BULLER DISTRICT COUNCIL

TRADE WASTE BYLAW 2007

THAT pursuant to its powers under the Local Government Act 2002, the Buller District Council resolves by way of Special Order to make the following Bylaw:

THE BULLER DISTRICT COUNCIL TRADE WASTE BYLAW 2007

1. TITLE

This Bylaw may be cited as the Buller District Council Trade Waste Bylaw 2007.

2. COMMENCEMENT

This Bylaw shall come into force on 1 July 2008.

3. RELATED DOCUMENTS

This Bylaw adopts New Zealand Standard NZS9210: Part 23: 2004, with the modification and amendments defined below. NSZ9201: Part 23: 2004 shall be read in conjunction with this document, with this document taking precedence.

4. DEFINITIONS

Add or amend the following definitions:

- Sewerage system shall mean the Westport Sewerage System, including treatment and disposal facilities.
- Territorial Authority shall mean the Buller District Council.
- Wastewater Authority shall mean the Buller District Council.
- Trade Waste (TW) shall be defined in NZS9201:23 and include discharges from all Trade Waste premise.
- Trade Waste Premises shall mean all premises, activities and the like that are considered non-domestic consumers.

5. AMENDMENTS TO NZS9201: PART 23: 2004

a) Renaming and amendments to Section 3.2: Application, for Trade Waste Consent. Delete the title and replace Clause 3.2.1 with:

3.2 Procedure for Trade Waste Consent

3.2.1 All connections from non-domestic (ND) premises shall have either a Permitted or Conditional Trade Waste Consent.

3.2.2 The Council will submit a provisional Trade Waste Consent Form to all ND consumers within six months of adopting the Trade Waste

Bylaw, and within six months from any new connections or change of use identifiable from the Council's rating database.

3.2.3 The recipient of the provisional Trade Waste Consent Form will have the option of either accepting the assessment stated on the form or submitting a Formal Trade Waste Consent Application on Form 1.

3.2.4 A Formal Trade Waste Consent Application will be dealt with in accordance with NZS9201:23, Section 3.

3.2.5 The recipient of the provisional Trade Waste Consent Form will have two calendar months to submit a Formal Trade Waste Consent Application. After this time, the Provisional Trade Waste Consent Form will be deemed to become approved and a Permitted Consent in terms of the Bylaw.

3.2.6 Fees and charges identified in Schedule 1C will be operative with an approved Consent and be included in the annual rates assessment.

3.2.7 At a frequency of greater than six months, non-domestic consumers may submit a new TW consent application form, seeking a reassessment or identifying a change of use.

3.2.8 Any reassessment will not become operative until the next financial year.

Renumber Clauses 3.2.2 to 3.2.6 as 3.2.9 to 3.2.13, respectively.

b) Clause 3.3 – delete "10 days" and replace with "20 working days"

c) Clause 3.4.2 – delete "10 days" and replace with "20 working days"

d) Clause 5.4.3: Tankered Waste – delete clause 5.4.3 and replace with:

"Tankered waste shall not be discharged into its sewerage system unless a Conditional Trade Waste Consent has been approved."

e) Clause 6.3: Charges and Payments

6.3.1 – insert the additional wording:

"The methodology for calculating the appropriate Trade Waste charge shall be as set out in Schedule 1D."

Schedule 1C: Trade Waste Charges

Fees and charges are set annually by Council resolution and notified in the Annual Plan.

The following charging categories apply to non-domestic/trade waste consumers.

A1 Connection/Annual Charge:	This is an annual charge made for every connection to the Westport sewerage system. This is the minimum charge per rateable lot with a connection to the system.
A2 Additional Trade Waste Charge:	This is an annual charge for recovery of the marginal cost of providing additional trade waste capacity. This charge will be made using the methodology defined in Schedule 1D. This charge will be made on the basis of multiples of domestic dwelling equivalents.
A3 Provisional Application Fee:	No charge.
A4 Trade Waste Consent Application Fee:	This is payable with each Trade Waste consent application.
A5 Compliance or Extraordinary Application Processing Costs:	Time and disbursements costs, as incurred and at rates identified in the annual plan. Extraordinary application processing costs will only be incurred after exceeding its provision in A4 and after advising the applicant that extraordinary processing or compliance costs will subsequently apply.

Schedule 1D: Methodology for Calculating Additional Trade Waste Charge

The following Methodology will be used to apply the fees and charges set out in Schedule 1C. This methodology is based on principles outlined in the Introduction to the Bylaw.

1. The Council will prepare a schedule of non-domestic consumers from their rating database (Appendix C).
2. Using best available information and local knowledge, the council will assess the business function or activity and estimate the relevant local capacity of usage criteria of each ND consumer on the schedule.
3. From load factors for the generic business functions or activities, an average daily flow will be estimated. In special cases, organic load may be considered, if relevant to that activity or if it may have an implication to the sewerage system.
4. From the estimate of daily flows (or organic load in special cases), the ratio of flow estimated from the activity (or organic load) to that expected from a domestic dwelling and as identified in Appendix A, will be calculated.
5. As the assessment is not necessarily highly accurate, the calculated ratio will be averaged into one of the following groups, and the appropriate charge concluded.

Ratio	Group	Charge
1 - <2	A	1 domestic charge
2 - <5	B	1 domestic charge + 3 additional TWC
5 - <10	C	1 domestic charge + 7 additional TWC
10 - <20	D	1 domestic charge + 15 additional TWC
20 – 30	E	1 domestic charge + 25 additional TWC
>30	F	1 domestic charge + Ratio x additional TWC
>70	G	Formal Trade Waste Consent Application Required

6. The assessment will be forwarded to the applicant as a Provisional Trade Waste Consent, with procedures defined in Section 3.2 of the Bylaw.
7. For application assessed or known to have a maximum flow greater than $50m^3$/day, a Formal Trade Waste Consent Application shall be required to be submitted by the consumer.

BULLER DISTRICT COUNCIL
TRADE WASTE BYLAW

Appendix B - Typical Wastewater Load Characteristics

From Westport WWTP Design Report, January 2006:

Average daily flow	3,309 m^3/day
Population equivalent	7382 pe

From Trade Waste Bylaw report, April 2007:

Conversion factor	2.13 pe/dwelling

1. ORGANIC CONTAMINANTS, DISSOLVED SOLIDS AND NUTRIENTS

Contaminant	g/m^3	g/pe/day	g/dwelling/day
BOD	280	70 [1]	149
Total Suspended Solids	300	75 [1]	160
Total Kjedahl Nitrogen	60	15 [1]	32
Total Phosphorus	16	4 [1]	9
Sodium	60 [2]	15	32
Chloride	90 [2]	23	48
Sulphate	30 [2]	8	16
Fats, Oil and Greases	100 [2]	25	53

2. METALS

Contaminant	mg/m^3	mg/pe/day	mg/dwelling/day
Aluminium	160 [2]	40	85
Arsenic	2.8 [2]	0.7	1.5
Boron	204 [2]	51	109
Cadmium	0.32 [2]	0.08	0.17
Chromium	5.6 [2]	1.4	3.0
Copper	100 [2]	25	53
Iron	1556 [2]	389	829
Lead	15 [2]	4	8
Manganese	91 [2]	23	48
Nickel	7.5 [2]	1.9	4.0
Zinc	196 [2]	49	104

[1] Sourced from Westport Sewerage - Assessment of Flows and Loads: Appendix D, January 2006

[2] Sourced from Selwyn District Council Trade Waste Bylaw Development, September 2004

BULLER DISTRICT COUNCIL
TRADE WASTE BYLAW

Appendix A - Flows and Loads per Trade Waste Activity Type

From Westport WWTP Design Report, January 2006:

Domestic Flow Load	250	L/pe/day
Domestic BOD Loading	70	g/pe/day

From the British Water Code of Practice - Flows and Loads:

Activity Type	Flow L/pe/day	Flow Factor	BOD g/pe/day	BOD Factor	SS g/pe/day	DRP g/pe/day	Ammonia-N g/pe/day	TKN g/pe/day
Accountants	50	0.20	25	0.36	20	2.2	5	7.5
Activity Centre	50	0.20	19	0.27	19	1.76	4	6
Auto-Electrical	50	0.20	25	0.36	20	2.2	5	7.5
Backpackers	100	0.40	56	0.80	50	2.2	5	7.5
Bank	50	0.20	25	0.36	20	2.2	5	7.5
Builders	50	0.20	25	0.36	20	2.2	5	7.5
Bus Company	50	0.20	25	0.36	20	2.2	5	7.5
Café	25	0.10	30	0.43	25	1.1	2.5	3.75
Café/Bakery	25	0.10	30	0.43	25	1.1	2.5	3.75
Car Repair	50	0.20	25	0.36	20	2.2	5	7.5
Cement	50	0.20	25	0.36	20	2.2	5	7.5
Clothing	50	0.20	25	0.36	20	2.2	5	7.5
club	20	0.08	19	0.27	18	2.2	5	7.5
Coal Stockpile	50	0.20	25	0.36	20	2.2	5	7.5
Commercial	50	0.20	25	0.36	20	2.2	5	7.5
Commercial Offices	50	0.20	25	0.36	20	2.2	5	7.5
Community	50	0.20	25	0.36	20	2.2	5	7.5
Contractor	50	0.20	25	0.36	20	2.2	5	7.5
Courts	50	0.20	25	0.36	20	2.2	5	7.5
Dairy	200	0.80	60	0.86	50	3.52	8	12
Distributors	50	0.20	25	0.36	20	2.2	5	7.5
Dry Cleaners	400	1.60	120	1.71	100	7.04	16	24
DOC	50	0.20	25	0.36	20	2.2	5	7.5
Education	60	0.24	25	0.36	20	1.1	2.5	3.75
Educational	50	0.20	25	0.36	20	2.2	5	7.5
Electricity	50	0.20	25	0.36	20	2.2	5	7.5
Emergency	50	0.20	25	0.36	20	2.2	5	7.5
Engineering	50	0.20	25	0.36	20	2.2	5	7.5
Ex-Hotel	50	0.20	25	0.36	20	2.2	5	7.5
Food	25	0.10	30	0.43	25	1.1	2.5	3.75
Funeral Service	50	0.20	25	0.36	20	2.2	5	7.5
Garage	50	0.20	25	0.36	20	2.2	5	7.5
Gas Station	50	0.20	25	0.36	20	2.2	5	7.5
Golf Club	20	0.08	19	0.27	18	1.76	4	6
Hall	10	0.04	12	0.17	12	1.1	2.5	3.75
Harbour	50	0.20	25	0.36	20	2.2	5	7.5
Health	800	3.20	0	0.00	0	0	0	0
Hire Store	50	0.20	25	0.36	20	2.2	5	7.5
Hotel	180	0.72	75	1.07	50	4.4	10	15
Information Centre	50	0.20	25	0.36	20	2.2	5	7.5
Joinery	50	0.20	25	0.36	20	2.2	5	7.5
Lawyer	50	0.20	25	0.36	20	2.2	5	7.5

Local Govt	50	0.20	25	0.36	20	2.2	5	7.5
Local Govt - Theatre	10	0.04	12	0.17	12	1.1	2.5	3.75
Motel	180	0.72	75	1.07	50	4.4	10	15
Motor Camp	130	0.52	50	0.71	45	2.2	5	7.5
NON-rateable	50	0.20	25	0.36	20	2.2	5	7.5
Plunket	50	0.20	25	0.36	20	2.2	5	7.5
Police	50	0.20	25	0.36	20	2.2	5	7.5
Printers	50	0.20	25	0.36	20	2.2	5	7.5
Racecourse	10	0.04	12	0.17	12	1.1	2.5	3.75
Railways	50	0.20	25	0.36	20	2.2	5	7.5
Real Estate	50	0.20	25	0.36	20	2.2	5	7.5
Refuse Tip	60	0.24	25	0.36	25	2.2	5	7.5
Religious	10	0.04	12	0.17	12	1.1	2.5	3.75
Retail	50	0.20	25	0.36	20	2.2	5	7.5
Sporting	50	0.20	19	0.27	19	1.76	4	6
Surveyor	50	0.20	25	0.36	20	2.2	5	7.5
Take aways	12	0.05	15	0.21	15	1.76	4	6
Tree Felling	50	0.20	25	0.36	20	2.2	5	7.5
Trucking	50	0.20	25	0.36	20	2.2	5	7.5
Tyre Retailer	50	0.20	25	0.36	20	2.2	5	7.5
Tyres	50	0.20	25	0.36	20	2.2	5	7.5
Vehicle repair	50	0.20	25	0.36	20	2.2	5	7.5
Veterinary	136	0.54	38	0.54	38	2.2	5	7.5
Video Store	50	0.20	25	0.36	20	2.2	5	7.5
Warehouse	50	0.20	25	0.36	20	2.2	5	7.5
WINZ	50	0.20	25	0.36	20	2.2	5	7.5
Workshops	50	0.20	25	0.36	20	2.2	5	7.5

All other activities are assessed individually on their load contribution

NEW ZEALAND STANDARD

MODEL GENERAL BYLAWS
Part 23
TRADE WASTE

ISBN 1-86975-013-6

NOTES

CONTENTS PAGE

Committee representation ..... IFC
Acknowledgement ..... IFC
Copyright ..... IFC
Foreword 5
Latest revisions 8
Review of Standards 8

Section

1 INTRODUCTION 9
1.1 Commencement and application 9
1.2 Revocation 9
1.3 Scope of the bylaw 9
1.4 Referenced documents 10
1.5 Definitions 11
1.6 Abbreviations 15
1.7 General 16

2 COMPLIANCE WITH THE BYLAW 18
2.1 Control of discharges 18
2.2 Storage, transport, handling and use of hazardous or harmful materials 18

3 TRADE WASTE DISCHARGES AND CONSENTS 19
3.1 Classification of trade waste discharges 19
3.2 Application for a trade waste consent 19
3.3 Processing of an application 20
3.4 Information and analysis 20
3.5 Consideration of an application 20
3.6 Consideration criteria 21
3.7 Conditions of trade waste consent 22
3.8 Duration 23
3.9 Technical review and variation 24
3.10 Cancellation of the right to discharge 24

4 TRADE WASTE APPROVAL CRITERIA 26
4.1 Pre-treatment 26
4.2 Mass limits 26

5 SAMPLING, TESTING AND MONITORING 27
5.1 Flow metering 27
5.2 Estimating discharge 27
5.3 Sampling and analysis 28
5.4 Monitoring 29

6 BYLAW ADMINISTRATION 31
6.1 Review of decisions 31
6.2 Accidents and non-compliance 31
6.3 Charges and payments 31
6.4 Authorized officers 32
6.5 Transfer or termination of rights and responsibilities 32
6.6 Service of documents 33
6.7 Offences 34
6.8 Transitional provisions 34

Appendix

A Application for trade waste discharge (Normative) 35
B Description of trade waste and premises (Normative) 37
C Application for temporary discharge (Normative) 39
D Model trade waste consent form (Normative) 41

Schedule

1A Permitted discharge characteristics 42
1B Prohibited characteristics 46
1C Trade waste charges 48

GUIDELINE TO THE MODEL TRADE WASTE BYLAW 50
What is the purpose of this Guideline? 50
The objectives of a trade waste bylaw 51
What is trade waste? 51
Implementation of a trade waste bylaw 52
Who should apply for a trade waste consent 54
Specific Guidelines to the model general bylaw 56
G1 Review of the bylaw 56
G1.5 Definitions 56
G3.1 Classification of trade waste discharges 57
G3.2 Application for a trade waste consent 57
G3.4 Information and analysis 61
G3.9 Technical review and variation 61
G4.1 Pre-treatment 61
G4.2 Flow balancing/mass limits 65
G5.1 Flow metering 65
G5.3 Sampling and analysis 66
G5.4 Monitoring 66
G6.3 Charges and payments 71
G6.4 Authorized officers 72
G6.5 Transfer or termination of rights and responsibilities 73
G6.7 Offences 74
G Schedule 1A Permitted discharge characteristics 75
G Schedule 1B Prohibited characteristics 84

Table

1A.1 General chemical characteristics 44
1A.2 Heavy metals 45
1A.3 Organic compounds and pesticides 45
G1 Summary of a simultaneous implementation process 54
G2 Examples of dischargers/processes producing trade waste 55
G3 Rates charges 72
G4 General chemical characteristics 80
G5 Heavy metals 82
G6 Organic compounds and pesticides 83

Figure

G1 Flow chart for the application process 58

FOREWORD

Purpose

This Model General Bylaw Part 23, *Trade Waste* has been prepared to provide a suitable model for all territorial authorities (TAs). It replaces NZS 9201:Part 23:1999 *Trade waste.* It is a complementary document to Part 22:1999 *Wastewater drainage* that covers the actual drainage of the wastewater from Trade Premises.

TAs are empowered under Part 8 of the Local Government Act (LGA) 2002 to make bylaws. This new Act requires that all existing local authority bylaws be reviewed by 30 June 2008. There are new policy analysis, decision-making and consultation requirements around the development of new bylaws (and the review of existing ones) and there are some specific new provisions relating to Trade Waste bylaws. This new Part 23 and Part 22 are part of the NZS 9201 series of model bylaws that cover various matters under the jurisdiction of TAs.

This model bylaw covers the use of existing practices from throughout New Zealand. It has been drafted to provide a general model so that by means of specific modifications each TA may meet its individual requirements. Small TAs should be able to use the document with minimal modification without undertaking substantial investigations.

The purpose of this document can be briefly described as follows:

(a) To provide a suitable model Trade Waste bylaw for all TAs.

(b) To provide guidance for relatively small TAs with limited resources.

(c) To ensure the protection of Wastewater Authority personnel and the general public.

(d) To protect the ability of the Wastewater Authority to meet the requirements of the Resource Management Act and in particular their resource consents for the discharge of treated Sewage and also the placement of sludge and Biosolids on land.

(e) To provide for an equitable spread of costs between domestic and Trade Waste discharges.

(f) To protect the investment in the existing and any future infrastructure, treatment plant and disposal facilities.

(g) To ensure compatibility between liquid, solid and gaseous phases of Trade Waste discharges. This compatibility can relate to such matters as meeting landfill acceptance criteria for solids and sludges and meeting resource consents for emissions to air as well as the Trade Waste discharge itself, into the TA Sewer.

(h) To ensure Trade Waste dischargers consider, and where appropriate and practicable implement, waste minimization and Cleaner Production techniques to reducing the quantity and improve the quality of their Trade Waste discharges.

(i) To foster consistency between TAs with respect to Trade Waste requirements.

Tailoring this Model Bylaw

This document is a model. As such it has been standardized as much as possible given the range of practices within New Zealand. Each TA will need to tailor the text to suit its individual requirements. As a minimum, this will include:

(a) Filling gaps provided in text with appropriate wording;

(b) Deleting unwanted text in the either/or choices provided;

(c) Inserting any figures, items, terms and other wording from the Schedules or elsewhere into the text in the places provided;

(d) Altering clause numbering (and any cross references) to match the TA's own bylaw system.

General legal and technical advice has contributed to the development of this model bylaw. However, it is recommended that any TA proposing to introduce a Trade Waste Bylaw also:

(a) Refers to the Building Act 2004;

(b) Refers to the Health Act 1956;

(c) Refers to the Local Government Act 2002 (particularly the bylaw provisions);

(d) Refers to the Guidelines for the Safe Application of Biosolids to Land in New Zealand 2003;

(e) Refers to the New Zealand Landfill Acceptance Criteria (2004);

(f) Refers to the New Zealand Waste Strategy 2002;

(g) Refers to the Resource Management Act (RMA) 1991; and

(h) Obtain specific legal and technical advice appropriate to their own particular requirements.

Concepts

The concept of a "Wastewater Authority" is included in this bylaw as it was in Part 23:1999. It is intended that the model bylaw should apply to the various options for the delivery of a wastewater service including situations where the responsibility for the total Sewerage System may be shared or split between two or more organizations.

The document introduces categories of Trade Waste. These categories are:

(a) Permitted;

(b) Conditional;

(c) Prohibited.

A permitted Trade Waste is an acceptable waste for which standard conditions can be applied, while Conditional Trade Waste is one where the risk of producing a waste which may be unacceptable is significant, and for which specific conditions may need to be applied. Prohibited waste is waste that is not acceptable for discharge.

The separation into particular categories is intended to provide advantages in administration, including renewals, control, policing and charging procedures.

Bylaw process

As noted above, the LGA has significantly altered the administrative process relating to the introduction and review of bylaws. For example, the need for a bylaw is to be substantiated by appropriate policy analysis, there are decision-making processes to be followed and a bylaw can only be introduced, amended (in any significant way) or revoked through the use of the 'special consultative procedure'. In addition to these general requirements there are specific provisions relating to consultation and process relating to Trade Waste bylaws that are to be strictly adhered to (refer to s. 148 of the LGA).

Before making changes to the model bylaw, consultation with interested parties is recommended. Consultation will assist in making appropriate modifications that will produce documents that are relevant and suitable for the specific circumstances of the individual authority. The regional council may require consultation in introducing these bylaws as they are responsible, under the RMA, for establishing a regional plan and for setting any conditions for discharges to the environment. The TA shall ensure consistency with regional plans and may need to impose certain conditions on the acceptance of wastewaters to meet requirements. The nature of the Wastewater Authority's infrastructure or treatment system, or discharge and disposal arrangements and associated resource consents, may also affect conditions of acceptance. In addition, consultation with prospective or existing dischargers may be necessary to set suitable conditions of acceptance on an individual discharger basis.

Bylaw fees and charges

Within the constraints of the LGA the individual TA shall, when setting fees and charges, set charging schedules and monitoring conditions that are appropriate for the circumstances of the TA and the specific dischargers, ensuring that the costs of treatment and disposal are shared fairly between industry and domestic dischargers, and that one is not subsidizing the other. Excessive and onerous monitoring requirements with no evident benefit shall be avoided so as not to impose large unnecessary costs on small Trade Waste dischargers in particular.

It should also be noted that fees and charges set under a bylaw must not provide for the TA to recover any more than the reasonable costs incurred by the TA for the matter for which the fee is charged. Also, fees and charges can only be amended by following the 'special consultative procedure'. This could be by way of the schedule of fees and charges being included in the Annual Plan or LTCCP process.

Guideline to this model trade waste bylaw
Standards New Zealand has also prepared a Guideline to the model bylaw. While not forming part of this model bylaw, it should be read in conjunction with, and is attached to, the document at the rear. The Guideline has been developed to assist in the management of trade discharges, to explain the responsibilities and requirements under Trade Waste bylaws and to assist in the understanding of them. The Guidelines also give both a business perspective and Wastewater Authority perspective.

The sign " " appears in the margin of the bylaw alongside any clause that has a corresponding clause in the Guidelines.

Defined terms are shown throughout the text of this bylaw starting with capital letters.

LATEST REVISIONS

The users of this Standard should ensure that their copies of the New Zealand and overseas Standards referenced in this document are the latest revisions or include the latest amendments. Such amendments are listed in the annual New Zealand Standards *Catalogue* which is supplemented by lists contained in the monthly magazine *Standards Update* issued free of charge to committee and subscribing members of Standards New Zealand.

REVIEW OF STANDARDS

It is recommended that this Standard be reviewed within five years of publication. Suggestions for improvement of this Standard will be welcomed. They should be sent to the Chief Executive, Standards New Zealand, Private Bag 2439, Wellington 6020.

NEW ZEALAND STANDARD

MODEL GENERAL BYLAWS
Part 23
TRADE WASTE

1 INTRODUCTION

This bylaw regulates the discharge of Trade Waste to a Sewerage System operated by a Wastewater Authority.

Section (s.) 158 of the Local Government Act (LGA) requires regular review of all bylaws.

1.1 Commencement and application

This bylaw comes into force on ./..July..2008

1.2 Revocation

The following bylaw is revoked on.....

1.3 Scope of the bylaw

1.3.1

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: Permitted, 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) 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 minimization and management programmes (including sludges) for Trade Waste producers.

1.3.2 *Compliance with other Acts*
Nothing in this bylaw shall derogate from any of the provisions of the Health Act, the Health and Safety in Employment Act, the Resource Management Act, the Building Act, the Hazardous Substances and New Organisms Act and its regulations or any other relevant statutory or regulatory requirements. In the event of any inconsistency between legislation the more stringent requirement applies.

1.3.3 *Trade premises and other users to which the bylaw applies*
This bylaw shall apply to all Trade Premises within the .....Buller.....District 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.

Pursuant to s. 196 of the Local Government Act the WWA may refuse to accept any type of Trade Waste which is not in accordance with this bylaw.

1.4 Referenced documents

New Zealand Standards

NZS 4304:2002	Management of healthcare waste
NZS 5465:2001	Self containment for motor caravans and caravans
NZS 9201:- - - -	Model general bylaws
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 waste waters

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 waste waters
BS EN 25667-1: 1994 BS 6068-6.1:1981	Water quality. Sampling. Guidance on the design of sampling programmes
BS EN 25667-2: 1993 BS 6068-6.2:1991	Water quality. Sampling. Guidance on sampling techniques
BS EN 5667-3: 2003 BS 6068-6.3:2003	Water quality. Sampling. Guidance on the preservation and handling of water samples

New Zealand Legislation
Building Act 2004
Hazardous Substances and New Organisms Act (HSNO) 1996 and associated Regulations
Health Act 1956
Health and Safety in Employment Act 1992
Land Transport Rule Dangerous Goods 1999 Rule 45001
Local Government Act (LGA) 2002
Resource Management Act (RMA) 1991 and associated Regulations

Other Publications
Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ) and 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

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

Building Industry Authority
New Zealand Building Code (NZBC) 1992 and Approved Documents
Document available from Building Industry Authority (BIA) 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

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

New Zealand Water and Wastes Association (NZWWA)
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 (NZWWA) 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

Sydney Water Corporation
Trade Waste Policy (2004)
Document available from Sydney Water Corporation 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

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

ACCESS POINT is a place where access may be made to a Private Drain for inspection (including sampling or measurement), cleaning or maintenance. The location of the Access Point shall be in accordance with the New Zealand Building Code.

ANALYST means a testing laboratory Approved in writing by an Authorized Officer on behalf of the WWA.

APPROVAL or APPROVED means Approval or Approved in writing by the Wastewater Authority (WWA), either by resolution of the Council or by an Authorized Officer.

AUTHORIZED OFFICER means any officer appointed by the Territorial Authority (TA) as an enforcement officer under s. 177 of the Local Government Act 2002 as an enforcement officer with powers of entry as prescribed by sections (s. s) 171-174.

BIOSOLIDS means Sewage Sludge derived from a Sewage treatment plant that has been treated and/ or stabilized 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/Biosolids is used generically throughout this document to include products containing Biosolids (e.g. composts).

CHARACTERISTIC means any of the physical or chemical Characteristics of a Trade Waste and may include the level of a characteristic.

CLEANER PRODUCTION means 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 minimize and manage Trade Waste by:

(a) Using energy and resources efficiently, avoiding or reducing the amount of wastes produced;

(b) Producing environmentally sound products and services;

(c) Achieving less waste, fewer costs and higher profits.

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 TRADE WASTE means Trade Waste which has conditions placed upon the Consent Holder by the WWA.

CONSENT means a Consent in writing given by the WWA and signed by an Authorized Officer authorizing a Person to discharge Trade Wastes to the Sewerage System.

CONSENT HOLDER means the Person occupying Trade Premises who has obtained a Consent to discharge or direct the manner of discharge of Trade Waste from any Premises to the WWA's Sewerage System, and includes any Person who does any act on behalf or with the express or implied Consent of the Consent Holder (whether for reward or not) and any licensee of the Consent Holder.

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 –

(a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or

(b) When discharged onto or into 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.

CONTINGENCY MANAGEMENT PROCEDURES means 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.

COUNCIL means the .....Buller District..... Council.

DISCONNECTION means the physical cutting and sealing of any of the Wastewater Authority's water services, utilities, drains or Sewer for use by any Person.

DISTRICT means the district of the Territorial Authority established under the LGA which has adopted this bylaw.

DOMESTIC SEWAGE means Foul Water (with or without matter in solution or suspension therein) discharged from Premises used solely for residential purposes, or wastes of the same character discharged from other Premises; but does not include any solids, liquids, or gases that may not lawfully be discharged into the Sewerage System and may include geothermal water.

FOUL WATER means 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 minimized, 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 hazardous substances as defined by the Hazardous Substances and New Organisms Act 1996.

INFRINGEMENT means an offence as specified by this bylaw under s. s 243 and 259 of the LGA.

LONG TERM COUNCIL COMMUNITY PLAN (LTCCP) means a long term council community plan adopted under s. 93 of the LGA.

MANAGEMENT PLAN means the plan for management of operations on the Premises from which Trade Wastes come, and may include provision for Cleaner Production, waste minimization, discharge, Contingency Management Procedures, and any relevant industry Code of Practice.

MASS LIMIT means the total mass of any characteristic that may be discharged to the Wastewater Authority Sewerage System over any stated period from any single Point of Discharge or collectively from several points of discharge.

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

OCCUPIER means the Person occupying Trade Premises connected to the Sewerage System.

PERMITTED DISCHARGE means a Trade Waste discharge that has been approved by, or is acceptable to, the Wastewater Authority and as long as it has the physical and chemical Characteristics which comply with the requirements of the Wastewater Authority standard as defined in Schedule 1A of this bylaw.

PERSON includes a corporation sole and also a body of Persons whether incorporated or unincorporated.

POINT OF DISCHARGE is 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 Consent.

PRE-TREATMENT means 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 Consent.

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 or separately occupied.

PRIVATE DRAIN means that section of drain between the Premises and the point of connection to the Wastewater Authority's Sewerage System.

PROHIBITED TRADE WASTES means a Trade Waste that has prohibited Characteristics as defined in Schedule 1B and does not meet the conditions of Schedule 1A. The waste is not acceptable for discharge into the Wastewater Authority's system unless specifically approved by them as a Conditional Trade Waste.

SCHEDULE OF RATES AND CHARGES means the list of items, terms and prices for services associated with the discharge of Trade Waste as approved by the Wastewater Authority.

SEWAGE means Foul Water and may include Trade Wastes.

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

SEWER means the pipework drainage system that conveys Sewage.

SEWERAGE SYSTEM means 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 is a term to indicate the relative size of a given Industry compared to the capacity of the Sewerage System (including Sewage treatment plant) which services that industry. Industry size relates to volume and/or loads discharging into the Sewerage System. Loads can be the conventional loadings of BOD_5 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.

STORMWATER means surface water run-off resulting from precipitation.

TANKERED WASTE is water or other liquid, including waste matter in solution or suspension, which is conveyed by vehicle for disposal, excluding Domestic Sewage discharged directly from house buses, caravans, buses and similar vehicles.

TEMPORARY DISCHARGE means any discharge of an intermittent or short duration. Such discharges include the short-term discharge of an unusual waste from Premises subject to an existing Consent.

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

TRADE PREMISES means:

(a) Any Premises used or intended to be used for any industrial or trade purpose; or

(b) Any Premises used or intended to be used for the storage, transfer, treatment, or disposal of waste materials or for other waste management purposes, or used for composting organic materials; or

(c) Any other Premises from which a Contaminant is discharged in connection with any industrial or trade process;

(d) 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 is 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 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.

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

WORKING DAY means any day of the week other than:

(a) A Saturday, a Sunday, Waitangi Day, Good Friday, Easter Monday, Anzac Day, the Sovereign's birthday, Labour Day; and

(b) A day in the period commencing with the 25th day of December in a year and ending with the 2nd day of January in the following year.

1.6 Abbreviations

$/kg	dollars per kilogram
$/L/s	dollars per litre per second
$/m^3	dollars per cubic metre
°C	degrees Celsius
ANZECC	Australian New Zealand Environment and Conservation Council
B	boron
BOD_5	Biochemical Oxygen Demand
Br_2	bromine
Cl_2	chlorine
CN	cyanide
COD	Chemical Oxygen Demand
DAF	dissolved air floatation
DP	deposited plan
DS	dry solids
F	fluoride
FOGs	fats, oils and greases

g/m^3	grams per cubic metre
GST	goods and services tax
H_2S	hydrogen sulphide
HAHs	halogenated aromatic hydrocarbons
HCHO	formaldehyde
HCN	hydrogen cyanide
hr	hour
HSNO	Hazardous Substances and New Organisms Act
kg/day	kilogram per day
L	litre
L/s	litre per second
LGA	Local Government Act
LTCCP	long term council community plan
m^3	cubic metre
max.	maximum
MBAS	methylene blue active substances
MfE	Ministry for the Environment
mg/L	milligram per litre
mL/L	millilitre per litre
mm	millimetres
MSDS	material safety data sheets
N	nitrogen
NH_3	ammonia
NH_3-N	ammoniacal nitrogen
P	phosphorus
PAHs	polycyclic (or polynuclear) aromatic hydrocarbons
PBBs	polybrominated biphenyls
PCBs	polychlorinated biphenyls
pH	measure of acidity/alkalinity
RMA	Resource Management Act
s	second
s.	section
s. s	sections
SBR	sequencing batch reactor
SO_4	sulphate
SS	suspended solids concentration
TAs	territorial authorities
UV	ultra violet
UVT	ultra violet transmission
WC	water closet
WWA	wastewater authority

1.7 General

1.7.1
In this bylaw one gender includes all genders, the singular includes the plural, and the plural includes the singular.

1.7.2
The word "shall" identifies a mandatory requirement for compliance with the Standard. The word "should" refers to practices which are advised or recommended.

1.7.3
The term "normative" has been used in this Standard to define the application of the Appendix to which it applies. A "normative" Appendix is an integral part of a Standard.

1.7.4
Clauses prefixed by "C" and printed in italic type inside a grey screen are intended as comments on the corresponding mandatory clauses. They are not to be taken as the only or complete interpretation of the corresponding clause, nor should they be used for determining in any way the mandatory requirements of compliance within this Standard. The Standard can be complied with if the comment is ignored.

2 COMPLIANCE WITH THE BYLAW

2.1 Control of discharges

2.1.1
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 Consent; 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 Consent.

2.1.2
In the event of failure to comply with 2.1.1 (a) – (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.

2.1.3
Any Person discharging to the WWA Sewerage System shall also comply with requirements of the Hazardous Substances and New Organisms (HSNO) Act and the RMA.

2.2 Storage, transport, handling and use of hazardous or harmful materials

(a) All Persons on Trade Premises shall take all reasonable steps to prevent the accidental entry of any of the materials listed in 2.2(c) of this bylaw from entry into the Sewerage System as a result of leakage, spillage or other mishap.

(b) 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 2.2(c) in a manner that may cause the material to enter the Sewerage System and cause harmful effects.

(c) Materials referred to in 2.2 (a) and (b) are those:

(i) Products or wastes containing corrosive, toxic, biocidal, radioactive, flammable or explosive materials

(ii) Likely to generate toxic, flammable, explosive or corrosive materials in quantities likely to be hazardous, when mixed with the wastewater stream

(iii) 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.

3 TRADE WASTE DISCHARGES AND CONSENTS

3.1 Classification of trade waste discharges

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

(a) Permitted (Consent required if decided by the WWA);

(b) Conditional (Consent required); or

(c) Prohibited (not Consentable).

NOTE – See the definitions in 1.5.

3.1.2
The WWA is not obliged to accept any Trade Waste. No application for a Trade Waste Consent shall be Approved where the Trade Waste discharge would contain, or is likely to contain, Characteristics which are Prohibited.

3.1.3
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.

3.2 Application for a trade waste consent

3.2.1 *Formal application*
Every Person who does, proposes to, or is likely to:

(a) Discharge into the Sewerage System any Trade Waste (either continuously, intermittently or temporarily); or

(b) Vary the Characteristics of a Consent to discharge that has previously been granted; or

(c) Vary the conditions of Consent to discharge that has previously been granted; or

(d) Significantly change the method or means of Pre-treatment for discharge under an existing Consent shall if required by the WWA to complete an application in the prescribed form for the Consent of the WWA (see Appendix A), to the discharge of that Trade Waste, or to the proposed variations.

3.2.2
The WWA reserves the right to deal with the owner as well as the Occupier of any Trade Premises.

3.2.3
Where the Trade Premises produces Trade Waste from more than one area, a separate copy of the "Description of Trade Waste and Premises" (see Appendix B) 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.

3.2.4
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 Consent Holder (whether for reward or not) in making any such application shall be deemed to be an act of the Consent Holder.

3.2.5
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.

3.2.6
Every application shall be accompanied by a Trade Waste application fee in accordance with the WWA's Schedule of Rates and Charges.

3.3 Processing of an application

The WWA shall acknowledge the application in writing within 10 Working Days of the receipt of the application.

3.4 Information and analysis

3.4.1
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:

(a) Require the applicant to submit any additional information which it considers necessary to reach an informed decision;

(b) Require the applicant to submit a Management Plan to the satisfaction of the WWA;

(c) Whenever appropriate have the discharge investigated and analysed as provided for in 5.1 and 5.3 of this bylaw.

3.4.2
The WWA shall notify the applicant of any requirement under this clause within 10 Working Days of receipt of the application.

3.5 Consideration of an application

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 3.4, whichever is the later, the WWA shall, after considering the matters in 3.6 action one of the following in writing:

(a) Grant the application as a Permitted Trade Waste and inform the applicant of the decision by issuing the appropriate notice;

(b) Grant the application as a Conditional Trade Waste discharge Consent and inform the applicant of the decision and the conditions imposed on the discharge by issuing the appropriate notice of Consent to the discharge; or

(c) Decline the application and notify the applicant of the decision giving a statement of the reasons for refusal.

3.6 Consideration criteria

In considering any application for a Trade Waste Consent to discharge from any Trade Premises or Tankered Waste into the Sewerage 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 or tanker in relation to:

(a) The health and safety of WWA staff, Council's agents and the public;

(b) The limits and/or maximum values for Characteristics of Trade Waste as specified in Schedules 1A and 1B of this 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 minimization 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.

3.7 Conditions of trade waste consent

Any Trade Waste Consent 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 3.8;

(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 Consent Holder, at the Consent Holder's expense, of screens, grease traps, silt traps or other Pre-treatment works to control Trade Waste discharge Characteristics to the consented levels;

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

(i) The provision and maintenance of a sampling, analysis and testing programme and flow measurement requirements, at the Consent Holder's expense;

(j) The method or methods to be used for the measuring flow rates and/or volume and taking samples of the discharge for use in determining the amount of any Trade Waste charges applicable to that discharge;

(k) The provision and maintenance by, and at the expense of, the Consent Holder of such meters or devices as may be required to measure the volume or flow rate of any Trade Waste being discharged from the Premises, and for the testing of such meters;

(l) The provision and maintenance, at the Consent Holder's expense of such services, (whether electricity, water or compressed air or otherwise), which may be required, in order to operate meters and similar devices;

(m) At times specified, the provision in a WWA Approved format by the Consent 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);

(n) The provision and implementation of a Management Plan;

(o) Risk assessment of damage to the environment due to an accidental discharge of a chemical;

(p) Waste minimization and management;

(q) Cleaner Production techniques;

(r) Remote control of discharges;

(s) Third party treatment, carriage, discharge or disposal of by-products of Pre-treatment of Trade Waste (including Sewage Sludge disposal);

(t) Requirement to provide a bond or insurance in favour of the WWA where failure to comply with the Consent 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; and

(u) Remote monitoring of discharges.

3.8 Duration

3.8.1 *Permitted discharges*
Permitted Discharges shall remain in force indefinitely until either:

(a) Cancellation under 2.1.2 or 3.10;

(b) The quantity and nature of the discharge changes significantly. For a temporary discharge see Appendix C;

(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.

In all cases, after appropriate consultation, the Person shall apply within 10 Working Days of this change occurring for a conditional Consent, in accordance with 3.2 of this bylaw. This application shall be Approved prior to the occurrence of any new discharge.

3.8.2 *Conditional consents*
Subject to 3.10 and 6.1 conditional Consents under this bylaw shall expire at the end of a term fixed by the WWA subject to the following:

(a) Conditional Consents may be given for a term not exceeding five years to a Consent 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 Consent Holder has a demonstrated ability to meet the conditions of the Consent during its term; and/or

  (ii) Cleaner Production techniques are successfully being utilized, 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 amortizing of this investment is considered reasonable; and/or

  (iv) The reissuing of a Consent can not be unreasonably withheld.

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

(A) The level of Consent Holder compliance, including any accidents including spills or process mishaps.

(B) Matters pertaining to the WWA's resource consents for the Sewerage System.

(C) Matters pertaining to the WWA's environmental policies and outcomes.

(D) New control and treatment technologies and processes.

(E) Any of the matters outlined in section 4.

(F) Matters pertaining to the WWA's legal obligations.

(b) In all other cases the term of a Conditional Trade Waste Consent should not exceed two years;

(c) In all cases where either the Consent Holder or the owner of the Premises changes, or there is a change of use, a new application for a Conditional Trade Waste Consent shall be made. It shall be the responsibility of the Consent Holder to lodge the new application; and

(d) The conditions on resource consents for the Sewerage System and the residuals from it change.

3.9 Technical review and variation

3.9.1
The WWA at any time may require a Person undertaking a Permitted Discharge to apply for a Consent in accordance with 3.8.1.

3.9.2
The WWA may at any time during the term of a Trade Waste Consent, by written notice to the Consent Holder (following a reasonable period of consultation), vary any condition to such an extent as the WWA considers necessary following a review of the technical issues considered when setting conditions of Consent. 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.

3.9.3
A Consent Holder 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 3.7 of this bylaw.

3.10 Cancellation of the right to discharge

3.10.1 *Suspension or cancellation on notice*
The WWA may suspend or cancel any Consent or right to discharge at any time following 20 Working Days' (during which consultation has occurred) notice to the Consent Holder or Person discharging any Trade Waste:

(a) For the failure to comply with any condition of the Consent;

(b) For the failure to maintain effective control over the discharge;

(c) For the failure to limit in accordance with the requirements of a Consent 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 Resource Management Act 1991;

(g) Failure to provide and when appropriate update a Management Plan as required for a conditional Consent;

(h) Failure to follow the Management Plan provisions at the time of an unexpected, unscheduled or accidental occurrence;

(i) Failure to pay any charges 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.

If any process changes require more than 20 Working Days, reasonable time may be given to comply with the Consent conditions.

3.10.2 *Summary cancellation*
Further to 3.10.1 any Trade Waste Consent or discharge may at any time be summarily cancelled by the WWA on giving to the Consent 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 Consent summarily;

(c) They discharge any Trade Waste unlawfully;

(d) If the continuance of discharge is, in the opinion of the WWA, a threat to the environment or public health; -

(e) If 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.

4 TRADE WASTE APPROVAL CRITERIA

4.1 Pre-treatment

The WWA may approve a Trade Waste discharge (see Appendix D for appropriate form) 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.

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.

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 Consent of the appropriate authority.

4.2 Mass limits

A Conditional Trade Waste Consent to discharge may impose controls on a Trade Waste discharge by specifying Mass Limits for any Characteristic.

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.

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).

5 SAMPLING, TESTING AND MONITORING

5.1 Flow metering

5.1.1
Flow metering may be required by the WWA:

(a) On 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.

5.1.2
The Consent 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 Consent Holder.

5.1.3
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 Consent Holder in a format Approved by the WWA.

5.1.4
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.

5.1.5
The Consent Holder shall arrange for *in situ* calibration of the flow metering equipment and instrumentation by a Person and method Approved by the WWA upon installation and at least once a year thereafter to ensure its performance. The meter accuracy should be ±10 % but with no greater a deviation from the previous meter calibration of ±5 %. A copy of independent certification of each calibration result shall be submitted to the WWA.

5.1.6
Should any meter, after being calibrated, be found to have an error greater than that specified in 5.1.5 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 Consent Holder shall pay or be credited a greater or lesser amount according to such adjustment.

5.2 Estimating discharge

5.2.1
Where no meter or similar apparatus is 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.

5.2.2
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 charged to the Person discharging) and they shall pay according to such estimate. Provided that when by reason of a large variation of discharge due to seasonal or other causes, the average of the previous 12 months would be an unreasonable estimate of the discharge, then the 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.

5.2.3
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.

5.3 Sampling and analysis

5.3.1
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 Permitted, Conditional, or Prohibited, refer to 3.1;

(c) A discharge complies with the provisions of Schedule 1A for Permitted Discharge and any Consent to discharge; and

(d) Trade Waste Consent charges are applicable to that discharge.

5.3.2
The taking, preservation, transportation and analysis of the sample shall be undertaken by an Authorized 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.

5.3.3
All Authorized Officers or authorized agents of the WWA, or any Analyst may enter any Premises believed to be discharging Trade Waste at any 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.

Authorization for entry to Premises is given under the LGA and entry shall be in compliance with the health and safety policies of that particular site.

5.4 Monitoring

5.4.1 *Monitoring for compliance*

The WWA is entitled to monitor and audit any Trade Waste discharge for compliance. Whether for a Permitted Discharge or a conditional Consent discharge monitoring may be carried out as follows:

(a) The WWA or its authorized 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 discharger. 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 Consent conditions including any Management Plans.

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

5.4.2 *Sampling methodology*

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 discharger 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.

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.

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.

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

5.4.3 *Tankered wastes*

Tankered Wastes shall not be discharged into the WWA's Sewerage System by any Person or Consent 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 Consent 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 Consent 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.

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.

5.4.4 *Disinfected/super chlorinated water*

Any water used during the repair and construction of water mains shall be de-chlorinated prior to the discharge into the Sewerage System. Application for a Temporary Discharge Consent shall be made. Such water shall not be disposed of to Stormwater or adjacent water courses without appropriate Approvals.

6 BYLAW ADMINISTRATION

6.1 Review of decisions

If any Person is dissatisfied with any decision by an Authorized Officer made under this bylaw, that Person may, by notice delivered to the Chief Executive Officer of the WWA not later than 20 Working Days after the decision by the Authorized Officer is served upon that Person, request the Chief Executive Officer to review any such decision and such a decision shall be final.

Nothing in this clause shall affect any right of appeal under the LGA.

6.2 Accidents and non-compliance

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.

In the event of any accident occurring when the Person holds a conditional Consent, then the WWA may review the Consent under 3.9 or may require the Consent Holder, within 20 Working Days of the date such requirement is notified to the Consent Holder in writing, to review the Contingency Management Procedures and re-submit for Approval the Management Plan with the WWA.

In the event of an accident occurring on the Premises of a Permitted Discharge, the WWA may require the Person discharging to apply for a conditional Consent.

6.3 Charges and payments

6.3.1 *Charges*

The WWA may recover fees and charges in accordance with the LGA. Schedule 1C outlines a regime of possible charges.

6.3.2 *Invoicing*

All charges determined in accordance with 6.3.1 shall be invoiced in accordance with WWA's standard commercial practice. The invoice shall provide each Person discharging with a copy of the information and calculations used to determine the extent of any charges and fees due, in regard to a discharge.

6.3.3 *Cease to discharge*

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.

6.3.4 *Failure to pay*

All fees and charges payable under this bylaw shall be recoverable as a debt. If the Person discharging fails to pay any fees and charges under this bylaw the WWA may cancel the right to discharge in accordance with 3.10.

6.3.5 *Recovery of costs*

The WWA may recover costs under LGA relating to s. 150 and s. 151, wilful damage or negligent behaviour (s. 175) and remedying damage arising from breach of bylaw (s. 176).

6.4 Authorized officers

All Authorized Officers of the WWA, or other Persons authorized under s. 174 or s. 177 or paragraph 32 of schedule 7 of the LGA, shall possess and produce on request warrants of authority and evidence of identity.

Any Authorized Officers may at any reasonable time enter any Premises believed to be discharging Trade Wastes to determine any Characteristic of any discharge by:

(a) Taking readings and measurements; or

(b) Taking samples or any solids, liquids or gaseous material or any combination or mixtures of such materials being discharged; or

(c) Observing accidental occurrences and clean-up.

The extent and level of delegation to Authorized Officers will be in accordance with the Council's Register of Statutory Delegations and Warrants.

Authorization for entry to Premises is given under the LGA and entry shall be in compliance with the health and safety policies of that particular site.

6.5 Transfer or termination of rights and responsibilities

6.5.1

A Trade Waste Consent to discharge shall be issued in the name of the given Consent Holder. The Consent Holder shall not, unless written Approval is obtained from the WWA:

(a) Transfer to any other party the rights and responsibilities provided for under this bylaw, and under the 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; or

(c) In particular and not in limitation of the above, allow Sewage from any other party to be discharged at their Point of Discharge.

NOTE – This clause does not relate to Permitted Discharges.

6.5.2

Renewal of a Trade Waste Consent on change of ownership of Premises shall not be unreasonably withheld if the Characteristics of the Sewage remain unchanged.

NOTE – This clause does not relate to Permitted Discharges.

6.5.3

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 Consent, 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.

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.

6.5.4
When a Person discharging ceases to occupy Premises from which Trade Wastes are discharged into the Sewerage System any Consent granted shall terminate but without relieving the Person discharging from any obligations existing at the date of termination.

6.6 Service of documents

6.6.1 *Delivery or post*
Any notice or other document required to be given, served or delivered under this bylaw to a Person discharging may (in addition to any other method permitted by law) be given or served or delivered by being:

(a) Sent by pre-paid ordinary mail, courier, or facsimile, or email to the Person discharging at the Person discharging's last known place of residence or business;

(b) Sent by pre-paid ordinary mail, courier, or facsimile, or email to the Person discharging at any address for service specified in a Consent to discharge;

(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.

6.6.2 *Service*
If any notice or other document is:

(a) Sent by post it will be deemed received on the first day (excluding weekends and public holidays) after posting;

(b) Sent by facsimile or email and the sender's facsimile or email machine produces a transmission report indicating that the facsimile or email was sent to the addressee, the report will be *prima facie* evidence that the facsimile or email was received by the addressee in 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 Consent Holder then that shall be deemed to be service on, or delivery to the Consent Holder at that time.

NOTE – It should be verified that notice has been served on the correct Person.

6.6.3 *Signature*
Any notice or document to be given, served or delivered shall be signed by an Authorized Officer.

6.7 Offences

Every Person or Consent Holder or owner or Occupier of Trade Premises who:

(a) Fails to comply with or acts in contravention of any provision of this bylaw;

(b) Breaches the conditions of any Consent to discharge granted pursuant to this bylaw; or

(c) Fails to comply with a notice served under this bylaw,

commits an offence under s. 239 of the LGA, and is liable to a fine as specified in s. 242 of the LGA, or the issue of an Infringement notice under s. 245 of the LGA.

In all cases the WWA may recover costs associated with damage to the WWA Sewerage System and/or breach of this bylaw in accordance with s. 175 and s. 176 of the LGA respectively.

6.8 Transitional provisions

6.8.1 *Applications*

Any application for a Consent to discharge Trade Waste made under the ..... (*previous*) bylaw for which a Consent has not been granted at the time of this new bylaw coming into force shall be deemed to be an application made under 3.2 of this bylaw.

6.8.2 *Existing trade waste consents*

Every existing Trade Waste Consent shall continue in force as if it were a Consent under this bylaw until it reaches its expiry date provided that no Consent shall run beyond .....

APPENDIX A
APPLICATION FOR TRADE WASTE DISCHARGE

(Normative)

THE WASTEWATER AUTHORITY OF THE

..... Council Logo

APPLICATION FOR TRADE WASTE DISCHARGE

PLEASE PRINT CLEARLY

TRADE NAME AND STREET ADDRESS OF TRADE PREMISES

.....

.....

Phone: ..... Fax: .....

After hours contact: .....

Phone: .....

POSTAL ADDRESS OF CUSTOMER FOR CHARGING

Name: .....

Address: .....

.....

OWNER OF PREMISES (if different from above)

Name: .....

Address: .....

.....

TERM OF CONSENT SOUGHT

From: .....

For a period of:

☐ 1 year ☐ 2 years ☐ 5 years ☐ Other (specify)

ADDRESS FOR SERVICE FOR FURTHER ENQUIRIES CONCERNING THIS APPLICATION

Name: .....

Address: .....

.....

Phone: ..... Fax: .....

THIS APPLICATION RELATES TO:

☐ Proposed new discharge

☐ An existing discharge for which no consent exists

Current point or place of discharge: .....

☐ Renewal of a consent

☐ Variation to an existing consent

Nature of variation: .....

Use and attach additional sheets as required

VALUATION NUMBER

.....

LOT NUMBER

.....

DP NUMBER

.....

ARE THE PREMISES ALREADY CONNECTED TO PUBLIC SEWER?

☐ Yes ☐ No

CONNECTIONS REQUIRED

Size: ..... No.: .....

Size: ..... No.: .....

Note – Minimum size 100 mm.

DESCRIPTION OF MAIN TRADE ACTIVITY

.....

.....

DIAGRAM FOR CONNECTION LOCATION
(Show distances from boundaries, kerbs, buildings)

SIGNATURE BLOCK

.....
(Full name)

.....
(Position)

1. I am duly authorized to make this application.
2. I believe that all the information contained in this application is true and correct.

Signature: .....

Date: .....

FOR OFFICE USE ONLY

APPLICATION NUMBER

.....

APPLICATION RECEIVED AND CHECKED BY

Inspector/Clerk: ..... Date: .....

☐ Permitted ☐ Controlled ☐ Conditional

PROPERTY LINK IDENTIFICATION NUMBER

.....

BUILDING CONSENT NUMBER

.....

TRADE WASTE CONSENT

Approved by: .....

No.: ..... Date: .....

APPLICATION FEE

$.....

GST $.....

Total $

Cashier Receipt: .....

File No.: .....

APPENDIX B
DESCRIPTION OF TRADE WASTE AND PREMISES

(Normative)

DESCRIPTION OF TRADE WASTE AND PREMISES – PLEASE PRINT CLEARLY

1 GENERAL PREMISES

1.1 Trade name and street address

.....

.....

.....

Phone: ..... Fax: .....

1.2 Name and address of owner/occupier

Name: .....

Address: .....

.....

.....

1.3 Contact for enquiries (if different from above)

Name: .....

Address: .....

.....

.....

1.4 Total volume of wastes:

Average daily volume	.....m^3
Maximum volume in any 8 hr period	.....m^3
Maximum daily volume	.....m^3
Maximum flow	.....L/sec

Seasonal fluctuation (range) .....

1.5 General characteristics of wastes:

	TYPICAL	RANGE
Temperature (°C)	.....	.....
BOD_5 (mg/L)	.....	.....
COD (mg/L)	.....	.....
Suspended solids (mg/L)	.....	.....
pH	.....	.....
Oil and greases	.....	.....

1.6 The source of water used on the premises is:

(a) from ..... Council ..... m^3/working day

(b) from other sources *(state source)*

..... m^3/working day

.....

1.7 The wastes do / do not, contain condensing water or storm water and the layout of drains on the premises is / is not, such as to reasonably exclude the possibility of such becoming mixed with trade wastes.

1.8 It is / is not proposed that domestic wastewater and trade waste should be discharged at the same point of discharge.

1.9 The proposed method for flow measurement is:

- ☐ a permanent installation of suitable flow measuring equipment
- ☐ based on water usage as measured by meter
- ☐ other, *(specify)* .....

1.10 List any substances contained in Schedule 1A or 1B of the bylaw which are stored, used, or generated on the premises.

.....

.....

.....

.....

Describe mitigation measures employed to prevent accidental spillages of these substances from entering the public sewer or storm water system.

.....

.....

.....

.....

1.11 Site plans of the premises are attached which clearly show the location of the following as appropriate:

- ☐ process areas
- ☐ flow measuring devices
- ☐ trade waste drains
- ☐ emergency spill devices
- ☐ domestic waste-water drains
- ☐ open areas draining to trade waste drains
- ☐ stormwater drains
- ☐ emergency spill containment
- ☐ other, *(specify)* .....

Main trade waste pretreatment systems

- ☐ screens
- ☐ pH control
- ☐ flow balance
- ☐ grease traps
- ☐ chemical treatment
- ☐ biological treatment

1.12 Detailed drawings and descriptions for the following are attached as appropriate:

- ☐ pretreatment systems
- ☐ flow measuring devices
- ☐ emergency spill containment
- ☐ sampling points
- ☐ method of flow meter calibration

1.13 An independent waste audit of the premises has / has not been carried out by:

.....

1.14 A Discharge Management Plan is / is not attached.

1.15 The Health and Safety Requirements and security arrangements for Wastewater Authority staff entering the premises are as follows: *(specify)*

.....

....

2. PROCESS
(Use a separate page for each process and attach copies of typical analyses for wastewater from each separate process)

2.1 Process name and description:

.....

.....

2.2 Type of product processed: .....

.....

.....

2.3 Volume of wastewater

Average daily volume: ..... m^3

Maximum daily volume: ..... m^3

Maximum flow: ..... L/s

2.4 If batch discharges:

Quantity: ..... m^3

Frequency: ..... m^3

Rate of discharge: ..... L/s

2.5 The wastewater contains the following Characteristics which when mixed with other wastewaters and discharged from the premises, are near or in excess of the limits stipulated in Schedule 1B of the bylaw.

(NOTE – The characteristics in table 1A.2 and table 1A.3 have a limit of zero unless approval for that particular characteristic is applied for.)

	VALUE OR CONCENTRATION			
	From process		At point of discharge	
	Typical	Max.	Typical	Max.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

2.6 The following steps have been / will be taken to improve the trade process as part of a strategy of cleaner production:

.....

.....

.....

.....

.....

.....

.....

.....

Date of improvements: .....

APPENDIX C
APPLICATION FOR TEMPORARY DISCHARGE

(Normative)

THE WASTEWATER AUTHORITY OF THE

..... Council

APPLICATION FOR TRADE WASTE DISCHARGE

Logo

PLEASE PRINT CLEARLY

APPLICANT

Name: .....

Company: .....

Address: .....

.....

Phone: .....

Fax: .....

Applicant responsible for liquid waste

- ☐ Transportation
- ☐ Generation
- ☐ Licensed transporter

GENERATOR / TRANSPORTER OF LIQUID WASTE
(Delete applicant's responsibility)

Name: .....

Company: .....

Address: .....

.....

Phone: .....

Fax: .....

APPLICATION SOUGHT FOR

- ☐ One discharge
- ☐ A number of discharges of the same kind of liquid waste over a period of one year.

PROPOSED POINT OF DISPOSAL

.....

.....

If from premises to public sewer, which is existing trade waste consent number?

.....

PROPOSED TIMING OF DISPOSAL

Time: .....

Date: .....

LIQUID WASTE

Quantity: ..... m^3

Source: .....

.....

.....

Process in which waste was produced: .....

.....

.....

.....

General characteristics

BOD_5: ..... mg/L

COD: ..... mg/L

Suspended solids: ..... mg/L

pH: .....

Oil and grease: ..... mg/L

List any characteristics which are likely to be greater than 50 % of concentrations stipulated in Schedule 1A of the Trade Waste Bylaw.

.....

.....

.....

.....

.....

.....

ANALYSIS

(Check with Wastewater Authority whether this is required)

- ☐ Appended
- ☐ Not required

DECLARATION

We hereby certify that the above liquid waste is accurately described

Applicant: .....

Transporter / Generator: .. ..

FOR OFFICE USE ONLY

APPLICATION NUMBER

.....

APPLICATION

Received by: ..... Date: .....

Discharge: ☐ Approved

☐ Not approved

By: .....

Date: .....

TEMPORARY DISCHARGE

If approved:

Where discharged: .....

Time and date: .....

If not approved:

Where referred to: .....

.....

TEMPORARY DISCHARGE FEE

$.....

GST $.....

Total _____

Cashier Receipt: .....

File No.: .....

APPENDIX D
MODEL TRADE WASTE CONSENT FORM

(Normative)

THE WASTEWATER AUTHORITY OF THE
..... Council
CONSENT TO DISCHARGE TRADE WASTE TO THE PUBLIC SEWER
Pursuant to the ..... Council Trade Waste Bylaw 20.....

Logo

To: .....
(Consent Holder trade name)

Address:.....
(Street address of Trade Premises)

Phone:..... Fax: .....

Name:.....
(Contact name)

Address:.....
(Address for charging and service of documents)

.....
(Trade activity)

In response to, and in terms of, the information declared in your application of ..... to discharge Trade Waste from the above Premises, the Consent of the WWA is hereby given for the term and subject to the conditions set out below:

1. That this Consent relates to a proposed new discharge / an existing non-consented discharge/ renewal of a Consent / variation to an existing Consent.
2. That this is a permitted/ conditional Consent.
3. That the provisions of the ..... Council Trade Waste Bylaw 20 ..... are complied with at all times.
4. That this Consent is valid for a period of ..... years and will expire on.....
5. That the Trade Waste discharged under this Consent shall consist only of wastes from the following processes:

   .....

   .....

   .....

   .....

   .....

   .....

   .....

   .....

6. That this Consent is subject to the specific conditions set out in Schedule 1A which is attached.

For and on behalf of the WWA of the .....

..... Council

Authorized Officer:

Name: .....

Signature: .....

Date: .....

FOR OFFICE USE ONLY

Consent No.: .....

Application No.: .....

File No.: .....

SCHEDULE 1A
PERMITTED DISCHARGE CHARACTERISTICS

1A.1 Introduction

1A.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.

1A.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.

1A.1.3
An additional column in tables 1A.1, 1A.2 and 1A.3 for Mass Limits may be added as required.

1A.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 3.9 of the bylaw.

1A.2 Physical characteristics

1A.2.1 *Flow*
(a) The 24 hour flow volume shall be less than 5 m^3.

(b) The maximum instantaneous flow rate shall be less than 2.0 L/s.

1A.2.2 *Temperature*
The temperature shall not exceed 40 °C.

1A.2.3 *Solids*
(a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15 mm.

(b) The suspended solids content of any Trade Waste shall have a Maximum Concentration which shall not exceed 2000 g/m^3. For Significant Industry this may be reduced to 600 g/m^3.

(c) The settleable solids content of any Trade Waste shall not exceed 50 mL/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.

1A.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/m^3 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 500 g/m^3 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 100 g/m^3 as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw Sewage throughout the range of pH 4.5 to pH 10.0.

1A.2.5 *Solvents and other organic liquids*
There shall be no free layer (whether floating or settled) of solvents or organic liquids.

1A.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 1000 g/m^3 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 (ultra violet 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.

1A.2.7 *Radioactivity*
Radioactivity levels shall not exceed National Radiation Laboratory Guidelines.

1A.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 Consent.

1A.3 Chemical characteristics

1A.3.1 *pH value*
The pH shall be between 6.0 and 10.0 at all times.

1A.3.2 *Organic strength*

1A.3.2.1
The Biochemical Oxygen Demand (BOD_5) of any waste may require to be restricted where the capacity for receiving and treating BOD_5 is limited. A BOD_5 restriction may be related to Mass Limits.

Where there is no WWA treatment system for organic removal the BOD_5 shall not exceed 1000 g/m^3. For Significant Industry this may be reduced to 600 g/m^3.

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

1A.3.3 *Maximum concentrations*
The Maximum Concentrations permissible for the chemical Characteristics of an acceptable discharge are set out in table 1A.1, table 1A.2 and table 1A.3.

Table 1A.1 – General chemical characteristics

(Mass limits may be imposed, refer to 4.2)

Characteristic	Maximum concentration (g/m^3)
MBAS (Methylene blue active substances)	500
Ammonia (measured as N) – free ammonia – ammonium salts	 50 200
Kjeldahl nitrogen	150
Total phosphorus (as P)	50
Sulphate (measured as SO_4)	500 1500 (with good mixing)
Sulphite (measured as SO_2)	15
Sulphide – as H_2S on acidification	5
Chlorine (measured as Cl_2) – free chlorine – hypochlorite	 3 30
Dissolved aluminium	100
Dissolved iron	100
Boron (as B)	25
Bromine (as Br_2)	5
Fluoride (as F)	30
Cyanide – weak acid dissociable (as CN)	5

Table 1A.2 – Heavy metals

(Mass limits may be imposed, refer to 4.2)

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

Table 1A.3 – Organic compounds and pesticides

(Mass limits may be imposed, refer to 4.2)

Compound	Maximum concentration (g/m^3)
Formaldehyde (as HCHO)	50
Phenolic compounds (as phenols) excluding chlorinated phenols	50
Chlorinated phenols	0.02
Petroleum hydrocarbons	30
Halogenated aliphatic compounds	1
Monocyclic aromatic hydrocarbons	5
Polycyclic (or polynuclear) aromatic hydrocarbons (PAHs)	0.05
Halogenated aromatic hydrocarbons (HAHs)	0.002
Polychlorinated biphenyls (PCBs)	0.002
Polybrominated biphenyls (PBBs)	0.002 each
Pesticides (general) (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticides not registered for use in New Zealand)	0.2 in total
Organophosphate pesticides	0.1

SCHEDULE 1B
PROHIBITED CHARACTERISTICS

1B.1 Introduction

This schedule defines Prohibited Trade Wastes.

1B.2 Prohibited characteristics

1B.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 Consent 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.

1B.2.2

A discharge has prohibited Characteristics if it has any characteristic which exceeds the concentration or other limits specified in Schedule 1A unless specifically Approved for that particular Consent.

1B.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 1A), 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 1C
TRADE WASTE CHARGES

Fees and charges are set by Council resolution. This may be done by the annual planning process, fee setting or a similar transparent public process in accordance with the Local Government Act (LGA).

In the following table the Council states what categories they will charge, or may charge, under the tenure of this bylaw.

NOTE–A wide range of categories has been provided in the following table to leave options open and promote awareness for future changes in the WWA's Sewerage System requirements.

A – Administrative Charges	
Category	**Description**
A1 Connection fee	Payable on application for connection to discharge
A2 Compliance monitoring	The cost of sampling and analysis of Trade Waste discharges
A3 Disconnection fee	Payable following a request for Disconnection from Sewerage System
A4 Trade Waste application fee	Payable on an application for a Trade Waste discharge
A5 Reinspection fee	Payable for each re-inspection visit by the WWA where a notice served under this bylaw has not been complied with by the Trade Waste discharger
A6 Special rates for loan charges	Additional rates for servicing loans raised for the purposes of constructing or improving the Sewerage System
A7 Temporary Discharge fee	Payable prior to receipt of Temporary Discharge
A8 Annual Trade Waste charges	An annual management fee for a Trade Waste discharge to cover the WWA's costs associated with for example: (a) Administration; (b) General compliance monitoring; (c) General inspection of Trade Waste Premises; (d) Use of the Sewerage System. This charge may vary depending on the Trade Waste sector and category of the discharger.
A9 Rebates for Trade Premises within the District	Reduction in fees is provided for in s. 150(2). Section 150(4) of the LGA states that the fees prescribed by the Council shall not provide for the Council to recover more than the reasonable cost incurred by the Council for the matter for which the fee is charged. In no event shall the resultant charge be less than the Council's sewerage charge for the equivalent period.
A10 New or Additional Trade Premises	Pay the annual fees and a *pro rata* proportion of the various Trade Waste charges relative to flows and loads

B Trade Waste Charges	
Category	**Description**
B1 Volume	Payment based on the volume discharged $/m^3$
B2 Flow rate	Payment based on the flow rate discharged $/L/s
B3 Suspended solids	Payment based on the mass of suspended solids $/kg
B4 Organic loading	Biochemical oxygen demand or chemical oxygen demand $/kg
B5 Nitrogen	Payment based on the defined form(s) of nitrogen $/kg
B6 Phosphorous	Payment based on the defined form(s) of phosphorous $/kg
B7 Metals	Payment based on the defined form(s) of the metal(s) $/kg
B8 Transmissivity	A charge based on the inhibiting nature of the Trade Waste to UV light used by the WWA's disinfection process
B9 Screenable solids	Payment based on the mass of screenable solids $/kg
B10 Toxicity charge	Payment based on the defined form(s) of the toxic substance(s) $/kg and/or $/$m^3$
B11 Incentive rebate	A rebate for discharging materials beneficial to the WWA's Sewerage System $/kg and/or $/$m^3$
B12 Depreciation	Operating cost related to capital and normally spread across the volume and mass charges
B13 Capital	Apportioned upfront or term commitment capital cost of specific infrastructure required to accommodate a conditional Consent
C Tankered Waste Charges	
C1 Tankered Wastes	Set as a fee(s) per tanker load, or as a fee(s) per cubic metre, dependent on Trade Waste category
C2 Toxicity	Payment based on the defined form(s) of the toxic substance(s) $/kg and/or $/$m^3$

GUIDELINE TO THE MODEL TRADE WASTE BYLAW

WHAT IS THE PURPOSE OF THIS GUIDELINE?

This Guideline does not form part of the Model Trade Waste Bylaw, but should be read in conjunction with the Model Trade Waste Bylaw and the adopted bylaws of individual Councils.

The Local Government Act (LGA) enables Territorial Authorities (TAs) to make a Trade Waste Bylaw and to ensure that existing Trade Waste Bylaws are reviewed in accordance with the Act.

The New Zealand Waste Strategy requires TAs to adopt a Trade Waste Bylaw or review their existing Trade Waste Bylaw, in accordance with NZS 9201.23, by December 2005.

This Guideline has been developed to assist in the management of Trade Waste discharges, to explain the responsibilities and requirements under the Trade Waste Bylaws and to assist in the understanding of them.

Business perspective

The Model Trade Waste Bylaw and attached Guidelines is an important document for businesses and WWAs. Characteristics for Trade Waste are established with limits based on scientific principles to enable Trade Waste to be discharged into the WWA Sewerage System in a safe and sustainable manner, with the associated costs shared fairly among those discharging the waste.

For existing and new businesses the limits and WWA's requirements will dictate the level, if any, of cleaner technology, waste minimization, and (pre)treatment required before discharge to their network.

For new businesses, the process of obtaining a Trade Waste Consent is laid out, with documented expectations for the business and the WWA, and the charging formulae separately provide a good basis for new industry to predict the likely costs involved in discharging their Trade Waste.

Use of consistent Trade Waste Bylaws among WWA's should ensure waste disposal costs are comparable across different WWAs, allowing for variations between different Sewerage Systems.

WWA perspective

This Guideline is a means of assisting the WWA to comprehensively and efficiently undertake the steps necessary to implement a Trade Waste Bylaw or review an existing one and ensure consistency with LGA 2002. It provides a reference for carrying out its role, including:

(a) Administration of the Trade Waste Bylaw;

(b) Consents and user charges to enable cost recovery;

(c) Quality and quantity monitoring; and

(d) Health and safety.

This Guideline also provides or refers to the reasoning behind the clauses within the Model Trade Waste Bylaw.

THE OBJECTIVES OF A TRADE WASTE BYLAW

The Trade Waste Bylaw is the legislative tool for fair and effective management of Trade Waste entering the WWA's Sewerage System. Trade Waste discharges are managed to:

(a) Protect the health and safety of all people working in the Sewerage System;

(b) Protect receiving waters from toxic substances originating from Trade Waste discharges;

(c) Protect the Sewerage System and Sewage treatment plants from damage due to harmful substances from Trade Waste sources;

(d) Assist the WWA to meet relevant environment and other regulations;

(e) Assist the WWA Sewage processing operations to produce effluent and Biosolids of an acceptable quality;

(f) Encourage waste minimization and Cleaner Production in the commercial and industrial sectors;

(g) Encourage water conservation;

(h) Allow recovery of reasonable costs;

(i) Allow for the allocation of a Sewage System's capacity including determination of further system optimization and development.

WHAT IS TRADE WASTE?

The definition for Trade Waste, as given in section 1.5 of the Model Trade Waste Bylaw, is '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 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.'

Any business that discharges wastes other than those of the same character as Domestic Sewage into the Sewerage System, may need to comply with their Council's Trade Waste Bylaw. If a business is unsure that a Trade Waste Bylaw applies to them, they will need to contact their Territorial Authority.

The Trade Waste Bylaw considers three types of Trade Waste:

(a) Permitted – the acceptance of such Trade Waste is normally 'automatic'. The source is from such businesses as small restaurants, retail butcheries, and schools.

(b) Conditional – a Consent with specific conditions to discharge is required. Trade Waste is from such businesses as larger meat processing plant, dentists, fellmongeries, landfills, food and fish processing plant.

(c) Prohibited – a liquid waste that the WWA will not accept into the Sewerage System. However if this waste is pre-treated in an appropriate manner the resultant discharge may become a conditional discharge.

Trade Waste discharges place an additional load on the Sewerage System and can also affect wastewater treatment processes and/or affect the reuse of Biosolids and treated effluent or the WWA's environmental discharges (i.e. to air, water, land). These effects shall be controlled.

Each business should pay Trade Waste charges in accordance with the type of discharge as set by the WWA. Permitted Dischargers should pay by rates and/or an annual fee. Conditional dischargers pay through rates and Trade Waste charges. Prohibited Waste is not accepted at all unless appropriate Pre-treatment is carried out to an extent that the discharge can become a conditional discharge.

Schedule 1B contains a list of prohibited Characteristics.

The WWA is not obliged to accept any Trade Waste discharge particularly if this discharge affects or has the propensity to affect the Sewerage System operation or resultant discharges to the environment or products e.g. Biosolids resulting from the sewerage treatment process.

IMPLEMENTATION OF A TRADE WASTE BYLAW

The procedures for implementing a new or amended Trade Waste Bylaw have changed with the arrival of the LGA, and are summarized below.

Consultation process

Sections 86 and 148 of the LGA set out two consultation processes, each of which need to be complied with. Section 148(7) enables both processes to be undertaken simultaneously. The special consultative procedure (s. 86) can therefore be used and modified to incorporate the requirements of s.148 within a single process.

A summary of the simultaneous process is provided in table G1.

The relevant parts of the LGA are Parts 6 and 8.

Part 6 of the LGA, Planning, decision-making and accountability makes many specific requirements for consultation with the community and with the involvement of Māori in decision-making processes, particularly in s. 81 and s. 82. It is advised that the proposed Trade Waste Bylaws be specifically drawn to the attention of the local tangata whēnua for their comment. There may be local cultural concerns about the disposal of certain materials to the Sewerage System particularly if the effluent or Sludge from the treatment plant is to be reused.

Part 8, s.145 to s.148, defines the Powers of TAs to make bylaws. Included in s.146 is the power to make a Trade Wastes Bylaw. Section 148 then defines special requirements for Trade Waste Bylaws and includes an additional consultative procedure.

Part 8, s.155 to s.160, covers the procedure for making bylaws and review of bylaws in general. In s. 156(1) it states that except for minor changes as covered in s.156(2), then the 'special consultative procedure' as defined in Part 6 s.83 shall be followed.

Commentary

One method of running the two procedures separately but simultaneously is detailed below and is expected to meet the requirements of the LGA.

Section 148 procedure

(a) Issue a public notice under s.148(2) and (5).

(b) Provide the proposed bylaws to the Minister of Health s.148(1) and (2).

(c) Action any consultation required by the Minister of Health, s.148(4), and

(d) Receive/collate representations under s.148(1), (3) and (4).

Section 83 procedure
Approximately one month after the first public notice (under s.148), or approximately one month before the anticipated conclusion of the s.148 procedure:

(a) Prepare the statement of proposal and summary of information;

(b) Put the proposal on the agenda for the Council meeting;

(c) Make the proposal available for public inspection and distribute it as widely as possible;

(d) Issue the public notice under s. 83. This notice will:

(i) Refer to the public notice under s.148

(ii) Advise that the bylaws have been given to the Minister of Health, made available for public inspection and distributed widely to interested parties and

(iii) State the closure date

(e) Respond to the submissions under s. 83 as required; and

(f) Set a date for a Council meeting (hearing) to give those who wish to be heard the opportunity to appear. The date for this meeting will need to be after the close of the 2-month period under s. 148 and after the 1-month period in s. 83.

Conclusion of s.148 and s. 83 procedures
At the Council hearing consideration will be given to:

(a) Any representations made under s. 148;

(b) The comments from the Minister of Health; and

(c) The submissions made under s. 83 (as well as any oral submissions from those who wish to be heard).

Table G1 – Summary of a simultaneous implementation process

Section 148 of the LGA	Section 83 of the LGA
At least 2 months before making the bylaw, public notice must be given of the intention to make the bylaw, setting out: ◦ The Trade Wastes to which the bylaw relates ◦ Where copies of the draft bylaw can be inspected/obtained and charged ◦ That Council is prepared to receive representations made over the next 2 months (at least).	Prepare a statement of proposal, including: • The draft bylaw • Reasons for the proposal ◦ s. 155 report. Prepare a summary of information, including: • Major matters in proposal • Where proposal may be inspected/obtained • The period within which submissions can be made.
Shall send bylaw to Minister of Health for comment.	Put statement of proposal on agenda for Council meeting.
Shall consult with anyone that the Minister of Health specifies.	Make statement of proposal available for public inspection.
Council shall consider any representation received in accord with this section.	Distribute the summary of information as widely as possible. Give public notice of the proposal, and state: ◦ Consultation undertaken • How Interested Persons may obtain a summary of information and inspect full proposal ◦ The period for submissions shall be at least one month.
	Anyone who makes a submission shall be sent a written notice: ◦ Acknowledging receipt of submission • Advising opportunity to be heard and explaining how that Person may exercise that opportunity to be heard. The Council shall ensure a Person is given a reasonable opportunity to be heard (if requested). Hold a public Council meeting if necessary. Make a decision as to whether to make the bylaw.

WHO SHOULD APPLY FOR A TRADE WASTE CONSENT

Any discharge other than from a domestic dwelling may be required to apply for a Trade Waste Consent. It is possible that the WWA may require a condition to be placed upon any discharge in which case it then becomes subject to a Conditional Trade Waste Consent. Table G2 provides examples of Premises and processes that are likely to discharge Permitted or Conditional Trade Waste although this is not an exhaustive list.

Table G2 – Examples of dischargers/processes producing trade waste

Permitted Trade Waste (some of these industries may require a Consent as Conditional Trade Waste)	Conditional Trade Waste
Bakeries Vehicle wash facilities Churches (with catering facilities) Clothing manufacturers Doctors' surgeries (excluding day care surgical facilities) Hotels and motels (with catering facilities) Laundries Marae Mechanical workshops/service stations Medical laboratories Restaurants – small, medium (excluding those with commercial macerators) Wholesalers/retailers including butchers, greengrocers and fishmongers (excluding those with commercial macerators) Schools, polytechnics, universities (with laboratories) Take away Premises Veterinary surgeries	Approved Stormwater discharged to Sewer Beverage manufacturers (including wineries) Concrete batching plants Dairy processing plants Dentists Dry Cleaners Electroplaters Fellmongers Food processors including canneries Foundries Fruit and vegetable processors including canneries Galvanizers Hospitals (including day care surgical facilities) Landfills (leachate discharge) Manufacturers of chemicals, and of chemical, petroleum, coal, rubber and plastic products Manufacturers of clay, glass, plaster, masonry, and mineral products Manufacturers of fabricated metal products, machinery and equipment Manufacturers of fertilizer Manufacturers of paper and paper products Metal finishers Mortuaries Medical laboratories Photo processors Premises with commercial macerators Printers Restaurants – large Scientific and other laboratories Spray painting facilities Stock sale yards Tankered Wastes Tanneries and leather finishings (including fellmongery) Textile fibre and textile processors Truck wash facilities Vaccine manufacturers Waste management processors Woolscourers

SPECIFIC GUIDELINES TO THE MODEL GENERAL BYLAW

G1 Review of the bylaw

A review of the WWA's bylaw is required under s. 158 of the LGA. Reasons for reviewing the bylaw prior to this may include:

(a) Higher environmental standards set for treated wastewater discharges. Future resource consents may also require higher standards;

(b) Greater community demands for environmental enhancement;

(c) Increasing emphasis on (true) environmental sustainability;

(d) Increased charges for Trade Waste disposal to meet increased costs to the WWA. This may include direct funding, or part thereof, of depreciation through the Trade Waste charges;

(e) Review of the Model General Bylaw.

Any of these changes may result in more stringent conditions and management of Trade Waste by the WWA. A review of the Trade Waste Bylaw will be associated with consultation as required under LGA, however a review of the Guidelines may be carried out without this.

It is in the interest of Industry, the WWA and the Community to minimize Trade Waste discharge now and in the future.

G1.5 Definitions

CONDITIONAL TRADE WASTE – allows the WWA to place conditions on the discharge. Examples of such conditions are as follows:

(a) The requirement for cleaner technology to be used and waste minimization to be practised;

(b) A waste Management Plan may be required e.g. how often a grease trap is to be cleaned out;

(c) Variations, either higher or lower, of the Characteristics from Schedule 1A;

(d) Variations to Schedule 1A tend to be lower with larger loads but can be determined and established to suit the flows and loads in a given Sewerage System. The decision whether or not to accept a given load shall be made with a sound understanding of the Sewerage System's capacity – this includes the wastewater treatment plant and Consent discharge conditions. For a 'large' increase in load advice should be sought from experienced process engineers; and

(e) Where a waste is prohibited Pre-treatment may result in an improved effluent to a degree that the treated effluent may become a Conditional Trade Waste.

FOUL WATER – definition taken from the New Zealand Building Code definitions as at April 2004.

G3.1 Classification of trade waste discharges

G3.1.1
The Trade Waste Bylaw considers three types of Trade Waste:

(a) Permitted – the acceptance of such Trade Waste is normally 'automatic'. The source is from such businesses as small restaurants, retail butcheries and schools. However under some circumstances such industry may be required to be Consented.

(b) Conditional – a Consent with specific conditions to discharge is required. Trade Waste is from such businesses as larger meat processing plants, dentists, fellmongeries, landfills, food and fish processing plants.

(c) Prohibited – a liquid waste that the WWA will not accept into the Sewerage System. However if this waste is pre-treated in an appropriate manner the resultant discharge may become a conditional discharge.

G3.1.2
Trade Waste discharges place an additional load on the Sewerage System and can also affect wastewater treatment processes and/or affect the reuse of Biosolids and treated effluent or the WWA's environmental discharges (i.e. to air, water, land). These effects must be controlled.

Each business may pay Trade Waste charges in accordance with the type of discharge as set by the WWA. Permitted Dischargers may pay by rates and/or an annual fee. Conditional discharges pay through rates and Trade Waste charges. Prohibited waste is not accepted at all unless appropriate Pre-treatment is carried out to an extent that the discharge can become a conditional discharge.

Schedule 1B contains a list of prohibited Characteristics, but it is not limited to those listed.

The WWA is not obliged to accept any Trade Waste discharge particularly if this discharge affects or has the propensity to affect the Sewerage System operation or resultant discharges to the environment or products e.g. Biosolids resulting from the Sewerage treatment process. If the WWA wishes to refuse a waste it can decline the application and notify the applicant of the decision giving a statement of the reasons for refusal (refer to 3.5(c)).

The WWA cannot arbitrarily refuse a waste as the decision may be challenged in the District Court as being unfair or unreasonable.

Reasons for refusing a waste would be the quantity, quality or both may have an adverse effect on the effectiveness of the reception, treatment and disposal of the waste.

G3.2 Application for a trade waste consent

G3.2.1 *Formal application*
A formal application is required from the discharger. The exact nature of the application form prescribed for that purpose shall be determined by the WWA and some examples are included in this Guideline.

Filling in the form
An essential first step is to clearly identify those responsible for the application and their contact details to ensure that the process is efficiently and effectively carried out. Consents should be issued to the legal business name rather than the trading name. In order to be legally robust you could use both names, for example Consent would be issued to "Waste Dischargers Limited trading as We Dump It".

It may be useful for the WWA to have a specific "Application Guide" produced for inclusion with the Form as well as additional further tailored information in an "Application Pack" to give to dischargers. This Guide should expand upon and clarify the WWA's information needs covered in the application form.

Figure G1 may assist in outlining the process and its requirements.

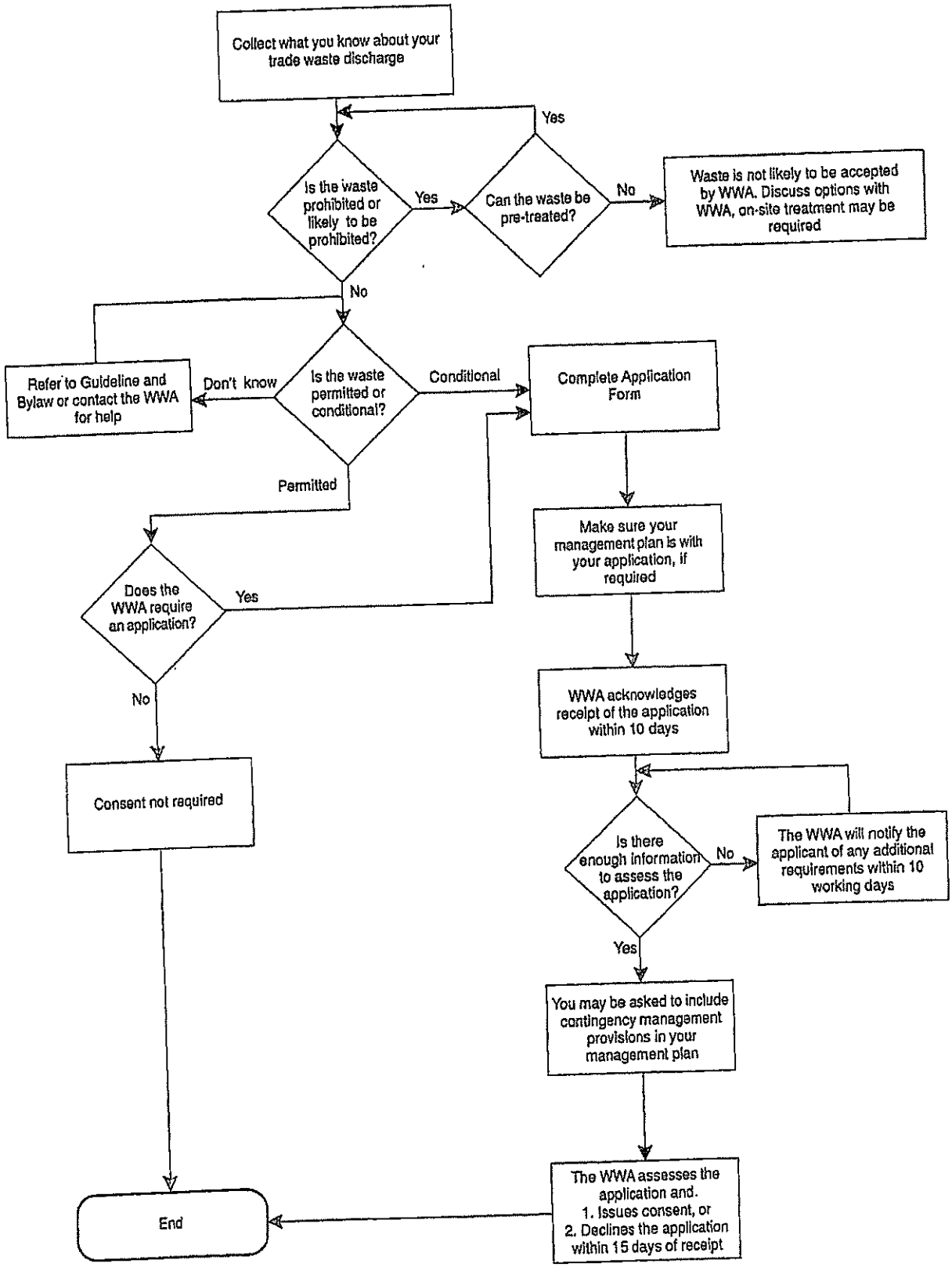

Figure G1 – Flow chart for the application process

G3.2.2
Although this bylaw targets and refers to Consent Holders of Premises, in some situations where individual buildings or compartments in buildings with one owner have a number of Consent Holders, it may be in the interests of the WWA to deal directly with the owner, who shall make application for all Trade Waste discharges.

G3.2.5 *Management plans*
Cleaner production
Cleaner Production provides an opportunity for industry to improve their operations with the benefit of reduced wastage, system control/understanding and reduced impact on the environment. When identifying options and developing a Cleaner Production Plan consider the following areas.

Use of more efficient processes
The production and implementation of Cleaner Production Plans should prompt businesses to examine how they carry out their production. In many cases processes are undertaken because "they have always done it that way" and little effort has gone into examining why.

Use of less raw materials
The methodology to be employed in the reduction of the usage of raw materials, e.g. water, so as to produce less waste for disposal. Reduction efforts to be meaningful should result not merely in volume reductions but also in reduced total waste loadings. The methodology to be employed in the reduction of the usage of raw materials, e.g. water, so as to produce less waste for disposal. Reduction efforts can result not merely in volume reductions but also in reduced total waste loadings.

Use of less toxic chemicals
The introduction or intended implementation, with timelines, of substitute less toxic raw materials which will produce less toxic waste products or wastewater for disposal. The plan should include the introduction or intended implementation, with timelines, of substitute less toxic raw materials which will produce less toxic waste products or wastewater for disposal.

Efficient use of materials
Examination of outputs compared to inputs along with associated wastage can assist in determining whether materials are being used efficiently or not. In many cases optimum quantities have not been determined and the installation of measurement and automation equipment can reduce unnecessary consumption of materials.

Housekeeping
Good housekeeping practices to minimize wastage due to factors such as poor storage of materials, contamination of raw materials due to sloppy practices.

Waste minimization
Plans should address the reduction of wastes produced by the business. Wastes to be covered primarily include solid and liquid wastes (Trade Wastes, wastewater to Stormwater or the sea and liquid wastes removed by contractors). Gaseous wastes may also be an issue. When identifying options and developing a Waste Minimization Plan consider the following areas:

Reduce, reuse, recycle, and recover materials
Plans should address the issues of examination of raw material reduction, the ability to reuse input materials not utilized by processes, the availability of options for recycling their waste materials and the ability to recover materials or resources such as heat that may be of use to either themselves or others.

Water conservation
Reduce, reuse, recycle and recovery should also apply to water use. Plans should detail those utilized and those planned to be utilized to conserve water. Where intentions are stated they should be accompanied by implementation dates.

Stormwater management
Management Plans should address issues related to the protection of Stormwater outflows from contamination and the minimization or prevention of Stormwater merging with Trade Wastes. Issues addressed will need to include the following:

(a) Appropriate removal of Stormwater from storage bunds;

(b) The need for Stormwater containment and shut-off valves;

(c) Stormwater catchments that need to be directed to the Trade Waste system due to surface contamination and subsequent management of flows from these areas;

(d) Signage and training/education of staff. e.g. only Stormwater to Stormwater and no washing to Stormwater;

(e) Control of product or vehicle loading/unloading areas.

TAs are available to assist with advice on Stormwater management.

Contingency plans
Management Plans should address the Premises response to unplanned for events, unintended events and emergency events. These plans should detail responses to events and the means to prevent events from becoming major problems.

Discharge management in the event of an emergency
Plans should detail actions to be undertaken in the event of an emergency to manage discharges that could occur from a site. Plans should include the following:

(a) Chain of responsibility, identification of key personnel/positions, contact numbers;

(b) Steps to be taken dependent upon seriousness of the event i.e. who to call and their numbers;

(c) Location of shut-off valves or spill mats, responsibility for shutting and reason for shutting along with policy for opening again;

(d) Procedures for getting rid of wastes created on site due to an emergency.

Storage and/or bunding of liquid and solid materials
Plans should indicate the locations and protective measures employed for liquid and where appropriate solid materials (that may produce a risk to Stormwater or Sewer on contact with water or other materials). These protective measures may include:

(a) Bunding, with capture volume appropriate to storage vessels size;

(b) An appropriate secure means of removal of Stormwater captured by the bund;

NOTE – The ideal is not to have a drain valve.

(c) Bunding of internal areas to prevent egress of spillages;

(d) Level alarms;

(e) Adequate identification of contents.

Management of a spill
Plans should indicate measures to be taken to contain/control spillages and then indicate the methodologies for clean-up and waste disposal. It may be necessary to have a range of options dependent upon the nature of the spill.

Industry Code of Practice
Individual industries may have developed their own Code of Practice and this industry best practice should be considered in the development of the Management Plan.

G3.4 Information and analysis

G3.4.2
The time restrictions under both 3.4.2 and 3.5 are considered the minimum reasonable times. These may be varied to suit Council requirements.

G3.9 Technical review and variation

G3.9.1
A Permitted Discharge could range from small supermarkets, to fish and chip shops, to vehicle service stations.

If the WWA is having problems with excess organic material from say supermarkets, oil and grease from fish and chip shops, or mineral oils from service stations then control of those excesses may be necessary. To control discharges adversely affecting the WWA's Sewerage System then the offending industry may be required to apply for a conditional Consent such that the Consents imposed will meet the objectives of the WWA in terms of quality of waste it will accept to ensure that the Sewerage System operates as required.

If industries are not managing their waste correctly, such as regular cleaning out of grease/solids traps then the WWA may require a particular discharge to be conditionally Consented such that conditions may be imposed e.g. clear the grease trap once per month to ensure that a given industry complies with a reasonable requirement.

If a small industry changes its scope of operation from e.g. a small supermarket to a larger supermarket greater controls may be required over the wastewater discharges from the site and hence a Conditional Trade Waste Consent may be required.

G4.1 Pre-treatment

G4.1.1 *Grease traps*
Food Premises are likely to produce wastewaters that contain varying amounts of fats, oils and greases (FOGs). There is a need and a requirement (via Trade Wastes Bylaws and the Building Act) to provide a means of reducing the amount of FOGs discharged to a Sewer. A grease trap is the most common means of achieving this goal and there are a number of different types of trap available including the following:

(a) In-ground gravity separation, requiring regular emptying;

(b) Enzyme/bacteria traps – under bench usually, requiring regular dosing;

(c) Semi-mechanical/electrical – under bench units.

The trap should meet the standards set out in G13, Section 4 of the New Zealand Building Code and Approved Documents published by the Building Industry Authority. G13 sets the minimum sizes and

shows a diagram of a typical trap and is a useful reference. Some New Zealand Local Authorities have set via a bylaw, larger minimum sizes than the 100 L minimum given in G13. Sydney Water has a minimum size of 1000 L.

G4.1.2 *pH control*
For some dischargers there will be a need to not only monitor pH but also to actively control it to an acceptable range for discharge to the Sewer system. Whilst batch dischargers may be able to achieve the desired level of control with manual dosing there may be a need for automated systems on continuous discharges. Some may also require automated shut-off valves and alarms triggered by pH excursions.

Some examples of businesses that might require pH adjustment systems areas follow:

(a) Electroplaters;

(b) Waste treatment companies;

(c) Tanneries and fellmongeries;

(d) Large laundries;

(e) Radiator repair shops;

(f) Concrete manufacturers.

There is a need to ensure that pH electrodes are calibrated and maintained properly, dosing chemical stocks are maintained and that the system remains functional.

G4.1.3 *Screening*
For wastes composed primarily of water and particulate matter rather than dissolved material, screening can be a cost effective efficient method of wastewater Pre-treatment. Screens of various mesh sizes and operational types can be obtained or built to suit differing requirements and budgets including the following:

(a) Static screens requiring manual cleaning;

(b) Vibratory screens – self cleaning, available in a range of sizes;

(c) Step screens – self cleaning, range of sizes available;

(d) Milliscreens – self cleaning, range of sizes available.

Typical screening applications include fish wastewaters, small goods manufacture, laundries, meat processing and vegetable processing.

G4.1.4 *Dissolved air flotation (DAF)*
If the density difference between solids and wastewater is marginal or if the solids have a high oil and grease content then a form of DAF can be an effective Pre-treatment process.

In a DAF process gaseous (air) fine microbubbles attach themselves in the DAF process tank to the effluent-feed solids. This reduces the solids apparent density to below that of water, float to the surface and are scraped off the surface of the DAF plant for disposal. Some DAF designs are effective in removing settleable solids from the bottom of the DAF tank.

Process issues to note where relatively high reductions are sought are:

(a) The use of appropriate coagulants and polyelectrolytes for a given effluent (often determined by trials);

(b) The proper formation and distribution of the fine microbubbles;

(c) Regular de-sludging and maintenance of the DAF tank;

(d) Ensure that the DAF tank is not overloaded hydraulically or by the solids loading rate;

(e) General DAF plant cleaning to limit build-up of greases particularly on scraper flights;

(f) To maintain floc integrity pumping needs to be limited and with pumps that handle flocs gently; and

(g) Dewatering of the resultant sludge, particularly greasy sludge will be challenging.

Typical applications include meat processing plants, tanneries and fellmongeries.

G4.1.5 *Filter bags*
A filter bag system is a method of pressurized liquid filtration in which the product to be filtered is passed through a filter bag from inside to outside leaving the solids trapped in the bag. Filter bags are made of polymers with the capability of filtering to 1 micron. Once full the bags can be cleaned out or disposed of. Make sure that the bag 'cleanings' are not returned to the Sewerage System.

Typical applications include small meat and food processing plants with relatively high oil and grease loads.

G4.1.6 *Biological*
The biological Pre-treatment of effluent is not normally necessary if the industry's effluent can be accepted into a municipal Sewerage System. However if the Sewerage System cannot accept the industry's effluent; e.g. a high NH_3-N then a sequencing batch reactor (SBR) could be used to nitrify/denitrify or a small trickling filter could be used to reduce a relatively high BOD_5 effluent prior to discharge into a municipal Sewerage System.

G4.1.7 *Sludge handling/dewatering*
The greater the amount of Pre-treatment required the greater the amount of sludge that will be produced by a given industry. This sludge is often at about 1 % dry solids (DS) and potentially difficult to dispose of, particularly to landfill. The volume of sludge can be reduced by digesting (anaerobic, aerobic) or more usually for the smaller scale of New Zealand industry by some form of dewatering and then disposal to landfill. Digested sludge would also require dewatering before final disposal.

The landfill acceptance criteria for sludge going to landfill states that for waste to be considered non-liquid it shall meet the following requirements:

(a) A solids content of at least 20 % and liberate no free liquids when transported; or

(b) No free liquids when tested in accordance with the US EPA *Paint Filter Liquids Test* (US EPA Method 9095A (1996)) and liberate no free liquids when transported.

Options available for dewatering sludges (which may include the use of coagulants and flocculants) are as follows:

(A) Dewater sludge using generous capacity storage and reasonable settling times. Use of a sludge thickener will assist;

(B) Screwpress;

(C) Decanter/centrifuge;

(D) Belt press or filter press;

(E) Composting – use with bulking solids e.g. sawdust, shredded greenwaste;

(F) Evaporation;

(G) Indirect thin film rotary dryers.

Direct fired dryers and fluidized bed/multi-hearth incinerators can be utilized for the Significant Industry or municipal plant.

In many cases the Pre-treatment of industrial wastewater and effective/sustainable disposal of the resultant sludge is site-specific and demands specialized and experienced knowledge to achieve reliable plant operation. Too often Pre-treatment operations fail to meet expectations because sustainable sludge treatment and disposal has not been considered adequately enough.

G4.1.8 *Disposal of industrial sludges*
Some options for disposal of industrial sludge:

(a) Dispose of to landfill – a minimum DS will be required. Disposal to landfill of a given sludge will also depend on the grading of the landfill, the proportion of other solid waste to mix with the sludge and acceptance criteria used;

(b) Sludges from metal processing or chemical Pre-treatment will need to be disposed of in an appropriate landfill and may even require additional treatment e.g. cement stabilization to ensure leaching is controlled;

(c) Composting;

(d) Drying to utilize as a fuel;

(e) Reuse or alternative application.

There may be a situation where a group of industries and perhaps the WWA could combine to more effectively treat and dispose of Sludge.

The MfE New Zealand Waste Strategy will have a considerable effect on the requirements for the future sustainable disposal of sludges and solid wastes. The strategy should be considered for on-going planning with respect to sludge disposal.

G4.2 Flow balancing

For discharges with batch type processes and/or large Working Day discharge flows, flow balancing can be very effective in terms of reducing the Trade Waste charge when it is based on a flow rate basis. Flow balancing can also allow greater volumes to be accommodated in the WWA wastewater system, particularly if there are hydraulic restrictions on the conveyance system and/or at the treatment facilities.

Flow balancing can also even out the Contaminant loads arriving at the WWA's treatment facilities and accordingly assist in improved treatment efficiency. One technique that can have advantages with some types of WWA treatment plants is to discharge Trade Waste into the system at night when domestic flows are low. The merits of this would depend on the treatment plant type and/or the conveyance hydraulic capacities. Such an arrangement could result in a rebate to the Trade Waste discharger, or alternatively allow a Trade Waste discharge to be made that could not otherwise be accepted into the WWA system.

G5.1 Flow metering

Assessment of the loading of any discharge is dependent upon the ability to determine not only its quality but also the quantity.

The required flow metering can be achieved in a number of ways with the method used depending upon the nature and significance of the discharge, the amount and type of information required and the most cost effective way of obtaining it. Methods may include:

(a) The usage of the main site water supply meter;

(b) A potable water meter or meters on the supply lines for processes that produce the Trade Wastes discharge for a site;

(c) Flow meters installed on the discharge line to the Sewer or ideally on the Trade Waste discharge line.

Flow meters are specifically designed for dealing with non-potable flows and there are a wide variety of types each with specific requirements and limitations and care should be exercised in selecting and fitting flow meters. Additional to the flow meter, a data logger can be fitted which allows the flow meter data to be recorded/analysed by a computer or integrated into a site management system. The use of data logger systems can allow the graphical presentation of flow data.

Potable water meters, though cheap, should not be used to measure Trade Waste; they are designed for clean flows and will fail in a Trade Waste environment.

Calibration of any flow-monitoring device will be required to ensure that its performance is acceptable. In practical terms this can be difficult particularly with in-ground installations and specialist assistance or the assistance of the manufacturer's agent will normally be required. Logs of usage can act as a guide to on-going performance via comparison with past records. Acceptable performance criteria for meter calibration are provided in 5.1.5 and 5.1.6 of the Trade Waste Bylaw.

The following British Standards may be of assistance (taken from the Model Trade Waste Bylaw):

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)

G5.3 Sampling and analysis

G5.3.3
The WWA or its agent should familiarize itself with the health and safety requirements pertaining to each particular Premises. Considerations may include but are not limited to:

(a) Procedures for permission to enter;

(b) Accompaniment on site by Premises' employees;

(c) Appropriate Person for delivery of any notice;

(d) Required personal safety equipment;

(e) Site specific safety training.

G5.4 Monitoring

G5.4.1 *Monitoring for compliance*
When, how and why
Monitoring of dischargers may be necessary to determine their compliance with the specific conditions of their Consent. It primarily involves sampling and sample analysis but can involve auditing of other parameters such as self-monitoring records/data, waste disposal receipts, cleaning records or the examination of flow data and waste Management Plans.

When and at what frequency and by whom a discharger is to be monitored is best determined by a combination of factors including:

(a) The nature of the business, e.g. is it seasonal, when do they operate?

(b) The scale of the discharge;

(c) The presence of an Approved or accredited laboratory on the Premises;

(d) The potential risks to the WWA Sewerage System from the discharge;

(e) The compliance history of the Person discharging;

(f) The need for information for purposes additional to compliance monitoring such as for user charges purposes.

Some dischargers may not require frequent monitoring or perhaps any monitoring, whilst others that can have a significant effect upon the WWA Sewerage System will require frequent monitoring.

The New Zealand Municipal Wastewater Monitoring Guidelines should be consulted before embarking on a monitoring, sampling and analysis programme either for a particular industry or district Sewerage System. Chapter 14 is particularly useful with respect to sampling and analytical methods.

The following gives more detailed examples of various, particularly manual, sampling methods.

G5.4.1.1 *Auditing self monitoring programmes*
The programme should be checked initially by visual observation. The sampling place, frequency of samples, type of sampler being used and the laboratory or methods of analysis being used should be verified.

In addition to the visual observation duplicate samples should be taken and analysed by a separate laboratory.

G5.4.1.2 *Auditing laboratory results*
The audit is carried out by taking a duplicate sample and having the analyses carried out by separate laboratories or utilizing a blind duplicate (separate sample identification but the same sample) being analysed by the same laboratory.

As with all sampling and analysis, and depending on the policy of the WWA, this work may be to the cost of the Person discharging.

G5.4.2 *Sampling methodology*
Once the need for sampling has been determined there is then a need to determine an appropriate sampling programme that covers the following issues:

(a) Sampling location;

(b) Method of sampling;

(c) Frequency, number and timing of samples;

(d) Sample preservation, transportation and storage;

(e) Who is to sample and analyse the wastewater;

(f) Sample containers;

(g) Sample identification and records;

(h) Sample transport; and

(i) Reporting procedure, timings and format.

The details for the above are covered in The New Zealand Municipal Wastewater Monitoring Guidelines. More specific information relating to Trade Waste is as follows.

G5.4.2.1 *Sampling location*
In all cases when selecting sampling locations, site health and safety implications should be considered.

The sampling location should 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 e.g. removing scale, Sewage Sludge, bacterial film from the walls of the sampling point.

If turbulent flow conditions do not exist at the sampling location they should 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 depth below the surface of the discharge.

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.

G5.4.2.2 *Method of Sampling*
The method of sampling chosen will vary to suit information needs, the nature of the discharge and available sampling locations. Where sampling is required there are a range of methods, both manual and automated, available including:

(a) "Spot" or "grab" sampling;

(b) Composite sampling, e.g.:

(i) Constant time – constant volume

(ii) Constant time – volume proportional to flow increment

(iii) Constant time – volume proportional to flow rate

(iv) Constant volume – time proportional to flow volume increment.

The method of sampling should be agreed with the Person discharging.

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).

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.

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

(a) Name of the Trade Premises;

(b) Trade Waste Consent number;

(c) Sampling point;

(d) Date, start and stop of sampling;

(e) Time, start and stop of sampling;

(f) Duration of the sampling period;

(g) Details of the sampling method;

(h) Preservation method;

(i) Details of any field tests;

(j) Name of the Person who carried out the sampling;

(k) Information required for a complete chain of custody.

Transportation of samples
(a) Samples may include infectious substances;

(b) Segregation of packages of dangerous goods for road transport is necessary;

(c) Sewage is classified in the Land Transport Rule Dangerous Goods 1999 Rule 45001 as Class 6.2 – Infectious Substance and may be carried by road and air transport as a Diagnostic Specimen in limited amounts;

(d) By road the maximum volume of liquid in any one package should not be greater than 5 litres. By air the limit per package is 4 litres;

(e) Containers shall be sufficiently robust to remain intact and continue to contain goods safely and without leaking for normal conditions of handling and loading;

(f) Three layers of packaging shall be used;

(g) Primary containers and one other layer of packaging shall be leakproof;

(h) Ensure that you have filled out the appropriate documentation;

(i) Check with the laboratory that you are using, that they supply containers that meet the required standards.

Reporting procedure, timings and format
Sample results should be reported to the WWA or their agent and the discharger as soon as they are available. The format for the reporting should be agreed between the laboratory and the WWA or their agent and the discharger.

It is important that dischargers are rapidly made aware of results so as they can better investigate and remedy any non-compliances observed.

Electronic formats for reports to the WWA or their agent may prove useful for inclusion into databases or for producing summaries of multiple reports.

There are many publications which may assist in the development of a sampling programme. These include:

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 waste waters
BS 6068: - - - -	Water quality
Part 6:- - - -	Sampling
Section 6.10:1993	Guidance on sampling of waste waters
BS EN 25667-1: 1994 BS 6068-6.1:1981	Water quality. Sampling. Guidance on the design of sampling programmes
BS EN 25667-2: 1993 BS 6068-6.2:1981	Water quality. Sampling. Guidance on sampling techniques
BS EN 5667-3: 2003 BS 6068-6.3:2003	Water quality. Sampling. Guidance on the preservation and handling of water samples

New Zealand Municipal Wastewater Monitoring Guidelines.

G5.4.3 *Tankered wastes*
Tankered Wastes are conveyed to the WWA reception point by the use of a vehicle require Consent. By definition house buses and motor homes are excluded. Tankered Waste can be collected from a variety of sources.

Grease traps
Grease traps are used for the removal of grease prior to discharge into the reticulation system. The waste removed from these grease traps will be high in fats and suspended solids. Normally the Tankered Waste from grease traps would not be allowed to be discharged into the system without further Pre-treatment. If the treatment system that follows after the discharge point is able to cope with the shock loads and removal of Contaminants, then discharge may be allowed.

Septic tanks
Septic tank waste collected solely from domestic Premises is generally accepted for discharge at permitted points. If the treatment plant is sensitive to shock loads or has a resource consent condition relating to objectionable odour then Pre-treatment may be required.

Oil interceptors
These are designed to remove liquid oils from the waste stream. Normally Tankered Waste collected from oil interceptors would not be allowed to be discharged into the system without further Pre-treatment.

If the treatment system that follows after the discharge point is able to cope with the shock loads and removal of Contaminants then discharge may be allowed.

Stock truck effluent disposal sites
These sites have been developed for the disposal of the wastes collected in the tanks on stock trucks. Acceptance of this waste will require investigation into the effects of this waste on the treatment and disposal system.

Motor caravan effluent
This comprises Sewage collected from motor caravans and generally has chemical additives. Some councils have motorhome disposal points connected to strategic locations throughout the reticulation system. NZS 5465 relates to the self-containment of motor caravans.

G6.3 Charges and payments

Charging principles

Fees and charges payable to a WWA for Trade Waste acceptance are allowed for under s. 150 of the LGA. The procedure followed in this model General Bylaw is to specify in Schedule 1C: Trade Waste Charges, the categories which the individual WWA will, or may, charge under the tenure of the bylaw. Schedule 1C includes a wide range of charges, many of which are currently in use. Once listed in Schedule 1C, the WWA can then set the actual fee and/or charge (i.e. dollar amount) on an annual or other basis through their special consultative procedures, i.e. LTCCP or annual planning process. This procedure avoids the need for a bylaw change when a WWA wishes to change a particular fee or charge. Furthermore, this procedure allows a WWA to include in Schedule 1C a fee or charge type it may wish to impose in the future, but for which it is not yet able to charge. This for example allows for a bylaw to include for a future Trade Waste charge relating to a future wastewater treatment plant upgrade and initially set it at $0.00 p.a., and then initiate the actual dollar charge once the upgrade is completed.

Recovery of not more than reasonable costs

In determining all fees and charges, the principle of s. 150(4) of the LGA is the one under which calculations shall be made. That is the WWA shall not recover more than the reasonable costs that a particular WWA (or an adjoining one, if a joint wastewater system) incurs for the matter for which the fee is charged.

In some cases a WWA may have deemed a public good component in the calculation and in that case, the fee or charge will be less than the maximum that could otherwise be charged by the WWA.

Rebates for Trade Premises (as included in Category A. Administrative Charges of Schedule 1C) allows for the reduction and fees that are otherwise prescribed by a WWA. Such rate charges are included in Table G3 below.

A WWA should have due regard for seasonal variations within an industry.

For Trade Waste charges a cost causative approach is appropriate

In determining both capital and annual operating and maintenance charges for the actual Trade Waste itself, that is Category B in Schedule 1C, the appropriate form of calculation is:

(a) To first establish the key components that are to be charged, that is the cost causative component; and

(b) Secondly the proportion between Trade Waste, and then individual Trade Waste discharges, and the local authority's domestic and future allowance.

For secondary wastewater treatment it is common for example, to charge for the following cost causative agents volume and/or flow (but ensuring there is no double-up), suspended solids and organic strength either as BOD_5 or COD. The important principle is to charge for what a WWA actually receives and treats and not to charge for what it does not do.

An incentive rebate for Category B: Trade Waste Charges

Such a rebate could be applied in a situation where a Trade Waste discharge has a beneficial effect on the treatment processes and accordingly lowers the WWA's wastewater treatment costs, be they capital and/or operating. Such a situation could arise for example, in a secondary biological treatment plant where there was a carbon or nitrogen deficiency in the wastewater arriving at the treatment plant and that a Trade Waste discharger reduces that imbalance to provide nearer optimum treatment requirements for the entire WWA plant.

Charges for capital apportionment
These are normally set on a *pro rata* apportion basis, that is the total capital amount divided by the total cost causative component (volume, suspended solids, BOD_5, etc.). Alternatively, situations may arise where a plant extension for a large Trade Waste discharger could be more fairly charged on a marginal capital costing basis.

There is also the provision in the suggested charges for a capital up-front payment. This can be applied where a WWA needs to expand facilities for an individual Trade Waste discharge. Such a payment could be made as a condition of a new Trade Waste Consent to receive that particular discharge. This procedure requires agreement between the WWA and the Trade Waste discharger(s) involved.

Charges for annual operating and maintenance costs
These (excluding a capital payment component) are most appropriately set on a uniform or *pro rata* basis as the larger part of operating costs are in direct proportion to wastewater volume and Contaminant load, e.g. electricity costs for pumping and wastewater aeration in secondary treatment plants, sludge treatment and disposal.

Depreciation
Depreciation is now required to be fully funded by Local Bodies including WWAs. This is an operating charge and relates to the asset capital value. From the NZ Waste Strategy full cost recovery is to be achievable over a period acceptable to the local community. This means that at some point full depreciation on Sewerage Systems will need to be recovered and become part of the Trade Waste charges. Depreciation would be applied instead of charges for capital apportionment. Do not apply both as this would result in a double charge.

Table G3 – Rates charges

Targeted (sewerage or drainage) charge	**A separate charge for sewerage which is uniform within defined sectors of the WWA**
General rate	Sewage charges included in property rates
WC levy ("pan charge")	A levy on each toilet or urinal in each Premises
Special rates for loan charges	Additional rates for servicing loans raised for the purposes of constructing or improving the WWA Sewerage System

G6.4 Authorized officers
All the powers to constitute bylaws and enforce the bylaw come under the LGA. The power to make Trade Waste Bylaws is given in s. 146 with special requirements contained in s. 148. Section 150 gives the power to charge fees. Sections 171 to 174 cover the powers of entry. The discharge of Sewage and Trade Waste is covered in sections 195 and 196 respectively. Penalties are set out in s. 242.

A Trade Waste Officer needs to be a warranted enforcement officer of council per s. 177 of the LGA. This will allow the Trade Waste Officer to enter onto private land to inspect and take samples. The warrant is required to be delegated by a full Council meeting and cannot be delegated to a committee of Council even if that committee comprises all members of the Council.

The warrant shall be signed under seal, and also dated.

Entry power of warrant
Under normal circumstances an officer of Council would obtain permission from the Trade Waste Consent holder to enter the Premises for the inspection and sampling purposes. For normal compliance operations this is satisfactory. If it is likely that enforcement action may need to be taken then the warrant should be produced on entry to the Premises even if entry is with the permission of the Trade Waste Consent Holder.

The power of entry for enforcement purposes is covered in s. 172 of the LGA.

Entry onto private Premises may be withheld under the Health and Safety in Employment Act. Refer to G5.3.2.

If entry to Premises is withheld then forced entry should not be undertaken, the Police should be contacted to accompany the enforcement officer onto the site.

G6.5 Transfer or termination of rights and responsibilities
These clauses are intended to encourage a new owner to appreciate their responsibilities with regards to discharges.

Discharges of Domestic Sewage and Trade Waste into a TA's Sewage drain in accordance with the TA's bylaws is not a breach of the LGA, RMA or Building Act. However, the Local Authority is not absolved from liability for the discharge of a Contaminant from a TA Sewerage System into the environment in contravention of the RMA (s. 195 of the LGA).

The TA's means of control is to regulate discharges into their Sewerage System by use of TA bylaws.

The Occupier of Trade Premises may discharge Trade Waste coming from Trade Premises into the TA's Sewerage drains, either with Consent from the TA or without Consent, and the discharger still has the liability for not breaching the Trade Waste Bylaw (s. 196(1) of the LGA).

The permission to discharge Trade Waste does not override any liability of the discharger to meet any of the Trade Waste Bylaws or RMA obligations (s. 196(2) of the LGA).

Trades range from the simple to complex, trade discharges therefore vary from requiring no regulation for low risk Trade Premises; to requiring complex regulation for high risk Trade Premises; and prohibition for unacceptable Trade Waste discharges that would put the TA's Sewerage System and environmental liability at extreme risk.

The Model General Bylaw therefore mandates the ability of a TA to permit discharge from a no/low risk Trade Premises as of right, whilst enabling the TA to selectively choose the Trade Premises that pose a risk requiring discharge conditions, or prohibit Trade Premises discharges that put the TA's Sewerage System or environmental liability at an unacceptable extreme risk.

To this end the bylaw enables a TA to classify trade discharges into a:

(a) Permitted Classification (for which no Consent is required); or

(b) Conditional Classification (for which an Application and Consent is required); or

(c) Prohibited Classification (for which the discharge is not Consentable).

As already stated, in all cases no permission is given to breach any of the Trade Waste Bylaw conditions.

Guidance as to which Classification to apply to Trade Premises is given by linking the discharge classification to the bylaw's schedules of discharge Characteristics so that for a:

(a) Permitted classification: the discharge should not exceed, nor need any conditions to meet, the bylaw's Schedule 1A Permitted Discharge Characteristics (for which no Consent is required); or a

(b) Conditional classification: the discharge needs conditions, to meet and not exceed the bylaw's Schedule 1A Permitted Discharge Characteristics, or remove any of the bylaw's Schedule 1B Prohibited Characteristics (for which an Application and Consent is required); or a

(c) Prohibited classification: the discharge has prohibited Characteristics as contained in the bylaw's Schedule 1B Prohibited Characteristics (the discharge is not Consentable).

Note that by having a Trade Waste Bylaw in place, the TA , in any case, is not obliged to accept any Trade Waste discharges that risk damaging the TA's Sewerage infrastructure or put at risk the TA's RMA consent liabilities for their Sewerage System's discharges into the environment.

G6.7 Offences

Every Person commits an offence who breaks the Trade Waste Bylaws, and is liable on summary conviction to a fine not exceeding $200,000 (s. 239, s. 242[5] of the LGA). The LGA also provides for the implementation of Infringement notices and Infringement fees (s. 243 to s. 246). For these to be implemented the necessary regulations under s. 259(a) need to be passed.

Discharge offences under the Resource Management Act are applicable.

G SCHEDULE 1A PERMITTED DISCHARGE CHARACTERISTICS

G1A.1 Discharge characteristics

Acceptance criteria
The tables in this section and the Contaminant concentrations shown are indications of what is acceptable. However local acceptance criteria may need to be developed dependant on the wastewater plant type and the treated wastewater disposal Consent, locality and conditions.

The acceptance criteria/Characteristics are generally sourced from the Guidelines for Sewerage Systems – Acceptance of Trade Waste (Industrial Waste).

The tables in these Guidelines are the same as in the Trade Waste Bylaws excepting that the tables in the Guidelines include commentary on reasons for the concentration indicated.

For Conditional Trade Waste discharges in particular the acceptance criteria can be back-calculated from the resource consent conditions imposed on the treated wastewater discharge. Mass loads (concentration multiplied by volume) are used for this calculation. Appropriate discharge Characteristics can be determined from the above Guidelines for Sewerage Systems.

Developing local acceptance criteria
When developing local acceptance criteria, each substance should be evaluated for its impact on the receiving environment, sludge quality, the treatment process, Sewerage System and occupational health and safety. For each of these factors, an acceptable pollutant concentration or mass load can be determined and the most stringent concentration or mass load can then be used for that pollutant. This can then be translated into local acceptance criteria for individual Trade Waste generators discharging the pollutant into the Sewerage System.

Factors affecting acceptance conditions
The following factors should be considered when developing local accepted criteria:

(a) Volume, concentration, Contaminant hazard assessment of the Trade Waste;

(b) Effectiveness and reliability of industry-based Pre-treatment, if any. Reliability includes a given industries track record in operating a Pre-treatment plant;

(c) Effectiveness and reliability of the WWA's sewerage collection, treatment and disposal facilities;

(d) Treated wastewater disposal location e.g. high energy coastal outfall, inland waterways, irrigated land disposal system, wetlands;

(e) Reuse of treated wastewater and/or Biosolids;

(f) Sludge disposal method by both industry and the WWA. Disposal to a Class A landfill will require less control over the resultant sludge than disposal to a Class B landfill or reuse as Biosolids;

(g) Occupational health and safety requirements.

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.

Conditional Trade Waste discharges generally need to meet the Characteristics listed in Schedule 1A for Permitted Trade Waste discharges. The conditions will indicate the variations from the Schedule.

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 3.9 of the bylaw.

G1A.2 Physical characteristics

In assessing on-going compliance with acceptable Discharge Characteristics for the particular trade or premise the WWA should make clear to the Consent Holder the specific sampling, monitoring, and reporting that is required and under what circumstances additional sampling, monitoring, and reporting will be required. In doing this the WWA should reflect on the anticipated Characteristics from the particular Trade Premises together with the risk and consequence of non-compliance to the WWA's asset/service.

In some authorities (e.g. Dunedin) there are distinct catchment/treatment areas, and in many cases these may entail different acceptable Characteristics for each area.

This schedule draws extensively from *Guidelines for Sewerage Systems: Acceptance of Trade Wastes* (industrial waste). This publication should be consulted for guidance as to suitable methodologies when setting local acceptable Discharge Characteristics.

All values given are Guidelines only. The right hand column gives further guidance on setting values, and a commentary on the requirements. Each WWA should determine its own acceptance criteria based on its local conditions.

Flow (a) The 24 hour flow volume shall be less than 5 m^3. (b) The maximum instantaneous flow rate shall be less than 2.0 L/s.	Flows larger than the Guideline values should be a Conditional Trade Waste Consent. Conditional Consents will be dependant on Contaminant concentration/mass load.
Temperature The temperature shall not exceed 40 °C.	Higher temperatures: – cause increased damage to Sewer structures – increase the potential for anaerobic conditions to form in the wastewater – promote the release of gases such as H_2S and NH_3 – can adversely affect the safety of operations and maintenance personnel – reflect poor energy efficiency. It should be noted that this temperature has been reduced from 50 °C to come into line with the ARMCANZ/ANZECC Guidelines for sewerage systems. A lower maximum temperature may be required for large volume discharges.
Solids (a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15 mm. (b) The suspended solids content of any wastewater shall have a Maximum Concentration which shall not exceed 2000 g/m^3. (c) The settleable solids content of any wastewater shall not exceed 50 mL/L.	Gross solids can cause Sewer blockages. In case of conditional Consents fine screening may be appropriate. High suspended solids contents can cause Sewer blockages and overload the treatment processes. Where potential for such problems is confirmed, a lower limit appropriate to the risk may be set. A lower limit may be set between 2000 g/m^3 and 600 g/m^3 The ANZECC Guidelines recommend a limit of 600 g/m^3.

Solids (continued) (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.	High total dissolved solids reduce effluent disposal options and may contribute to soil salinity. Where potential for such problems exists, a limit of 10,000 g/m^3 may be used as a Guideline.
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/m^3 as petroleum ether extractable matter when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw Sewage, throughout the range pH 6.0 to pH 10.0. (c) A Trade Waste with oil, fat or grease unavoidably emulsified, which in the opinion of the WWA is biodegradable shall not exceed 500 g/m^3 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/m^3 as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15 °C and when the emulsion is in contact with, and diluted by, a factor of 10 by raw Sewage throughout the range pH 4.5 to pH 10.0.	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. If the WWA only has screening and/or primary treatment prior to discharge, it is recommended that oil and grease be reduced to 100 g/m^3. 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. If quick break detergents are being used, it should be ensured that proper separation systems are being used by the Consent Holder. If not, oil will reappear in drainage systems as a free layer.
Solvents and other organic liquids There shall be no free layer (whether floating or settled) of solvents or organic liquids.	Some organic liquids are denser than water and will settle in Sewers and traps.
Emulsions of paint, latex, adhesive, rubber, plastic or similar material (a) Where such emulsions are not treatable they may be discharged into the Sewer subject to the total suspended solids not exceeding 1000 g/m^3.	'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.

Emulsions of paint, latex, adhesive, rubber, plastic or similar material (continued) (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 (ultra violet 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.	Emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of emulsion to be treated. Emulsion may colour the WWA treatment plant influent such that % UVT is unacceptably reduced. Emulsions will coagulate when unstable and can sometimes cause Sewer blockage. Emulsions are stable when dilute or in the correct pH range.
Radioactivity 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.
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.	Colour may cause aesthetic impairment of receiving waters, and adverse affects 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.
Inhibitory substances 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 Consent summarily.	
Chemical Characteristics *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: – can adversely affect biological treatment processes – can adversely affect the safety of operations and/or maintenance personnel – cause corrosion of Sewer structures – increase the potential for the release of toxic gases such as H_2S and HCN. 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 (BOD_5) of any waste may require to be restricted where the capacity for receiving and treating BOD_5 is limited. A BOD_5 restriction may be related to Mass Limits. Where there is no WWA treatment system for organic removal the BOD_5 shall not exceed 1000 g/m^3. For Significant Industry this may be reduced to 600 g/m^3.	The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD_5) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD_5. For domestic wastewater it is about 2.5:1 (COD: BOD_5), but can range from 1:1 to 100:1 for Trade Waste. Therefore BOD_5 is important for the treatment process and charging, but because of the time taken for testing, it is often preferable to use COD for monitoring. However, the use of COD testing 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 BOD_5 and COD can be established the discharge may be monitored using the COD test. If the treatment plant BOD_5 capacity is not limited, and sulphides are unlikely to cause problems, there may be no need to limit BOD_5. High COD may increase the potential for the generation of sulphides in the wastewater. A BOD_5 limit which is too stringent may require the installation of Pre-treatment systems by some Consent Holders, imposing unnecessary costs because the most cost effective treatment method may be the WWA treatment plant. The concentration and mass loads of BOD_5 may be set to reflect WWA treatment plant capacity; e.g. ARMCANZ/ANZECC Guidelines for sewerage systems use a concentration of 600 g/m^3.
Maximum concentrations *Introduction* The Maximum Concentrations permissible for the chemical Characteristics of an acceptable discharge are set out in the following tables: Table 1A.1 and table G4 – General chemical characteristics Table 1A.2 and table G5 – Heavy metals Table 1A.3 and table G6 – Organic compounds and pesticides	Where appropriate, maximum daily limits (kg/day) for Mass Limit Permitted Discharges may also be given. Where the WWA chooses not to incorporate Mass Limits, the appropriate column from table 1A.1 should be removed. Mass Limits should be calculated and inserted where the WWA considers that it gives: (a) The Consent Holder more flexibility to adopt Cleaner Production techniques which may produce an effluent which allows the WWA to consider Consenting 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 Consents); 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 Consent 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.

Table G4 – General chemical characteristics

Characteristic	Maximum Concentration (g/m^3)	Reason for limits
MBAS (Methylene blue active substances)	500	MBAS is a measure of anionic surfactants. High MBAS can: • adversely affect the efficiency of activated Sewage Sludge plants • impair the aesthetics of receiving waters. For treatment plants which suffer from the effects of surfactants the Maximum Concentration could be reduced significantly; e.g. Sydney Water utilize a level of 100 g/m^3.
Ammonia (measured as N) – free ammonia – ammonium salts	 50 200	High ammonia: • may adversely affect the safety of operations and maintenance personnel. • may significantly contribute to the nutrient load to the receiving environment.
Kjeldahl nitrogen	150	High Kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment. A value of 50 g/m^3 should be used as a Guideline for sensitive receiving waters.
Total phosphorus (as P)	50	High phosphorus may significantly contribute to the nutrient loading of the receiving environment. A value of 10 g/m^3 should be used as a Guideline for sensitive receiving waters.
Sulphate (measured as SO_4)	500 1500 (with good mixing)	Sulphate: • may adversely affect Sewer structures. • may increase the potential for the generation of sulphides in the wastewater if the Sewer is prone to become anaerobic.
Sulphite (measured as SO_2)	15	Sulphite has potential to release SO_2 gas and thus adversely affect the safety of operations and maintenance personnel. It is a strong reducing agent and removes dissolved oxygen thereby increasing the potential for anaerobic conditions to form in the wastewater.

Table G4 – General chemical characteristics (continued)

Characteristic	Maximum Concentration (g /m³)	Reason for limits
Sulphide – as H_2S on acidification	5	Sulphides in wastewater may: • cause corrosion of Sewer structures, particularly the top non-wetted part of a Sewer • generate odours in Sewers which could cause public nuisance • release the toxic H_2S gas which could adversely affect the safety of operations and maintenance personnel. Under some of the conditions above sulphide should be <2.0 g/m³.
Chlorine (measured as Cl_2) – free chlorine – hypochlorite	 3 30	Chlorine: • can adversely affect the safety of operations and maintenance personnel • can cause corrosion of Sewer structures. ARMCANZ/ANZECC Guidelines for sewerage systems utilize a figure of 10 g/m³.
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_2)	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 20 g/m³.
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.

Table G5 – Heavy metals

Metal	Maximum concentration (g/m^3)
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.

Table G6 –Organic compounds and pesticides

Compound	Maximum concentration (g/m^3)	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: • adversely affect the treatment processes • impair the quality of the receiving environment • adversely affect the safety of operations and maintenance personnel.
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 andare 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 pesticides not registered for use in New Zealand)	0.2 in total	Pesticides: • may adversely affect the treatment processes • may impair the quality of the receiving environment • may adversely affect the safety of operations and maintenance personnel.
Organophosphate pesticides	0.1	–

G SCHEDULE 1B PROHIBITED CHARACTERISTICS

G1B.1

Some Contaminants listed in Schedule 1A may be present in the incoming water supply provided by the WWA. In this case the WWA will need to reconsider the suggested values in the Model Trade Waste Bylaw. At no time should the levels required by the Trade Waste Bylaw be more severe than the levels present in the water supply provided by the WWA.