



**PALMERSTON NORTH CITY**

# **PALMERSTON NORTH TRADE WASTE BYLAW**

**2022**

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# **Administration Manual**

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## **PART ONE – INTRODUCTION**

The purpose of this Administration Manual is to provide material complementary to the Trade Waste Bylaw by bringing together those aspects which may otherwise be included in the Bylaw, but which are of a technical or administrative nature, or operational matters that are more likely to be amended before the Bylaw is reviewed. In taking this approach, it will simplify the administration of the bylaw, allow for administrative and technical processes to be kept up to date, and assist in interpretation of the Bylaw.

The Administration Manual is made under the Bylaw, and it will govern the implementation and operation of the bylaw. The Administration Manual is a public document, and will be made available on the Council's website alongside the bylaws. A hard copy can be provided on request.

This Administration Manual will be updated from time to time, as necessary, to ensure that it is kept up to date and reflects current practice.

## **PART TWO – INFORMATION REQUIREMENTS FOR CONSENT APPLICATION**

- 1.1 The applicant must ensure that the application and every other document conveying required information is properly executed.
- 1.2 The Council may require a consent 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.
- 1.3 Every consent application shall be accompanied by the applicable application fee.
- 1.4 The Council will acknowledge the consent application in writing within 5 working days of the receipt of the application.
- 1.5 On receipt of any trade waste consent application the Council may:
  - (a) Require the applicant to submit any additional information which it considers necessary for the purpose of approving a consent;
  - (b) Require the applicant to submit a management plan to the satisfaction of the Council; and
  - (c) Have the discharge sampled, tested or monitored.
- 1.6 The Council will notify the applicant of any further information requirement within 10 working days of receipt of the application.

## **PART THREE – CONSIDERATION CRITERIA FOR CONSENT APPLICATIONS**

- 2.1 In considering any application for a trade waste consent and any conditions on such a consent, the Council will take into consideration the quality, volume, and rate of discharge of the trade waste in relation to:
- (a) The health and safety of the Council staff, agents and the public;
  - (b) The limits and/or maximum values for characteristics of trade waste as specified in appendices 1 and 2 of the Administration Manual;
  - (c) The extent to which the trade waste may react with other trade waste or domestic wastewater discharge to produce an undesirable effect, e.g. settlement of solids, production of odours, accelerated corrosion and deterioration of the Wastewater 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 wastewater treatment plant, and other facilities;
  - (f) The nature of any wastewater treatment process and the degree to which the trade waste is capable of being treated in the wastewater treatment plant;
  - (g) The timing and balancing of flows into the Wastewater system;
  - (h) Any statutory requirements relating to the discharge of raw or treated wastewater to receiving waters, the disposal of sewage sludge, 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 Wastewater 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 Wastewater system and the environment;
  - (l) Consideration for other existing or future discharges;
  - (m) Amenability of the trade waste to pre-treatment;
  - (n) Existing pre-treatment works on the premises and the potential for their future use;

- (o) Cleaner production techniques and waste minimisation practices;
- (p) Requirements and limitations related to sewage sludge disposal and reuse;
- (q) Control of stormwater;
- (r) Any management plan; and
- (s) Tankered waste being discharged at an approved location/s.

## **PART FOUR – CONDITIONS OF TRADE WASTE CONSENT**

- 3.1 A trade waste discharge consent may be subject to such conditions that the Council considers appropriate, 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;
  - (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 at the expense of the consent holder;
  - (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 Council approved format by the consent holder to the Council 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 minimisation 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 Council where failure to comply with the consent could result in damage to the Council Wastewater system, its treatment plants, or could result in the Council being in breach of any statutory obligation; and
- (u) Remote monitoring of discharges.

3.2 A trade waste consent may include conditions prescribing penalty charges, and the rates or amounts of those penalty charges, to be payable for exceeding any limits stipulated in that consent that relate to:

- (a) physical or chemical characteristics; and
- (b) maximum concentrations of chemical characteristics



## **PART FIVE – SAMPLING, TESTING AND MONITORING**

### **FLOW METERING**

- 4.1 Metering (to measure the flow rate and volume of discharge) may be required by the Council in any of the following circumstances:
- (a) On discharges when there is not a predictable relationship between a metered water supply to the premises, and the discharge of trade waste;
  - (b) When the Council will not approve a method of flow estimation; or
  - (c) When the discharge from particular premises represents a significant proportion of the total flow/load received by the Council.
- 4.2 The consent holder is responsible for the supply, installation, reading and maintenance of any meter required by the Council for the measurement of the rate or quantity of discharge of trade waste. These devices shall be approved by the Council but shall remain the property of the consent holder.
- 4.3 Records of flow and/or volume must be available for inspection at any time by the Council, and shall be submitted to the Council at prescribed intervals by the consent holder in a format and method approved by the Council.
- 4.4 Meters must be located in a position approved by the Council and should be readily accessible for reading and maintenance. The meters shall be located and installed according to the manufacturer's installation instructions.
- 4.5 The consent holder shall arrange for on site calibration of the flow metering equipment and instrumentation by a person and method approved by the Council upon installation and at least once a year thereafter to ensure its performance. The meter accuracy should be  $\pm 10\%$  but with no greater a deviation from the previous meter calibration of  $\pm 5\%$ . A copy of independent certification of each calibration result shall be submitted to the Council.
- 4.6 Should any meter, after being calibrated, be found to have an error greater than that specified in section 4.5 of the Administration Manual as a repeatable measurement, the Council may make an adjustment in accordance with the results shown by such tests back-dated for a period at the discretion of the Council but not exceeding 12 months, and the consent holder shall pay or be credited a greater or lesser amount according to such adjustment.

### **ESTIMATING DISCHARGE**

- 4.7 In premises where no meter or similar apparatus is required to be provided, the Council may require that a percentage of the water supplied to the premises (or other such basis as seems reasonable) be used for estimating the rate or quantity of flow for the purposes of charging.

- 4.8 In premises where a meter or similar apparatus is required and that meter is out of repair or ceases to register or is removed the Council 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 the person discharging shall pay according to such estimate. Provided that when by reason of a large variation of discharge due to seasonal or other causes, the average of the previous 12 months would be an unreasonable estimate of the discharge, then the Council 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.
- 4.9 Where in the opinion of the Council a meter has been tampered with, the Council (without prejudice to the other remedies available) may declare the reading void and estimate discharge as provided above.

### **SAMPLING AND ANALYSIS**

- 4.10 As determined by the Council, sampling, testing and monitoring may be undertaken to determine if:
- (a) A discharge complies with consent conditions and /or the provisions of the bylaw;
  - (b) A discharge is to be classified as Permitted, Conditional, Controlled or Prohibited;
  - (c) A discharge complies with the provisions of appendix 1 of the Administration Manual for Permitted Discharge and any consent to discharge; and
  - (d) Trade waste consent charges are applicable to that discharge.
- 4.11 The taking, preservation, transportation and analysis of the sample shall be undertaken by an authorised officer or agent of the Council, or the person (or their agent) discharging in accordance with accepted industry standard methods, or by a method specifically approved by the Council.
- 4.12 The Person discharging shall be responsible for all reasonable costs of the sampling and analysis.
- 4.13 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.

### **MONITORING**

- 4.14 The Council is entitled to monitor and audit any trade waste discharge for compliance. The sampling procedure will be appropriate for the trade waste and the analysis. For permitted or conditional discharges monitoring may include any of the following:

- (a) The Council or its authorised agent will take the sample and arrange for this sample to be analysed in an approved and accredited laboratory by agreed and approved analytical methods;
- (b) The Council 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;
- (c) The Council will audit the sampling and analysis carried out by an approved testing laboratory. Inter-laboratory checks are to be part of this process; or
- (d) The Council will audit the trade waste consent conditions including any Management Plans.

4.15 At the discretion of the Council all costs of monitoring, sampling and analysis shall be met by the consent holder.

4.16 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 Council; and
- (c) A third portion of the sample is retained by the Council for 20 working days, for additional analysis if required.

4.17 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.

4.18 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.

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

# APPENDICES

## APPENDIX 1 – PERMITTED DISCHARGE CHARACTERISTICS

### 1. Introduction

- 1.1. The nature and levels of the characteristics of any trade waste discharged to the Council system shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by the Council as part of an approval to discharge a trade waste.
- 1.2. The Council shall take into consideration the combined effects of trade waste discharges and may modify the following acceptable characteristics for individual discharges.
- 1.3. The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the Council.

### 2. Physical characteristics

#### 2.1. Flow

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

#### 2.2. Temperature

- a) The temperature shall not exceed 40 °C.

#### 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<sup>3</sup>. For significant Industry this may be reduced to 600 g/m<sup>3</sup>.
- 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 Council having regard to the volume of the waste to be discharged, and the suitability of the drainage system and the treatment plant to accept such waste.
- e) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the drainage system or treatment plant shall not be present.

#### 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 Council is not biodegradable shall not exceed 200 g/m<sup>3</sup> as petroleum ether extractable matter when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw Wastewater, 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 Council is biodegradable shall not exceed 500 g/m<sup>3</sup> when the emulsion is stable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw wastewater throughout the range of pH 4.5 to pH 10.0.
- d) Emulsified oil, fat or grease shall not exceed 100 g/m<sup>3</sup> as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15 °C and when the emulsion is in contact with and diluted by a factor of 10 by raw wastewater throughout the range of pH 4.5 to pH 10.0.

#### 2.5. Solvents and other organic liquids

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

#### 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<sup>3</sup> or the concentration agreed with the Council.
- b) The Council 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 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.

#### 2.7. Radioactivity

- a) Radioactivity levels shall not exceed National Radiation Laboratory Guidelines.

#### 2.8. Colour

- a) 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 wastewater discharge consent.

### **3. Chemical characteristics**

#### 3.1. pH value

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

#### 3.2. Biochemical Oxygen Demand (BOD<sub>5</sub>)

- a) The BOD<sub>5</sub> of any waste may be restricted where the capacity for receiving and treating BOD<sub>5</sub> is limited. A BOD<sub>5</sub> restriction may be related to Mass Limits.

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

#### 4. Maximum concentrations

- 4.1. The maximum concentrations permissible for the chemical characteristics of an acceptable discharge are set out in Table 1, Table 2 and Table 3.

**Table 1 – General chemical characteristics**

(Mass limits may be imposed, refer to clause 20 of the Bylaw).

<i>Characteristic</i>	<i>Maximum concentration (g/m<sup>3</sup>)</i>
MBAS (Methylene blue active substances)	500
Ammonia (measured as N)	
– Free ammonia	50
– Ammonium salts	200
Kjeldahl nitrogen	200
Total phosphorus (as P)	50
Sulphate (measured as SO <sub>4</sub> )	500 1500 (with good mixing)
Sulphite (measured as SO <sub>2</sub> )	15
Sulphide – as H <sub>2</sub> S on acidification	5
Chlorine (measured as Cl <sub>2</sub> )	
– Free chlorine	3
– Hypochlorite	30
Aluminum (dissolved)	100
Iron (dissolved)	100
Boron (as B)	25
Bromine (as Br <sub>2</sub> )	5
Fluoride (as F)	30
Cyanide – weak acid dissociable (as CN)	5

**Table 2 – Heavy metals**  
(Mass limits may be imposed, refer to clause 20 of the Bylaw).

<b>Metal</b>	<b>Maximum concentration (g/m<sup>3</sup>)</b>	<b>Metal</b>	<b>Maximum concentration (g/m<sup>3</sup>)</b>
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 3 – Organic compounds and pesticides**

<b>Compound</b>	<b>Maximum concentration (g/m<sup>3</sup>)</b>
Formaldehyde (as HCHO)	50
Phenolic compounds 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 (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

## APPENDIX 2 – PROHIBITED CHARACTERISTICS

### 1. Prohibited characteristics

- 1.1. Any discharge has prohibited characteristics if it has any solid liquid or gaseous matters or any combination or mixture of such matters which by themselves or in combination with any other matters will immediately or in the course of time:
- a) Interfere with the free flow of wastewater in the Wastewater system;
  - b) Damage any part of the Wastewater system;
  - c) In any way, directly or indirectly, cause the quality of the treated wastewater or residual Biosolids and other solids from any wastewater treatment plant in the district 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 Wastewater 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 Wastewater treatment plant to receiving waters to be coloured.
  - h) Is likely to impact the health and safety of Council staff, agents and the public
- 1.2. A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in appendix 1 unless specifically 'Approved' for that particular consent.
- 1.3. A discharge has a prohibited Characteristic if it has any amount of:
- a) Harmful solids, including dry solid wastes and materials which combine with water to form a cemented mass;
  - b) Liquid, solid or gas which could be flammable or explosive in the wastes, including oil, fuel, solvents (except as allowed for in appendix 1), calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with Wastewater;
  - c) Asbestos;
  - d) The following organo-metal compounds:
    - i. Tin (as tributyl and other organotin compounds);
  - e) Any organochlorine pesticides;
  - f) Genetic wastes: being 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 Wastewater system by NZS 4304 or any pathological or histological wastes; or
- h) Radioactive material, unless the material is discharged in accordance with the Code of Practice for Unsealed Radioactive Material published by the Ministry of Health.
- i) Cytotoxic waste, liquid antibiotics or any pharmaceutical waste.

*Note: Appendix 3 – Trade Waste Consent Application Form has been removed*