



OTOROHANGA
DISTRICT COUNCIL

make the kiwi connection

The Otorohanga District Council

Trade Waste Bylaw 2000

That in pursuance and exercise of the powers and authorities vested in it by the Local Government Act 1974 and its respective amendments and regulations and of every other power and authority contained in any other Act for the time being in force, the Otorohanga District Council, for the purpose of controlling the nature of discharges into its sewer reticulation network within the Otorohanga Community, hereby makes by way of Special Order, the following Bylaw:

1.0 SHORT TITLE

The short title of this Bylaw shall be "The Otorohanga District Council Trade Waste Bylaw 2000."

2.0 COMMENCEMENT

This Bylaw shall come into force on the 24th day of July 2000 and will revoke "The Otorohanga District Council Trade Waste Bylaw 1998".

Trade Waste Bylaw

3.0 CONTENTS

	Page
1.0 SHORT TITLE.....	I
2.0 COMMENCEMENT.....	I
3.0 CONTENTS.....	II
FOREWORD.....	IV
SECTION 1 TRADE WASTE BYLAW.....	1
1.1. INTRODUCTION.....	1
1.2. DEFINITIONS.....	1
1.3. CLASSIFICATION OF TRADE WASTE DISCHARGES.....	3
1.4. STORAGE OF HAZARDOUS MATERIALS.....	3
1.5. APPLICATION FOR A TRADE WASTE CONSENT.....	3
1.5.1. <i>Application form</i>	3
1.5.2. <i>Acknowledgement</i>	4
1.5.3. <i>Information and analysis</i>	4
1.5.4. <i>Consideration of an application</i>	4
1.5.5. <i>Consideration criteria</i>	5
1.6. CONDITIONS OF TRADE WASTE CONSENT.....	5
1.7. DURATION.....	6
1.8. TECHNICAL REVIEW AND VARIATION.....	6
1.9. ACCEPTANCE STANDARDS.....	7
1.9.1. <i>Pre-treatment</i>	7
1.9.2. <i>Mass limits</i>	7
1.9.3. <i>Flow metering</i>	8
1.9.4. <i>Estimating discharge</i>	8
1.9.5. <i>Sampling and analysis</i>	8
1.9.6. <i>Monitoring</i>	9
1.9.7. <i>Dilution</i>	9
1.9.8. <i>Stormwater, condensing and cooling water</i>	9
1.10. DISPUTES.....	9
1.10.1. <i>Sampling and analysis</i>	9
1.10.2. <i>Review of decisions</i>	9
1.10.3. <i>Emergency provisions</i>	10
1.11. ACCIDENTS.....	10
1.12. PAYMENT.....	10
1.12.1. <i>Charges</i>	10
1.12.2. <i>Invoicing</i>	11
1.12.3. <i>Cease to discharge</i>	11
1.12.4. <i>Failure to pay</i>	11
1.13. AUTHORIZED OFFICERS.....	11
1.13.1. <i>Delegation</i>	11
1.14. TRANSFER OR TERMINATION OF RIGHTS AND RESPONSIBILITIES.....	12
1.15. CANCELLATION.....	12
1.15.1. <i>Summary cancellation</i>	12
1.15.2. <i>Grounds for cancellation</i>	12
1.16. SERVICE OF DOCUMENTS.....	13
1.16.1. <i>Delivery or post</i>	13
1.16.2. <i>Deemed service</i>	13
1.16.3. <i>Service date</i>	13
1.16.4. <i>Signature</i>	13
1.17. OFFENCES.....	13
1.18. TRANSITIONAL PROVISIONS.....	13
1.18.1. <i>Existing trade waste consents</i>	13

SECTION 2 ACCEPTABLE DISCHARGE CHARACTERISTICS.....	14
2.1. INTRODUCTION	14
2.2. BYLAW REQUIREMENTS - PHYSICAL CHARACTERISTICS.....	14
2.2.1. <i>Flow</i>	14
2.2.2. <i>Temperature</i>	14
2.2.3. <i>Solids</i>	14
2.2.4. <i>Oil and grease</i>	14
2.2.5. <i>Solvents and other organic liquids</i>	15
2.2.6. <i>Emulsions of paint, adhesive, rubber, plastic</i>	15
2.2.7. <i>Radioactivity</i>	15
2.2.8. <i>Colour</i>	15
2.3. BYLAW REQUIREMENTS - CHEMICAL CHARACTERISTICS.....	15
2.3.1. <i>pH value</i>	15
2.3.2. <i>Organic strength</i>	16
2.3.3. <i>Maximum concentrations</i>	16
2.4. GENERAL CHEMICAL CHARACTERISTICS	16
2.5. TOXIC POLLUTANTS - HEAVY METALS [†]	17
2.6. TOXIC POLLUTANTS – ORGANIC COMPOUNDS AND PESTICIDES.....	18
2.7. INHIBITORY CHEMICALS	18
SECTION 3 PROHIBITED CHARACTERISTICS	19
3.1.1. <i>Introduction</i>	19
3.1.2. <i>Prohibited characteristics</i>	19
SECTION 4 GUIDE TO TYPES OF TRADE ACTIVITIES AND PROCESSES	20
4.1. VOLUME OF DISCHARGE.....	20
4.2. CONTROLLED	20
4.3. CONDITIONAL	20
SECTION 5 SAMPLING PROCEDURE.....	21
5.1. SAMPLING EQUIPMENT	21
5.1.1. <i>Sample containers</i>	21
5.1.2. <i>Apparatus</i>	21
5.1.3. <i>Sampling location</i>	22
5.1.4. <i>Choice of sampling method</i>	22
5.1.5. <i>Frequency, number and timing for samples</i>	24
SECTION 6 TRADE WASTE CHARGES	27
6.1. GUIDELINES FOR CHARGING PRINCIPLES	27
6.2. METHOD OF DETERMINING THE EXCESS CHARACTERISTICS OF A TRADE WASTE DISCHARGE	27
6.3. METHOD OF CALCULATING CHARGES.....	28
6.4. METHOD OF SETTING THE CHARGE RATES.....	29

List of Tables

Table 1: Charge items and terms	27
Table 2: Definition and means of calculation of the items used in calculating trade waste charges	29

FOREWORD

This Bylaw is prepared in pursuance and exercise of the powers and authorities vested in it by the Local Government Act 1974 and its respective amendments and regulations and of every other power and authority contained in any other Act for the time being in force.

This Bylaw has been prepared using as a base document the New Standard "NZS 9201:Part 23:1999 MODEL GENERAL BYLAWS PART 23 – TRADE WASTE"

OTOROHANGA DISTRICT COUNCIL TRADE WASTE BYLAW

Section 1 TRADE WASTE BYLAW

1.1. Introduction

This bylaw covers the discharge of trade waste to a Wastewater Authority.

1.2. Definitions

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

ACCEPTABLE DISCHARGE means a wastewater with physical and chemical characteristics which comply with the requirements of the wastewater authority standard as defined in Section 2 of this bylaw.

ACCESS POINT is a place where access may be made to a private drain for inspection (including sampling or measurement), cleaning or maintenance. The location of the access point shall be in accordance with the NZ Building Code.

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

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

CHARACTERISTIC means any of the physical or chemical characteristics of a trade waste referred to in Section 2 and Section 3.

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

CONDENSING WATER or **COOLING WATER** means any water used in any trade, industry, or commercial process or operation in such a manner that it does not take up matter into solution or suspension.

CONDITIONAL means that the trade waste is of such complexity or volume exceeding controlled standards that a specific consent to discharge is required.

CONSENT means a consent in writing given by the wastewater authority authorizing an occupier to discharge wastewater to the sewer system.

CONTROLLED means that the trade waste requires no specific consent to discharge.

COUNCIL means the Otorohanga District Council.

DISCHARGE MANAGEMENT PLAN means the plan agreed between the Wastewater Authority and the occupier for the monitoring, programming and controlling by the occupier, of the sources of trade waste from the occupier's premises, so that the discharge to the wastewater system complies with the Wastewater Authority's requirements.

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

DISTRICT means the area administered by the Otorohanga District Council.

Trade Waste Bylaw

DOMESTIC WASTEWATER means either that wastewater which is discharged from premises used solely for residential activities or wastes of the same character discharged from other premises, provided that the characteristics of the wastewater are an acceptable discharge.

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

MASS LIMIT means the total mass of any characteristic that may be discharged to the wastewater authority wastewater system over any 24 hour period from any single point of discharge or collectively from several points of discharge.

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

OCCUPIER means the person occupying trade premises who discharges, or has obtained a consent to discharge or direct the manner of discharge of wastewater from any premises to the public sewer of the wastewater authority.

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

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

PREMISES means either:

- a) A property or allotment which is held under a separate certificate of title or for which a separate certificate of title may be issued and in respect to which a building consent has been or may be issued, or
- b) A building that has been defined as an individual unit by a cross-lease, unit title or company lease and for which a certificate of title is available, or
- c) Land held in public ownership (e.g. reserve) for a particular purpose, or
- d) Individual units in buildings which are separately leased.

PROHIBITED CHARACTERISTICS means a wastewater which shall not be discharged into the wastewater authority system, as defined in Section 3 of this bylaw.

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

TRADE WASTE BYLAW SCHEDULE OF CHARGES means the list of items, terms and prices for services associated with the discharge of wastewater as approved by the wastewater authority.

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

SEWER means that section of public sewer downstream of the point of discharge. This section of sewer is owned and maintained by the wastewater authority.

STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER means the 18th edition (including the Supplement) as published by the American Water Works Association (AWWA)/American Public Health Association, or the most current subsequent edition of this publication.

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

Trade Waste Bylaw

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

TERRITORIAL AUTHORITY (TA) means a city council, or district council.

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

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

WASTEWATER means water or other liquid, including waste matter in solution or suspension, discharged from a premises to a sewer.

WASTEWATER AUTHORITY (WWA) means the unit of a territorial authority including its authorized agents, responsible for the collection, treatment and disposal of wastewater.

1.3. Classification of trade waste discharges

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

- a) **Controlled** - where the trade activity and/or processes is able to produce an acceptable trade waste, and for which standard conditions can be applied.
- b) **Conditional** - where the trade activity and/or processes are of such a complexity or size; or employ such chemicals, raw materials, or feedstock; that the risks of producing a trade waste which is not acceptable are considered significant by the WWA, and a specific consent is required. Such activities shall include temporary discharges.

No application for a trade waste consent shall be approved where the trade waste discharge would contain, or is likely to contain, characteristics which are prohibited.

No person shall discharge, or cause to be discharged, any trade waste to the WWA sewer except in accordance with the provisions of this bylaw.

1.4. Storage of hazardous materials

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

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

1.5. Application for a trade waste consent

1.5.1. Application form

Every occupier of trade premises who wishes to:

- a) Discharge into the sewer system any trade waste, or
- b) Vary the characteristics of a consent to discharge that has previously been granted, or

Trade Waste Bylaw

c) Vary the conditions of consent to discharge that has previously been granted, shall if required by the WWA complete an application in the form provided by the WWA for the consent of the WWA, to the discharge of that trade waste, or to the proposed variations.

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

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.

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

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

Any discharge of an intermittent or short duration shall be applied for on the separate "Temporary discharge" form provided by the WWA. Such discharges include the short term discharge of an unusual waste from an occupier with an existing trade waste consent, and the discharge of tankered wastes to designated points in the WWA systems.

Every application shall be accompanied by a trade waste application fee in accordance with the WWA's Trade Waste Bylaw Schedule of Charges.

1.5.2. Acknowledgement

The WWA shall acknowledge the application in writing within 7 working days of the receipt of the occupier's application and fee.

1.5.3. Information and analysis

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

Require the applicant to submit any additional information which it considers necessary to reach an informed decision, and

Whenever appropriate shall have the discharge investigated and analysed as provided for in 1.9.3 and 1.9.5 of this bylaw.

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

1.5.4. Consideration of an application

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

Decline the application and notify the applicant of the decision giving a statement of the reasons for refusal, or

Grant the application a controlled trade waste consent and inform the applicant of the decision by issuing the appropriate notice of trade waste consent, or

Trade Waste Bylaw

Grant the application a conditional trade waste consent and inform the applicant of the decision and the conditions imposed on the discharge by issuing a draft consent for consideration by the applicant.

1.5.5. Consideration criteria

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

- a) The health and safety of WWA staff and the public,
- b) The limits and/or maximum values for characteristics of trade waste as specified in Section 2 and Section 3 of this bylaw, and
- c) The extent to which the trade waste may react with other trade waste or domestic wastewater to produce an undesirable effect, e.g.: settlement of solids, production of odours etc., and
- d) The flows and velocities in the sewer, or sewers and the material or construction of the sewer or sewers, and
- e) The capacity of the sewer or sewers and the capacity of any wastewater treatment works, and
- f) The nature of any wastewater treatment process and the degree to which the trade waste is capable of being treated in the wastewater treatment works, and
- g) Any statutory requirements relating to the discharge of raw or treated wastewater to receiving waters, the disposal of sewage sludges, and any discharge to air, (including the necessity for compliance with any resource consent, discharge permit or water classification), and
- h) Consideration for other existing or future discharges.

1.6. Conditions of trade waste consent

Any trade waste consent to discharge may be granted subject to such conditions the WWA may impose, including but not limited to:

- a) The particular public sewer or sewers to which the discharge will be made, and
- b) The maximum daily volume of the discharge and the maximum rate of discharge, and the duration of maximum discharge, and
- c) The maximum limit or permissible range of any specified characteristics of the discharge, including concentrations and/or mass limits determined in accordance with 1.9, and
- d) The period or periods of the day during which the discharge, or a particular concentration, or volume of discharge may be made, and
- e) The degree of acidity, or alkalinity of the discharge at the time of discharge, and
- f) The temperature of the trade waste at the time of discharge, and
- g) The provision by the occupier, at the occupier's expense, of screens, grease traps, silt traps or other pre-treatment works to prevent or control the discharge of solids or grease, and

Trade Waste Bylaw

- h) The provision and maintenance at the occupier's expense of inspection chambers, manholes or other apparatus or devices to provide reasonable access to drains for sampling and inspection, and
- i) A sampling and testing program and flow measurement requirements, and
- j) Which of the methods set out in 1.9.3, 1.9.4 and 1.9.5 are to be used for measuring flow rates and taking samples of the discharge for use in determining the amount of any trade waste charges applicable to that discharge, and
- k) The provision and maintenance by and at the expense of the occupier of such meters or devices as may be required to measure the volume or flow rate of any trade waste being discharged from the premises, and for the testing of such meters, and
- l) The provision and maintenance, at the occupier's expense of such services, (whether electricity, water or compressed air or otherwise), which may be required, in order to operate meters and similar devices, and
- m) The provision by the occupier to the WWA of all flow and/or volume records and results of analyses.

1.7. Duration

Trade waste consents granted under this bylaw shall expire at the end of a term fixed by the WWA subject to the following:

Trade waste consents may be given for a term not exceeding 10 years to an occupier who at the time of application satisfies the WWA that:

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

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

1.8. Technical review and variation

The WWA may at any time during the term of a trade waste consent, by written notice to the occupier (following a reasonable period of consultation), vary any condition to such extent as the WWA considers necessary 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.

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

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

1.9. Acceptance standards

1.9.1. Pre-treatment

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

1.9.2. Mass limits

A trade waste consent to discharge may impose controls on a trade waste discharge by specifying mass limits for any characteristics, or for any conditional discharge.

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

Within 3 months of the end of the financial year the WWA shall publish data showing:

- a) The current capacity of the wastewater system to receive those characteristics controlled by mass limits,
- b) The total mass of those controlled characteristics that were allocated over the financial year,
- c) The capacity held in reserve for industrial expansion and as a safety factor against accidental discharge, and
- d) The total mass of those controlled characteristics that were actually received into the wastewater system over the financial year.

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

- a) Conditions in the wastewater system near the trade waste discharge point and elsewhere in the wastewater system, and
- b) The extent to which the available industrial capacity was used in the last financial period and is expected to be used in the forthcoming period, and
- c) Whether or not the applicant uses cleaner production techniques, and
- d) Whether or not the applicant has established to the satisfaction of the WWA a programme to achieve cleaner production techniques within a satisfactory period, and
- e) Whether or not there is any net benefit to be gained by the increase of one characteristic concurrently with the decrease of another to justify any increased application for industrial capacity, and
- f) Any requirements of the WWA to reduce the pollutant discharge of the wastewater system, and
- g) How great a proportion the mass flow of a characteristic of the discharge will be of the total mass flow of that characteristic in the wastewater system, and
- h) The total mass of the characteristic allowable in the wastewater system, and the proportion (if any) to be reserved for future allocations, and
- i) Whether or not there is an interaction with other characteristics which increases or decreases the effect of either characteristic on the sewer reticulation, treatment process, or receiving water (or land).

Trade Waste Bylaw

1.9.3. Flow metering

Flow metering shall be required:

- a) On conditional discharges when there is not a reasonable relationship between a metered water supply to the premises, and the discharge of trade waste, or
- b) When the occupier and the WWA cannot agree on a suitable method of flow estimation.

The occupier shall be responsible for the supply, installation 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 occupier. Measurement of flow shall be carried out by the occupier in accordance with BS 3680: Part 11A, BS 3680: Part 11B and BS 5728:Part 3.

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.

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

The occupier shall arrange for confirmation of the flow metering equipment and instrumentation by a company in accordance with NZS 10012:Part 1 upon installation and at least once a year thereafter to ensure performance within $\pm 10\%$ of its reading. A copy of independent certification of each calibration result shall be submitted to the WWA.

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

1.9.4. Estimating discharge

Where 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.

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 4 billing periods charged to the occupier) and the occupier shall pay according to such estimate. Provided that when by reason of a large variation of discharge due to seasonal or other causes, the average of the previous 4 billing periods would be an unreasonable estimate of the discharge the WWA may take into consideration other evidence for the purpose of arriving at a reasonable estimate, and the occupier shall pay according to such estimate.

Where 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.

1.9.5. Sampling and analysis

Sampling shall be in accordance with the procedure contained in Section 5 or some other procedure designed in accordance with BS 6068: Section 6.10.

Any analysis shall use methods or procedures in accordance with, or validated against, the AWWA *Standard methods for the examination of water and wastewater* by a laboratory accredited for the purpose, or a laboratory approved in writing by the WWA.

Trade Waste Bylaw

1.9.6. Monitoring

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

If required by the occupier, all independent samples made by the WWA shall be split as follows:

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

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

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

1.9.7. Dilution

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

1.9.8. Stormwater, condensing and cooling water

The occupier shall not add or permit the addition of stormwater, condensing or cooling water to any wastewater. However, if for practical reasons it cannot be separated from the wastewater it may be included subject to specific approval.

1.10. Disputes

1.10.1. Sampling and analysis

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

1.10.2. Review of decisions

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

Trade Waste Bylaw

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

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

1.10.3. Emergency provisions

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

1.11. Accidents

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

1.12. Payment

1.12.1. Charges

1.12.1.1. General

The consent holder shall be liable to pay for the discharge of trade wastes and any related material in accordance with Section 6 which covers charges.

The items included in Section 6 are covered by Section 494 of the Local Government Act and the charges will be set by Special Order and may by Special Order be varied from time to time.

1.12.1.2. Treatment charges

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

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

The excess Biochemical Oxygen Demand treatment charge is determined by multiplying the excess biochemical oxygen demand (BOD) of the discharge by the number of operational days in the charge period and by the BOD treatment charge rate using the formula contained in Section 6.

The BOD treatment charge rate (C_b) is set out in the Council's publicly notified Trade Waste Bylaw Schedule of Charges and is calculated by dividing the estimated total annual cost of treating all BOD within the district, by the total annual mass of BOD treated within the district, and is calculated according to the formula set out in Section 6.

The excess suspended solids treatment charge is determined by multiplying the excess suspended solids (SS) of the discharge by the number of operational days in the charge period and by the SS treatment charge rate using the formula contained in Section 6.

Trade Waste Bylaw

The SS treatment charge rate, (C_s) as set out in the Council's publicly notified Trade Waste Bylaw Schedule of Charges, is calculated by dividing the estimated total annual cost of treating all SS within the district, by the estimated total annual mass of SS treated within the district, and is calculated according to the formula set out in Section 6.

1.12.1.3. Excess sewage reception and disposal charges

The amount of the excess volume charge payable in respect of a particular discharge, shall be determined by multiplying the excess volume of the discharge by the number of operational days in the charge period and by the 24 hour flow volume charge rate using the formula contained in Section 6. =

The 24 hour flow volume charge rate (C_{24}) is set out in the Council's publicly notified Trade Waste Bylaw Schedule of Charges and is calculated by dividing the estimated total annual cost of receiving and disposing of all wastewater within the district, as notified in the Trade Waste Bylaw Schedule of Charges, by the estimated total 24 hour flow volume of all wastewater received within the district in a year, and is calculated by the method set out in Section 6.

1.12.1.4. Operational days

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

1.12.2. Invoicing

All charges determined in accordance with 1.12.1 shall be invoiced every 3 months on the 20th day of that month in respect of the trade waste discharge occurring during the immediately preceding charge period. The occupier shall pay this invoice by the 20th day of the next month.

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

1.12.3. Cease to discharge

The occupier shall be deemed to be continuing the discharge of trade waste and shall be liable for all charges, until such time as he/she gives notice of disconnection in accordance with 1.14.

1.12.4. Failure to pay

All sums payable for charges and rates for wastewater services under this bylaw shall be recoverable as a debt.

1.13. Authorised Officers

1.13.1. Delegation

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

The General Manager shall set the extent and level of delegation to authorized officers.

1.14. Transfer or termination of rights and responsibilities

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

- a) Transfer to any other party the rights and responsibilities provided for under this bylaw, and under their consent,
- b) Allow a point of discharge to serve another premises, or the private drain to that point to extend by pipe or any other means to serve another premises,
- c) In particular and not in limitation of the above allow wastewater from any other party to be discharged at their point of discharge.

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

The occupier shall give 72 hours notice in writing to the WWA of his/her requirement for disconnection of the discharge connection and/or termination of the discharge consent, except where demolition or relaying of the discharge drain is required, in which case the notice shall be 10 working days. The occupier shall notify the WWA of the new address details for final invoicing.

1.15. Cancellation

1.15.1. Summary cancellation

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

- a) The WWA is lawfully directed to withdraw or otherwise to terminate the trade waste consent summarily, or
- b) The occupier discharges any trade waste unlawfully and in the opinion of the WWA damage to any part of the sewer system or danger to the health or safety of any person is likely to occur as a result of the discharge, or
- c) The occupier discharges any prohibited substance.

1.15.2. Grounds for cancellation

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

- a) Failure to comply with any condition of the consent, or
- b) Failure to maintain effective control over the discharge, or
- c) Failure to limit in accordance with the requirements of a consent the volume, nature, or composition of trade waste being discharged, or
- d) Any negligence of the occupier which, in the opinion of the 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, or
- e) The existence of any other circumstances which, in the opinion of the WWA, render it necessary in the public interest to cancel the consent.

1.16. Service of documents

1.16.1. Delivery or post

Any notice or other document required to be given, served or delivered under this bylaw to an occupier may (in addition to any other method permitted by law) be given or served by delivery to or by registered post addressed to:

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

1.16.2. Deemed service

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

1.16.3. Service date

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

1.16.4. Signature

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

1.17. Offences

- a) Every occupier of trade premises commits an offence and is liable to a fine as specified in Section 493 of the Local Government Act 1974 who fails to comply with or acts in contravention of any provision of this bylaw.

1.18. Transitional provisions

1.18.1. Existing trade waste consents

Every existing trade waste consent under the provisions of the Otorohanga District Council Trade Waste Bylaw 1998 shall continue in force as if it were a consent granted under this Bylaw until it reaches its stated expiry date provided that no trade waste consent granted under the provisions of the Otorohanga District Council Trade Waste Bylaw 1998 shall be in force after 30 June 2001 and any such trade waste consent which has not expired prior to that date shall be deemed to have expired on 30 June 2001.

Section 2 ACCEPTABLE DISCHARGE CHARACTERISTICS

2.1. Introduction

The nature and levels of the characteristics of any wastewater 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 wastewater.

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

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 1.8 of the bylaw.

2.2. Bylaw Requirements - Physical characteristics

2.2.1. Flow

- a) The 24 hour flow volume shall be less than 5 m³.
- b) The maximum instantaneous flow rate shall be less than 2.0 L/s.

2.2.2. Temperature

The temperature shall not exceed 50 °C.

2.2.3. Solids

- a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15 mm and gross solids shall have acquiescent settling velocity which shall not exceed 50 mm/minute.
- b) The suspended solids content of any wastewater shall have a maximum concentration which shall not exceed 2000 g/m³.
- c) The settleable solids content of any wastewater shall not exceed 50 mL/L.
- d) The total dissolved solids concentration in any wastewater shall be subject to the approval of the 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 wastewater in the drainage system or treatment plant shall not be present.

2.2.4. 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 200 g/m³ as petroleum ether extractable matter when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage, throughout the range pH 6.0 to pH 10.0.

Trade Waste Bylaw

- 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/m³ when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 4.5 to pH 10.0.
- d) Emulsified oil, fat or grease shall not exceed 100 g/m³ 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.

2.2.5. Solvents and other organic liquids

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

Refer 2.6 Toxic Pollutants – Organic Compounds and Pesticides for information on dissolved solvents and other organic liquids.

2.2.6. Emulsions of paint, adhesive, rubber, plastic

For the purposes of this sub-clause:

'Latex emulsion' means an emulsion containing paint, adhesive, rubber, plastic, or similar material.

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

- a) Latex emulsions which are not treatable may be discharged into the sewer subject to the total suspended solids not exceeding 1000 g/m³.
- b) The WWA may require pretreatment of latex emulsions if the emulsion wastewater unreasonably interferes with the operation of the WWA treatment plant.
- c) Latex emulsions of both treatable and non treatable types, shall be discharged to the sewer only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public sewer.

2.2.7. Radioactivity

Radioactivity levels shall not exceed National Radiation Laboratory guidelines.

2.2.8. 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 final effluent discharge consent.

2.3. Bylaw Requirements - Chemical characteristics

2.3.1. pH value

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

Trade Waste Bylaw

2.3.2. Organic strength

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

Where there is no treatment system for organic removal the BOD shall not exceed 1000 g/m³.

2.3.3. Maximum concentrations

2.3.3.1. Introduction

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

- General chemical characteristics clause 2.4
- Heavy metals clause 2.5
- Organic compounds clause 2.6

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

2.4. General Chemical Characteristics

Characteristic	Maximum Concentration
MBAS (Methylene blue active substances)	500 g/m ³
Ammonia (measured as N)	
– free ammonia	50 g/m ³
– ammonium salts	200 g/m ³
Kjeldahl nitrogen	500 g/m ³
Total phosphorus (as P)	150 g/m ³
Sulphate (measured as SO ₄)	500 g/m ³ 1500 g/m ³ (with good mixing)
Sulphite (measured as SO ₂)	15 g/m ³
Sulphide – as H ₂ S on acidification	5 g/m ³
Chlorine (measured as Cl ₂)	
– free chlorine	3 g/m ³
– hypochlorite	30 g/m ³
Dissolved aluminium	300 g/m ³
Dissolved iron	300 g/m ³
Boron (as B)	25 g/m ³
Bromine (as Br ₂)	5 g/m ³
Fluoride (as F)	30 g/m ³
Cyanide – weak acid dissociable (as CN)	5 g/m ³

2.5. Toxic Pollutants - Heavy Metals †

Metal	Maximum Concentration (g/m³)
Antimony	10
Arsenic	5
Barium	10
Beryllium	0.005
Cadmium	0.5
Chromium	5
Cobalt	10
Copper	10
Lead	10
Manganese	20
Mercury	0.005
Molybdenum	10
Silver	2
Nickel	10
Selenium	10
Thallium	10
Tin	20
Zinc	10

† Heavy Metals shall be accepted up to the maximum concentrations given only when specifically approved.

2.6. Toxic pollutants – Organic compounds and pesticides

Compound	Maximum Concentration
Formaldehyde (as HCHO)	50 g/m ³
Phenolic compounds (as phenols) – excluding chlorinated phenols	50 g/m ³
Chlorinated phenols	0.02 g/m ³
Petroleum hydrocarbons	30 g/m ³
Halogenated aliphatic compounds [†]	1 g/m ³
Monocyclic aromatic hydrocarbons	5 g/m ³
Polycyclic (or polynuclear) aromatic hydrocarbons (PAHs)	0.05 g/m ³
Halogenated aromatic hydrocarbons (HAHs) Polychlorinated biphenyls (PCBs) Polybrominated biphenyls (PBBs)	0.002 g/m ³ 0.002 g/m ³
Pesticides (general) [†] <small>(includes insecticides, herbicides, fungicides and excludes organo-phosphate, organo-chlorine and any pesticides not registered for use in New Zealand)</small>	0.2 g/m ³
Organophosphate pesticides ^{*†}	0.1 g/m ³

* Excludes pesticides not registered for use in New Zealand.

† These compounds shall be accepted up to the given maximum concentration only when specifically approved.

2.7. Inhibitory Chemicals

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

Section 3 PROHIBITED CHARACTERISTICS

3.1.1. Introduction

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

3.1.2. Prohibited characteristics

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

- a) Interfere with the free flow of sewage in the wastewater system, or
- b) Damage any part of the wastewater system, or
- c) In any way, directly or indirectly, cause the quality of the effluent or residual biosolids and other solids from any wastewater treatment plant in the catchment to which the waste was discharged to breach the conditions of a consent issued under the Resource Management Act 1991, or water right, permit or other governing legislation, or
- d) Prejudice the occupational health and safety risks faced by sewerage workers, or
- e) After treatment be toxic to fish, animals or plant life in the receiving waters, or
- f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance, or
- g) Have a colour or colouring substance that causes the discharge of any wastewater treatment plant to receiving waters to be coloured.

A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in Section 2 unless specifically approved for that particular consent.

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 Section 2), 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)
 - Chromium (as organic compounds)
- e) Any organochlorine pesticides;
- f) Genetic wastes, as follows:
 - All wastes that contain or are likely to contain genetically altered material from premises where the genetic alteration of any material is conducted.
- g) Any health care waste covered by NZS 4304 or any pathological or histological wastes.
- h) Radioactivity levels in excess of National Radiation Laboratory guidelines.

Section 4 GUIDE TO TYPES OF TRADE ACTIVITIES AND PROCESSES

4.1. Volume of discharge

A discharge of more than 20 m³/day will render a premises "conditional", whatever type of premises it emits from.

4.2. Controlled

Dry Cleaners

Restaurants (excluding those with commercial wastemasters)

Bakeries

Take away premises

Doctors surgeries

Retail butchers and fishmongers (excluding those with commercial wastemasters)

Mechanical workshops/service stations

Schools, polytechnics, universities (with laboratories)

Clothing manufacture

Photo processors (modular units only)

Dentists

Mortuaries

Hotels and motels (with catering facilities)

Car wash

Laundries

Churches (with catering facilities)

Marae

4.3. Conditional

Beverage manufacture

Dairy products processing

Footwear manufacture

Galvanizers

Landfill (leachate discharge)

Manufacturing of paper and paper products

Metal surfacing

Premises with commercial wastemasters

Scientific laboratories

Stock sale yards

Textile fibre and textile processing

Waste management processors

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

Concrete batching plants

Electroplaters

Foundries

Hospitals

Manufacturing of fertiliser

Meat, fish and shellfish processing

Photo and medical laboratories

Printers

Spray painting facilities

Tanneries and leather finishings

Truck wash facilities

Section 5 SAMPLING PROCEDURE

5.1. Sampling equipment

5.1.1. Sample containers

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

Desirable factors to be considered when selecting sample containers are:

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

The sample container needs to prevent losses due to adsorption, volatilization and contamination by foreign substances.

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

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

5.1.2. Apparatus

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

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

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

Trade Waste Bylaw

5.1.3. Sampling location

Safety precautions: In all cases when selecting sampling locations, health and safety aspects should be observed.

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

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

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

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

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

5.1.4. Choice of sampling method

5.1.4.1. Types of sample

It is common to distinguish between 2 sample types:

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

5.1.4.2. Spot sample

A spot sample is defined as a discrete sample taken randomly (with regard to time and/or location) from the trade waste.

In a spot sample, the whole sample volume is taken at one time. Spot samples are useful for determining the wastewater composition at a certain time. In cases with small variations in the volume and composition of the waste stream, a spot sample can be representative of the composition during a longer period.

For certain determinations, spot samples only can be used. For example, this is the case with oil and grease, dissolved oxygen, chlorine and sulphide. Here the result will differ if the analyses are not carried out (or started) immediately after collection of the sample, and if the whole sample volume is not used at a time.

5.1.4.3. Composite sample

A composite sample is defined as 2 or more samples or sub-samples, mixed together in appropriate known proportions (either discretely or continuously), from which the average result of a desired characteristic may be obtained. The proportions are usually based on time for flow measurements.

Composite samples are prepared by mixing a number of spot samples or by collection of a continuous fraction of the waste stream.

In sampling, each of the spot samples should be greater than 50 ml in volume. Often it is advisable that spot samples are 200 ml to 300 ml in volume, in order to be able to collect representative samples.

5.1.4.4. Instantaneous composite sample

An instantaneous sample is a composite sample taken using the following method:

Three spot samples of the discharge shall be taken at intervals of not less than 1 minute nor more than 5 minutes. The 3 spot samples must be combined using equal volumes of all 3 samples to obtain the instantaneous sample.

An instantaneous sample shall be used for all routine compliance monitoring unless otherwise specified.

5.1.4.5. Four hour average composite sample

A 4 hour average sample is a composite sample taken using the following method:

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

5.1.4.6. Twenty four hour flow proportionate sample

A 24 hour flow proportionate sample is obtained using the following method:

- a) Spot samples shall be taken from the discharge over a continuous 24 hour period. The samples shall be taken at reasonably even intervals over the whole period. The intervals between the samples must not be less than 15 minutes nor more than 60 minutes. Whenever more than one sample is taken within a 60 minute period the samples must be of equal quantity and may be stored with other samples taken during that 60 minute period in a common container.
- b) If the discharge usually flows for a period less than 24 hours then no less than 18 spot samples shall be taken as described in paragraph a) above to represent the nominated 24 hour period.

Trade Waste Bylaw

c) The 24 hour flow proportionate sample is then obtained by taking a part of the contents of each container and mixing all such samples together. The size of the part of each container sample that is used shall be in direct proportion to the volume of discharge that occurred from the time a sample was first placed in the particular container to the time a sample was first placed in the next container.

5.1.5. Frequency, number and timing for samples

5.1.5.1. Frequency and number of samples

Analyses shall be based on samples taken at regular intervals during each month (the control period). The samples should be composite samples, unless the determinations to be carried out prohibit the use of a composite sample. The choice of the necessary number of samples taken during each control period should be decided on the basis of statistical techniques (See BS 6068:Section 6.1) but shall not be less than once per month when sampling and analysis is required.

5.1.5.2. Sampling programme

The objective of a sampling programme often dictates when and how a sample is collected. When sampling trade waste, allowance should be made for the following sources of variation in quality:

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

If the identification of the nature and magnitude of peak load are important, sampling should be restricted to those periods when peak loads are known to occur.

The most appropriate type of sampling method (grab or composite) may be dependant on the magnitude of the variation in quality.

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

If taking more than one sample, the samples should normally be taken at fixed intervals during the whole control period. The control period shall normally be one month.

The following formula indicates the working day number during which sampling should take place

$$A + \frac{WD}{n}, A + \frac{WD \times 2}{n}, A + \frac{WD \times 3}{n}, \dots\dots\dots A + \frac{365 \times n}{n}$$

where

WD is the number of working days for the premises in the month

n is the number of samples per month

Trade Waste Bylaw

A is a random number in the interval between $(-WD/n)$ and 0.

After determining the intervals and the working day number, it should be ensured that the sampling does not lead to any risk of systematic error, for example by always taking samples on one particular day, or by systematically omitting particular working days.

5.1.5.3. Sampling period

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

This subclause deals with the selection of the period over which a composite sample has to be taken. When selecting the period, the following 2 factors should be considered:

- a) The objective of the sampling. For example, it may be necessary to assess the average organic load in a flow over several 24 hour periods, in which case diurnal flow proportional composite samples will be adequate.
- b) The stability of the sample. In the example given in (a), it would not necessarily be practical to extend the compositing period for longer than 24 hours, since the organic component in the sample under study may deteriorate.

The stability of the sample may often limit the duration of the sampling period. In such cases, reference should be made to the specific analytical techniques to be employed and the receiving laboratory should be consulted, in order that correct preservative measures can be used. BS 6068:Section 6.3 gives further details on the preservation and storage of samples.

5.1.5.4. Sample preservation, transportation and storage

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

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

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

The laboratory responsible for analysing the samples should always be consulted with regard to the selection of the preservation method and subsequent transport and storage.

NOTE – Further details may be found in BS 6068:Section 6.3.

5.1.5.5. Sample identification and records

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

- a) Name of the trade premises;
- b) Trade waste consent number;
- c) Sampling point;
- d) Date, start and stop of sampling;

Trade Waste Bylaw

- e) Time, start and stop of sampling;
- f) Duration of the sampling period;
- g) Details of the sampling method;
- h) Preservation method;
- i) Details of any field tests;
- j) Name of the person who carried out the sampling.

Section 6 TRADE WASTE CHARGES

6.1. Charging principles

Treatment, reception and disposal

The approach taken within this bylaw is to levy 2 types of charges:

- a) A "trade waste treatment charge", based on excess biochemical oxygen demand and excess suspended solids measurements, and
- b) An "excess sewage reception and disposal charge", based on "excess volume" and taking no account of quality.

Table 1: Charge items and terms

Trade waste discharges	Terms
Temporary discharge charge	A charge payable prior to receipt of temporary discharge
Trade waste application charge	A charge payable on an application for a trade waste discharge
Annual trade waste consent charge	An annual management charge for holders of trade waste consents to cover the WWA's costs associated with: <ol style="list-style-type: none"> (a) Administration, (b) Compliance monitoring, and (c) Inspection of the consents.
Volume charge Suspended solids charge Biochemical oxygen demand charge	A set of unit charges incorporating the trade waste share of capital and operational costs for the reticulation, treatment and disposal of wastewater

6.2. Method of determining the excess characteristics of a trade waste discharge

The **excess volume** is the average daily 24 hour flow volume of the discharge less the estimated average daily 24 hour flow volume from an equivalent number of dwellings. It is calculated using the following formula:

$$\text{Excess 24 hour flow volume } (X_{24}) = F_{t24} - (F_{d24} n)$$

Should the calculation based on this equation yield a negative value then the excess 24 hour flow volume (X_{24}) is 0.

The **excess biochemical oxygen demand** is the average total daily mass of biochemical oxygen demand of the discharge less the estimated total daily biochemical oxygen demand mass from an equivalent number of dwellings. It is calculated using the following formula:

$$\text{Excess biochemical oxygen demand } (X_b) = B_t - (B_d n)$$

Trade Waste Bylaw

Should the calculation based on this equation yield a negative value then the excess Biochemical Oxygen Demand (X_b) is 0.

The **excess suspended solids** is the average total daily suspended solids mass of the discharge less the estimated total daily suspended solids mass from an equivalent number of dwellings. It is calculated using the formula:

$$\text{Excess suspended solids } (X_s) = S_t - (S_d n)$$

Should the calculation based on this equation yield a negative value then the excess suspended solids (X_s) is 0.

The items in the above formulae are defined and their method of calculation is set out in Table 2.

The Council's publicly notified Trade Waste Bylaw Schedule of Charges contains values which are believed to be reasonable estimates of data necessary for use in the above formulae.

6.3. Method of calculating charges

The **excess volume** reception and disposal charge (volume charge) is calculated using the formula:

$$\text{Excess volume charge} = X_{24} C_t C_{24}$$

The **excess biochemical oxygen** treatment charge (BOD charge) is calculated using the formula:

$$\text{BOD charge} = X_b C_t C_b$$

The **excess suspended solids** treatment charge (SS charge) is calculated using the formula:

$$\text{SS charge} = X_s C_t C_s$$

The total trade waste charges due is the sum of:

- a) The excess volume charge,
- b) The BOD charge, and
- c) The SS charge.

The items in the above formulae are defined and their method of calculation in set out in Table 2.

The Council's publicly notified Trade Waste Bylaw Schedule of Charges contains data which are believed to be reasonable estimates for use in the above formulae.

6.4. Method of setting the charge rates

The **24 hour flow volume** charge rate is calculated using the following formula:

$$\text{Twenty-four hour flow volume charge rate } (C_{24}) = \frac{\$R}{TQ_{24}}$$

The **Biochemical Oxygen Demand** treatment charge rate is calculated using the following formula:

$$\text{Biochemical Oxygen Demand treatment charge rate } (C_b) = \frac{\$B}{T_b}$$

The **suspended solids** treatment charge rate is calculated using the following formula:

$$\text{Suspended solids treatment charge rate } (C_s) = \frac{\$S}{T_s}$$

The items in the above formulae are defined and their method of calculation is set out in Table 2.

The Council's publicly notified Trade Waste Bylaw Schedule of Charges contains data which are believed to be reasonable estimates for use in the above formulae.

Table 2: Definition and means of calculation of the items used in calculating trade waste charges

Item	Units	Definition
BOD	g/m ³	Biochemical Oxygen Demand.
B_d	kg/day	Estimated total daily biochemical oxygen demand mass from an average dwelling as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
B_t	kg/day	The average total daily mass of biochemical oxygen demand per operational day from the trade premises. B_t is calculated using the following formula: $B_t = b_t \times Q_t$
b_t	g/m ³	The average biochemical oxygen demand concentration. Determined as the mean of the results of the analysis of no fewer than 3 samples taken in accordance with the Council's trade waste bylaw.

Trade Waste Bylaw

C_{24}	\$/m ³	Twenty four hour flow volume charge rate as calculated pursuant to 6.4 and notified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
C_b	\$/kg	Biochemical oxygen demand treatment charge rate demand as calculated pursuant to 6.4 and notified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
C_s	\$/kg	Suspended solid (SS) treatment charge rate as calculated pursuant to 6.4 and notified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
C_t	days	Operational days. The number of days on which the discharge occurs during the charge period determined in accordance with clause 1.12.1.4 of this bylaw.
F_{d24}	m ³	Estimated average daily 24 hour flow volume from an average dwelling as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
F_{t24}	m ³	Average 24 hour flow volume determined by taking the mean of no less than 5 determinations of the 24 hour flow volume of a discharge made within the charge period in accordance with the methods specified in the trade waste bylaw.
H_t	hours	The average number of hours of discharge on an operational day, as specified in the notice of consent to discharge trade waste, or reasonably estimated by the WWA whenever it is found that actual operational hours exceed those on the consent.
n		$n = 1$ As each property pays the same separate sewage rate, the rateable value of each Trade Waste property will be taken to be equal to the average rateable value of a dwelling.
Q_t	m ³ /day	The average total volume of a discharge during an operational day. Where the consent to discharge specifies the use of 24 hour flow measurement and 24 hour flow proportionate sampling, then Q_t is calculated using the following formula: $Q_t = F_{t24}$
SS	kg/day	Suspended solids.
S_d	kg/day	The estimated total daily suspended solids mass from an average dwelling as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
S_t	kg/day	The average daily total mass of suspended solids per operational day from the trade premises. S_t is calculated using the following formula: $S_t = s_t \times Q_t$
s_t	g/m ³	The average suspended solids concentration. Determined as the mean of the results of the analysis of no fewer than 3 samples taken in accordance with the trade waste bylaw.
T_b	kg	Estimated total annual biochemical oxygen demand load of the total flow into the wastewater treatment plant as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.

Trade Waste Bylaw

TQ_{24}	m^3	Estimated maximum potential 24 hour flow volume of all wastewater received and disposed of from the district on an annual basis. Being the estimated 24 hour flow capacity of the wastewater treatment plant multiplied by the number of days in the year.
T_s	kg	Estimated total suspended solids load of the total flow into the wastewater treatment plant as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
X_{24}	m^3/day	Excess 24 hour flow volume as calculated pursuant to 6.2.
X_b	kg/day	Excess biochemical oxygen demand as calculated pursuant to 6.2.
X_s	kg/day	Excess suspended solids as calculated pursuant to 6.2.
$\$B$		The estimated annual BOD treatment costs for all wastewater from the district calculated as follows: $\$B = \$STP \times 0.3$
$\$D$	\$	The estimated annual cost of providing, financing, operating and maintaining the wastewater drainage network including the wastewater pumping stations, as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.
$\$R$	\$	The estimated annual reception and disposal costs for all wastewater in the district calculated as follows: $\$R = (\$STP \ 0.4) + \$D$
$\$S$	\$	The estimated annual SS treatment cost for all wastewater in the district calculated as follows: $\$S = \$STP \ 0.3$
$\$STP$	\$	The estimate annual cost of providing, financing, operating and maintaining the Council's wastewater treatment plant and the outfall, as specified in the Council's publicly notified Trade Waste Bylaw Schedule of Charges.


AND THAT PUBLIC NOTICE BE GIVEN of the purport of this resolution together with notice that the resolution will be submitted for confirmation at an Ordinary Meeting of the Council to be held on the 11th day of July 2000 at the Council Chambers, Maniapoto Street, Otorohanga.

AND THAT a copy of the Special Order be deposited at the Offices and Library of the Council, Maniapoto Street, Otorohanga and be available for public inspection during office hours until immediately preceding the date of confirmation.

The foregoing Bylaw was made by Special Order of the Otorohanga District Council at a Meeting of the Council held on the 30th day of May 2000 and with amendments duly confirmed as such at a Meeting of the Council held on the 11th day of July 2000.

THE COMMON SEAL of THE OTOROHANGA DISTRICT COUNCIL was hereto set and affixed pursuant to a resolution passed by Council on the 21st day of July 2000 in the presence of:





MAYOR

GENERAL MANAGER