;
- c) a third portion of the sample is retained by the WWA for 20 working days, for additional analysis if required.

12.8. Due consideration will be applied to any changes that could occur in retained trade waste samples and provisions to mitigate against changes will be adopted where practicable.

12.9. In all cases the samples shall be handled in an appropriate manner such that the characteristics being tested for are, as far as reasonably possible, preserved.

12.10. All samples shall be preserved, handled, transported and delivered to an approved laboratory according to best possible practice and approved standards.

#### *Tankered Wastes*

12.11. Tankered wastes shall not be discharged into the WWA's sewerage system by any person or permit holder not compliant with the Liquid and Hazardous Wastes Code of Practice. The WWA may accept tankered wastes for discharge at an approved location. Tankered wastes shall:

- a) be transported by a permit holder to discharge domestic septic tank or industrial wastes;
- b) have material safety data sheets (MSDS) supplied to the WWA detailing the contents of a waste;
- c) be tested to determine their character if the contents of the waste are not known. Specialist advice on pre-treatment or acceptance may be required. The cost of all testing and advice shall be borne by the permit holder;
- d) not be picked up and transported to the disposal site until appropriate arrangements and method for disposal have been determined by the WWA;
- e) to prevent cross-contamination between tanker loads, the tanker shall be thoroughly washed prior to collecting a load for disposal into the sewerage system; and
- f) have 24 hours' notice given for the disposal of wastes other than those sourced from domestic septic tanks.

12.12. 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 WWA's sewerage system other than the prescribed location will be in breach of the bylaw.

#### *Disinfected/Super Chlorinated Water*

12.13. Any water used during the repair and construction of water mains shall be de-chlorinated prior to the discharge into the sewerage system. An application for a temporary discharge permit shall be made. Such water shall not be disposed of to stormwater or adjacent water courses without appropriate approvals.

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## 13. Accidents and Non-compliance

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- 13.1. The person discharging shall inform the WWA immediately on discovery of any, accident including spills or process mishaps which may cause a breach of this bylaw.
- 13.2. In the event of any accident occurring when the person holds a conditional permit, then the WWA may review the permit under clauses 7.5 to 7.7 or may require the permit holder, within 20 working days of the date such requirement is notified to the permit holder in writing, to review the contingency management procedures and re-submit for approval the management plan with the WWA.
- 13.3. In the event of an accident occurring on the premises of a controlled discharge, the WWA may require the person discharging to apply for a conditional permit.

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## 14. Charges and Payments

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### Charges

- 14.1. Council may, by resolution publicly notified, prescribe or vary fees in respect of any matter provided for in this Part of the bylaw. This includes, but is not limited to, fees and charges for the application process, administration and monitoring or trade waste discharge permits and for the conveyance, treatment and disposal of trade waste.
- 14.2. Fees shall be levied in accordance with the Council's Revenue and Financing Policy.

### Invoicing

- 14.3. All charges determined in accordance with clause 15.1 of this Part of the bylaw shall be invoiced as follows:
- a) conditional permit holders – 12 monthly or as otherwise required. The occupier shall pay this invoice by the 20th day of the next month.
  - b) other permit holders – 12 monthly or as otherwise required. The occupier shall pay this invoice by the 20th day of the next month.
- 14.4. 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.

### Cease to Discharge

- 14.5. 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 17.3 of this part of the bylaw.

### Failure to Pay

- 14.6. All fees and charges payable under this Part of the bylaw shall be recoverable as a debt and, failing recovery, such monies shall become a charge on the trade premises to which the charges relate. If the person discharging fails to pay any fees and charges under this bylaw the WWA may cancel the right to discharge in accordance with Section 8.

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## 15. Authorised Officers

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- 15.1. All authorised officers of the WWA, shall possess and produce on request, warrants of authority and evidence of identity.

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## 16. Transfer or Termination of Rights and Responsibilities

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- 16.1. A trade waste permit to discharge shall be issued in the name of the given permit holder. The permit holder shall not, unless written approval is obtained from the WWA:
- a) transfer to any other party the rights and responsibilities provided for under this Part of the bylaw, and under the permit;
  - 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; or
  - c) allow sewage from any other party to be discharged at their point of discharge.
- 16.2. Renewal of a trade waste permit on change of ownership of premises shall not be unreasonably withheld if the characteristics of the sewage remain unchanged.
- 16.3. The person discharging shall give 48 hours' notice in writing to the WWA of their requirement for disconnection of the discharge connection and/or termination of the discharge permit, except where demolition or relaying of the discharge drain is required, in which case the notice shall be within seven working days. The person discharging shall notify the WWA of the new address details for final invoicing.
- 16.4. On permanent disconnection and/or termination the person discharging may, at the WWA's discretion, be liable for trade waste charges to the end of the current charging period.
- 16.5. When a person discharging ceases to occupy premises from which trade wastes are discharged into the sewerage system any permit granted shall terminate but without relieving the person discharging from any obligations existing at the date of termination.

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## 17. Service of Documents

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### Delivery or Post

- 17.1. Any notice or other document required to be given, served or delivered under this Part of the 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;
  - b) sent by pre-paid ordinary mail, courier, or facsimile, or email to the person discharging at any address for service specified in a trade waste permit to discharge;
  - 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.

### Service

- 17.2. If any notice or other document is:
- a) sent by post it will be deemed received on the third day (excluding weekends and public holidays) after posting;



- b) sent by facsimile or email and the sender's facsimile machine or email 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 a 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 permit holder then that shall be deemed to be service on, or delivery to the permit holder at that time.

*NOTE: It should be verified that notice has been served on the correct person.*

### **Signature**

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

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## **18. Offences and Penalties**

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18.1. Any person who breaches this Part of the bylaw commits an offence and may be liable to a penalty under section 242 of the LGA. Refer to Wairarapa Consolidated Bylaw 2019 Part 1: Introductory (refer Section 15) for details of what broadly constitutes a breach of this Part.

18.2. To avoid any doubt, a person breaches this bylaw and commits an offence who:

- a) breaches the conditions of any permit to discharge, granted pursuant to this Part of the bylaw; or
- b) fails to comply with a notice served under this Part of the bylaw.

18.3. WWA may recover costs associated with wilful or negligent damage to the WWA sewerage system and/or breach of this bylaw in accordance with sections 175 and 176 of the LGA respectively.

## Schedule 1A: Summary of Discharge Characteristics

- 1) The following general conditions are summarised from the Wairarapa Consolidated Bylaw 2019: Part 12 - Trade Waste for your convenience but are not complete and do not replace the bylaw in any way.
- 2) This permit is personal to the occupier and is not transferable without written approval.
- 3) If the quantity of wastewater or the point of discharge is to be changed from that requested by the occupier and approved in this permit, the occupier must apply for a variation to this permit.
- 4) A permit can be cancelled if the occupier fails to comply with any condition of the permit, or fails to maintain effective control over the discharge.
- 5) Records of flow and/or volume shall be available for viewing at any time by the Council.
- 6) No trade waste shall be acceptable if it contains any matter or substances which are prohibited in Schedule 1D of the Trade Waste Bylaw.
- 7) Temperature – must not exceed 40°C unless a higher temperature is approved in Schedule 1B.
- 8) pH – must be between 6.0 and 10.0 at all times unless a variation is approved in Schedule 1B.
- 9) Solids which may block sewers or pumps are prohibited. These include dry solids, non-faecal solids in excess of 15mm, heavy solids which settle faster than 50mm/minute, fibrous material, sheet films, and anything which may react to form a solid mass or interfere with the free flow of wastewater in the drainage system.
- 10) Solvents, fuels and organic fluids including oil, fat and grease must not be present as a free layer (whether floating or settled).
- 11) Dissolved or emulsified solvents, fuel and organic liquids are prohibited unless authorised in Schedule 1B.
- 12) Emulsified oils must not exceed 500g/m<sup>3</sup> and the emulsion must be stable.
- 13) Sulphides must not exceed 5g/m<sup>3</sup> (as H<sub>2</sub>S on acidification) unless authorised in Schedule 1B.
- 14) Oxidised sulphur compounds must not exceed 500g/m<sup>3</sup> (as sulphate) unless authorised in Schedule 1B.
- 15) Toxic pollutants – heavy metals are prohibited unless authorised in Schedule 1B.
- 16) Toxic pollutants – organic compounds and pesticides are prohibited unless authorised in Schedule 1B.
- 17) Stormwater and condensing or cooling waters are prohibited unless specified in Schedule 1B.
- 18) Unless specified within this permit, all premises that discharge process waste to the sewer shall have an appropriately sized interceptor that complies with the provisions of the Building Code.
- 19) The permit holder shall ensure that the oils/solids trap is cleaned and maintained at an interval that is appropriate to comply with the Trade Waste Bylaw. No trade waste monitoring is required unless spot-checks or inspections reveal inadequate maintenance. Records of trap cleaning and maintenance to be retained on the premises for inspection by the Trade Waste Officer.
- 20) The Trade Waste Officer may inspect the wastewater treatment facility at any reasonable time and may require a sample to be taken for analysis if, in the opinion of the Trade Waste Officer, the discharge from the facility does not comply with the Trade Waste Bylaw. Any trade waste monitoring will be at the expense of the occupier. Any non-compliance with the Trade Waste Bylaw may result in the permit being changed to a higher risk category and there may be an increase in permit fees and associated monitoring costs.
- 21) The permit holder is required to ensure that where hazardous substances are stored, handled or used, or where hazardous processes are undertaken, construction shall be designed to protect people and other property, under both normal and reasonably foreseeable abnormal conditions, and shall be provided with the means of preventing hazardous substances or other materials unacceptable to the network utility operator, from entering the sewers or public drains.

**Schedule 1B: Specific Conditions**

**CONDITIONS SPECIFIC TO TRADE WASTE PERMIT NUMBER ..... TO DISCHARGE CONTROLLED OR CONDITIONALTRADE WASTE TO THE COUNCIL WASTEWATER DRAINAGE SYSTEM**

**1. Point of discharge**

This permit is for trade waste to enter the public sewer.

**2. Flow**

- (a) Less than ..... m<sup>3</sup> shall be discharged in any 24 hour period.
- (b) The instantaneous flow rate of the discharge shall not exceed ..... L/s at any time.

**3. Temperature**

The temperature shall not exceed..... °C.

**4. Discharge characteristics**

Limits specific to this permit are:

.....

.....

**5. Pre-treatment**

The occupier shall provide the following pre-treatment works:

.....

.....

**6. Monitoring**

The following trade waste monitoring programme shall be implemented by the occupier:

.....

.....

**7. Charges**

The occupier shall pay the required annual fee.

## Schedule 1C: Controlled Discharge Characteristics

### **1C.1 Introduction**

#### **1C.1.1**

The nature and levels of the characteristics of any trade waste discharged to the WWA system shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by the WWA as part of an approval to discharge a trade waste.

*NOTE: It is very important to refer to the guideline tables for background reasons for contaminant concentrations.*

#### **1C.1.2**

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

#### **1C.1.3**

An additional column in Schedule 1G for mass limits may be added as required.

#### **1C.1.4**

The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the WWA, refer to clauses 7.5-7.7 of the bylaw.

### **1C.2 Physical Characteristics**

#### **1C.2.1 Flow**

- a) The 24 hour flow volume shall be less than 5m<sup>3</sup>.
- b) The maximum instantaneous flow rate shall be less than 2.0L/s.

#### **1C.2.2 Temperature**

The temperature shall not exceed 40°C.

#### **1C.2.3 Solids**

- a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15mm, and gross solids shall have an acquiescent settling velocity, which shall not exceed 50mm/minute.
- b) The suspended solids content of any trade waste shall have a maximum concentration which shall not exceed 2000g/m<sup>3</sup>. For significant industry this may be reduced to 600g/m<sup>3</sup> or such other concentration as may be determined.
- c) The settleable solids content of any trade waste shall not exceed 50mL/L.
- d) The total dissolved solids concentration in any trade waste shall be subject to the approval of the WWA 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 sewage in the drainage system or treatment plant shall not be present.

#### **1C.2.4 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 WWA is not biodegradable shall not exceed 200g/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 of pH 6.0 to pH 10.0.

- c) A trade waste with oil, fat or grease unavoidably emulsified, which in the opinion of the WWA is biodegradable shall not exceed 500g/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 of pH 4.5 to pH 10.0.
- 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 of pH 4.5 to pH 10.0.

### **1C.2.5 Solvents and Other Organic Liquids**

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

### **1C.2.6 Emulsions of Paint, Latex, Adhesive, Rubber, Plastic**

- a) Where such emulsions are not treatable these may be discharged into the sewer subject to the total suspended solids not exceeding 1000g/m<sup>3</sup> or the concentration agreed with the WWA.
- b) The WWA may determine that the need exists for pre-treatment of such emulsions if they consider that trade waste containing emulsions unreasonably interferes with the operation of the WWA treatment plant e.g. reduces % UVT (Ultraviolet Transmission).
- 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.

### **1C.2.7 Radioactivity**

Radioactivity levels shall not exceed National Radiation Laboratory Guidelines.

### **1C.2.8 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 treated sewage discharge permit.

### **1C.2.9 Liquid Pharmaceutical Waste**

<u>Volume Limit</u>	<u>Active Concentration</u>
10 litres	125mg/5ml
5 litres	250mg/5ml
3 litres	Above 250mg/5ml

## **1C.3 Chemical Characteristics**

### **1C.3.1 pH Value**

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

### **1C.3.2 Organic Strength**

#### **1C.3.2.1**

The Biochemical Oxygen Demand (BOD<sub>5</sub>) of any waste may require to be restricted where the capacity for receiving and treating BOD<sub>5</sub> is limited. A BOD<sub>5</sub> restriction may be related to mass limits.

Where there is no WWA treatment system for organic removal the BOD<sub>5</sub> shall not exceed 1000g/m<sup>3</sup>. For significant industry this may be reduced to 600g/m<sup>3</sup>.

*NOTE: For biological process inhibiting compounds see table 5 in the Guidelines for Sewerage Systems: Acceptance of Trade Wastes (industrial waste) 12.*

<p><b>Flow</b></p> <p>a) The 24 hour flow volume shall be less than 5m<sup>3</sup>.</p> <p>b) The maximum instantaneous flow rate shall be less than 2.0L/s.</p>	<p>Flows larger than the guideline values should be a conditional trade waste permit. Conditional permits will be dependent on contaminant concentration/mass load.</p>
<p><b>Temperature</b></p> <p>The temperature shall not exceed 40°</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>It should be noted that this temperature has been reduced from 50°C to come into line with the ARMCANZ/ANZECC Guidelines for sewerage systems.</p> <p>A lower maximum temperature may be required for large volume discharges.</p>
<p><b>Solids</b></p> <p>a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15mm.</p> <p>b) The suspended solids content of any wastewater shall have a maximum concentration which shall not exceed 2000g/m<sup>3</sup>.</p> <p>c) The settleable solids content of any wastewater shall not exceed 50mL/L.</p> <p>d) The total dissolved solids concentration in any wastewater shall be subject to the approval of the WWA 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.</p> <p>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.</p>	<p>Gross solids can cause sewer blockages.</p> <p>In case of conditional permits fine screening may be appropriate.</p> <p>High suspended solids 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 2000g/m<sup>3</sup> and 600g/m<sup>3</sup>. The ANZECC Guidelines recommend a limit of 600g/m<sup>3</sup>.</p> <p>High total dissolved solids reduce effluent disposal options and may contribute to soil salinity. Where potential for such problems exists, a limit of 10,000g/m<sup>3</sup> may be used as a guideline.</p>

<p><b>Oil and grease</b></p> <p>a) 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 the WWA is not biodegradable shall not exceed 200g/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 the WWA 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. Where the treatment plant discharges to a sensitive receiving water, lower values should be considered.</p> <p>If the WWA only has screening and/or primary treatment prior to discharge, it is recommended that oil and grease be reduced to 100g/m<sup>3</sup>.</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 WWA treatment system.</p> <p>If quick break detergents are being used, it should be ensured that proper separation systems are being used by the permit holder. If not, oil will reappear in drainage systems as a free layer.</p>
<p><b>Solvents and other organic liquids</b></p> <p>There shall be no free layer (whether floating or settled) of solvents or organic liquids.</p>	<p>Some organic liquids are denser than water and will settle in sewers and traps.</p>
<p><b>Emulsions of paint, latex, adhesive, rubber, plastic or similar material</b></p> <p>a) Where such emulsions are not treatable, they may be discharged into the sewer subject to the total suspended solids not exceeding 1000g/m<sup>3</sup>.</p> <p>b) The WWA may require pre-treatment of such emulsions if the emulsion wastewater unreasonably interferes with the operation of the WWA treatment plant e.g. reduces % UVT (Ultraviolet 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>‘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 WWA treatment system.</p> <p>Emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of emulsion to be treated.</p> <p>Emulsion may colour the WWA treatment plant influent such that % UVT is unacceptably reduced.</p>

	Emulsions will coagulate when unstable and can sometimes cause sewer blockage. Emulsions are stable when dilute or in the correct pH range.
<b>Radioactivity</b> Radioactivity levels shall not exceed the National Radiation Laboratory Guidelines.	Refer National Radiation Laboratory Code of safe practice for the use of unsealed radioactive materials NRL C1.
<b>Colour</b> 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 permit.	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.
<b>Inhibitory substances</b> Should any characteristic of a discharge be found to inhibit the performance of the wastewater treatment process, such that the WWA is significantly at risk or prevented from achieving its environmental statutory requirements, then the WWA reserves the right to amend the corresponding permit summarily.	
<b>Chemical Characteristics pH value</b>  pH value The pH shall be between 6.0 and 10.0 at all times.	In the setting of restrictions for chemical characteristics the WWA shall 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 shall be determined by the WWA.  Extremes of pH: <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> Relaxation of these limits to 5.5 and 11.0 is acceptable for low volume premises which discharge into a large flow. Significant industries may need to be restricted to limits between 6.0 and 9.0.



**Organic strength**

The Biochemical Oxygen Demand (BOD5) of any waste may require to be restricted where the capacity for receiving and treating BOD5 is limited. A BOD5 restriction may be related to mass limits.

Where there is no WWA treatment system for organic removal the BOD5 shall not exceed 1000g/m<sup>3</sup>. For significant industry this may be reduced to 600g/m<sup>3</sup> or such other concentration as may be determined.

The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD5) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD5. For domestic wastewater it is about 2.5:1 (COD: BOD5), but can range from 1:1 to 100:1 for trade waste. Therefore BOD5 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 shall 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 BOD5 and COD can be established the discharge may be monitored using the COD test.

If the treatment plant BOD5 capacity is not limited, and sulphides are unlikely to cause problems, there may be no need to limit BOD5. High COD may increase the potential for the generation of sulphides in the wastewater.

A BOD5 limit which is too stringent may require the installation of pre-treatment systems by some permit holders, imposing unnecessary costs because the most cost effective treatment method may be the WWA treatment plant.

The concentration and mass loads of BOD5 may be set to reflect WWA treatment plant capacity; e.g. ARMCANZ/ANZECC Guidelines for sewerage systems use a concentration of 600g/m<sup>3</sup>.

## Maximum concentrations

### Introduction

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

- Schedule 1F  
General chemical characteristics
- Schedule 1G  
Heavy metals
- Schedule 1H  
Organic compounds and pesticides

Where appropriate, maximum daily limits (kg/day) for mass limit-controlled discharges may also be given. Where the WWA chooses not to incorporate mass limits, the appropriate column from Schedule 1F should be removed.

Mass limits should be calculated and inserted where the WWA considers that it gives:

- a) The permit holder more flexibility to adopt cleaner production techniques which may produce an effluent which allows the WWA to consider permitting to a higher level than the maximum concentration permissible, but for a lower total mass (without any adverse effects on the WWA system or discharge permits); or
- b) The ability to allocate a fixed quantity of a particular characteristic amongst various trade premises, e.g. a heavy metal. The quantity may be fixed by reason of a discharge permit or some other constraint.

The maximum concentration permissible should not exceed that achievable from the appropriate best available technology. Concentration limits should also be set to ensure the health and safety of the WWA personnel, the integrity of the collection systems and the treatment process. Mass limits are more complex to administer and police and should only be adopted where the WWA has sufficient expertise and resources.

## Schedule 1D: Prohibited Characteristics

### **1D.1 Introduction**

This schedule defines prohibited trade wastes.

### **1D.2 Prohibited Characteristics**

#### **1D.2.1**

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 sewage in the sewerage system;
- b) Damage any part of the sewerage system;
- c) In any way, directly or indirectly, cause the quality of the treated sewage or residual biosolids and other solids from any sewage treatment plant in the catchment to which the waste was discharged to breach the conditions of a permit issued under the Resource Management Act, or water right, permit or other governing legislation;
- d) Prejudice the occupational health and safety risks faced by sewerage workers;
- e) After treatment be toxic to fish, animals or plant life in the receiving waters;
- f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance; or
- g) Have a colour or colouring substance that causes the discharge from any sewage treatment plant to receiving waters to be coloured.

#### **1D.2.2**

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

#### **1D.2.3**

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 1C), calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with sewage;
- c) Asbestos;
- d) The following organo-metal compounds:
  - tin (as tributyl and other organotin compounds);
- e) Any organochlorine pesticides;
- f) Genetic wastes, as follows:
  - All wastes that contain or are likely to contain material from a genetically modified organism that is not in accordance with an approval under the Hazardous Substances and New Organisms Act. 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 sewerage system by NZS 4304 or any pathological or histological wastes; or
- h) Radioactivity levels in excess of the National Radiation Laboratory Guidelines.

## Schedule 1E: Guide to Types of Trade Activities and Processes Connected to the Sewerage System that Require a Trade Waste Permit

Approved stormwater discharged to sewer  
Automotive Servicing Facilities  
Automotive/whiteware - small plant services  
Bakeries  
Beverage manufactures (including wineries)  
Building services  
Cafe/takeaway food vendor  
Car wash/valet  
Chemists/pharmaceutical waste including cytotoxic ingredients.  
Churches (with catering facilities)  
Clothing manufacture  
Concrete batching plants  
Dairy products processing  
Dentists  
Doctors surgeries  
Dry Cleaners  
Electroplaters  
Engineering Workshops  
Fellmongers  
Food premises licensed as food premises under the Health Act  
Food processors including canneries  
Footwear manufacture  
Foundries  
Fruit and vegetable processors including canneries  
Garages  
Galvanisers  
Hospitals  
Hotels and motels (with catering facilities)  
Kitchens/Dining halls  
Landfills (leachate discharge)  
Laundries  
Manufacturing of chemicals, and of chemical, petroleum, coal, rubber and plastic products  
Manufacturing of clay, glass, plaster, masonry, asbestos, and related mineral products  
Manufacturing of fabricated metal products, machinery and equipment  
Manufacturing of fertiliser  
Manufacturing of paper and paper products  
Marae  
Meat, fish, and shellfish processing  
Mechanical workshops/service stations  
Medical laboratories  
Metal finishers  
Mortuaries  
Paint and Panel Beaters  
Paint formulation/manufacture  
Photo and medical laboratories  
Photo processors  
Premises with commercial macerators  
Printers  
Research Institutes  
Residential Care Facilities  
Restaurants  
Retail butchers and fishmongers  
Service Stations  
Schools, polytechnics, universities (with laboratories)  
Scientific and other laboratories  
Spray painting facilities

Stockyards  
Swimming pools/spa facilities  
Takeaway premises  
Tankered Wastes  
Tanneries and leather finishing  
Textile fibre and textile processing  
Timber processing  
Truck wash facilities  
Vaccine manufacturers  
Vehicle wash facilities  
Veterinary surgeries  
Waste management processors  
Wholesalers/retailers including butchers, green grocers and fishmongers  
Woolscourers

## Schedule 1F: General chemical characteristics table

Characteristic	Maximum Concentration (g /m <sup>3</sup> )	Reason for limits
MBAS (Methylene Blue Active Substances)	500	<p>MBAS is a measure of anionic surfactants.</p> <p>High MBAS can:</p> <ul style="list-style-type: none"> <li>• adversely affect the efficiency of activated sewage sludge plants</li> <li>• impair the aesthetics of receiving waters.</li> </ul> <p>For treatment plants which suffer from the effects of surfactants the maximum concentration could be reduced significantly; e.g. Sydney Water utilise a level of 100g/m<sup>3</sup>.</p>
Ammonia (measured as N)	50	<p>High ammonia:</p> <ul style="list-style-type: none"> <li>• may adversely affect the safety of operations and maintenance personnel</li> <li>• may significantly contribute to the nutrient load to the receiving environment</li> </ul>
- free ammonia - ammonium salts	200	
Kjeldahl nitrogen	150	High kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment. A value of 50g/m <sup>3</sup> should be used as a guideline for sensitive receiving waters.
Total phosphorus (as P)	50	High phosphorus may significantly contribute to the nutrient loading of the receiving environment. A value of 10g/m <sup>3</sup> should be used as a guideline for sensitive receiving waters.
Sulphate (measured as SO <sub>4</sub> )	500 1500 (with good mixing)	<p>Sulphate:</p> <ul style="list-style-type: none"> <li>• may adversely affect sewer structures.</li> <li>• may increase the potential for the generation of sulphides in the wastewater if the sewer is prone to become anaerobic.</li> </ul>
Sulphite (measured as SO <sub>2</sub> )	15	<p>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.</p> <p>It is a strong reducing agent and removes dissolved oxygen thereby increasing the potential for anaerobic conditions to form in the wastewater.</p>

<b>General chemical characteristics continued</b>		
<b>Characteristic</b>	<b>Maximum Concentration (g/m<sup>3</sup>)</b>	<b>Reason for limits</b>
Sulphide – as H <sub>2</sub> S on acidification	5	<p>Sulphides in wastewater may:</p> <ul style="list-style-type: none"> <li>• cause corrosion of Sewer structures, particularly the top non-wetted part of a sewer</li> <li>• generate odours in sewers which could cause public nuisance</li> <li>• release the toxic H<sub>2</sub>S gas which could adversely affect the safety of operations and maintenance personnel.</li> </ul> <p>Under some of the conditions above sulphide should be &lt;2.0g/m<sup>3</sup>.</p>
Chlorine (measured as Cl <sub>2</sub> ) – free chlorine – hypochlorite	3 30	<p>Chlorine:</p> <ul style="list-style-type: none"> <li>• can adversely affect the safety of operations and maintenance personnel</li> <li>• can cause corrosion of sewer structures</li> </ul> <p>ARMCANZ/ANZECC guidelines for sewerage systems utilise a figure of 10g/m<sup>3</sup>.</p>
Dissolved aluminium	100	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate on a scale which may cause a sewer blockage.
Dissolved iron	100	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	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	High concentrations of bromine may adversely affect the safety of operations & maintenance personnel.
Fluoride (as F)	30	Fluoride is not removed by conventional wastewater treatment, however pre-treatment can easily and economically reduce concentrations to below 20g/m <sup>3</sup> .
Cyanide – weak acid dissociable (as CN)	5	Cyanide may produce toxic atmospheres in the sewer and adversely affect the safety of operations and maintenance personnel.

## Schedule 1G: Heavy metals table

Metal	Maximum concentration (g/m <sup>3</sup> )
Antimony	10
Arsenic	5*
Barium	10
Beryllium	0.005
Cadmium	0.5*
Chromium	5
Cobalt	10
Copper	10*
Lead	10*
Manganese	20
Mercury	0.05
Molybdenum	10*
Nickel	10*
Selenium	10
Silver	2
Thallium	10
Tin	20
Zinc	10*

**NOTE:**

*Heavy metals have the potential to:*

- a) Impair the treatment process;*
- b) Impact on the receiving environment;*
- c) Limit the reuse of sewage sludge and effluent.*

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

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. Specialist advice should be sought.

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

For recommended mass loads of metals refer to the Guidelines for Sewerage Systems: Acceptance of Trade Wastes (industrial waste) 12.

## Schedule 1H: Organic Compounds and Pesticides Table

Compound	Maximum concentration (g/m <sup>3</sup> )	Reason for limits
Formaldehyde (as HCHO)	50	Formaldehyde in the sewer atmosphere can adversely affect the safety of operations and maintenance personnel.
Phenolic compounds (as phenols) – excluding chlorinated phenols	50	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	Chlorinated phenols can adversely affect biological treatment process and may impair the quality of the receiving environment.
Petroleum hydrocarbons	30	Petroleum hydrocarbons may adversely affect the safety of operations and maintenance personnel.
Halogenated aliphatic compounds	1	Because of their stability and chemical properties these compounds may: <ul style="list-style-type: none"> <li>• adversely affect the treatment processes</li> <li>• impair the quality of the receiving environment</li> <li>• adversely affect the safety of operations and maintenance personnel.</li> </ul>
Monocyclic aromatic hydrocarbons	5	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	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 each	Because of their stability, persistence and ability to bioaccumulate in animal tissue these compounds have been severely restricted by health and environmental regulators.
Pesticides (general) (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any use in New Zealand) pesticides not registered for use in New Zealand	0.2 in total	Pesticides: <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 and maintenance personnel.</li> </ul>
Organophosphate pesticides	0.1	