

## Trade Waste Plan

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Author:	Manager Development & Governance	Commencement:	15/05/2019

### 1. PURPOSE

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This Plan sets out the standards for accountability that Council has regarding the *Environmental Protection Act 1994*, *Water Supply (Safety and Reliability) Act 2008*, and address the health and safety risks associated with processing trade waste. Additionally, this plan will stipulate how entities can make a trade waste application to discharge into Mareeba Shire Council wastewater system, how they are assessed for compliance, and utility charges are raised.

### 2. SCOPE

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This Trade Waste Policy is administered and implemented by the Building and Plumbing Section of the Development and Governance group and applies to all commercial and industrial generators discharging sewerable liquid trade waste to any Mareeba Shire Council wastewater system.

### 3. PLAN STATEMENT

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Liquid wastes are produced by a variety of industrial, commercial and domestic activities. The *Environmental Protection Act 1994* provides a general prohibition against the pollution of the environment by the discharge of such wastes, except where the person or agency holds an environmental authority permitting such discharge. All discharges to receiving waters are required to be treated to a standard that will maintain or enhance receiving water quality and environmental values.

Under the Environmental Protection Act 1994, Council is held responsible for any pollution from stormwater outfalls under its control. The discharge of Trade Waste to stormwater drainage is prohibited under the Local Government Act 2009, Chapter 3 Section 79(1). Stormwater drainage shall only be used for the disposal of uncontaminated stormwater runoff.

Liquid waste generated by industry, small business and commercial enterprises is referred to as Trade Waste. The Water Supply (Safety and Reliability) Act 2008 prohibits the unauthorised discharge of wastes, other than domestic sewage, into sewerage systems. The options for producers of trade waste are to have it treated at an approved treatment facility, obtain approval from Council to discharge Trade Waste to a sewerage system, or to obtain an environmental authority under the Environmental Protection Act 1994 to treat the Trade Waste themselves before discharging the Trade Waste to the environment.

As Trade Waste imposes an additional load on sewerage systems, charges are applied for the discharge of Trade Waste to sewerage systems. The Council is required to meet the conditions of Environmental Approvals, issued by the Queensland Government, for a sewerage system, including the disposal and reuse of treated Trade Waste and biosolids. The Council is also required by the Water Supply (Safety and Reliability) Act 2008 to fully assess the effect of Trade Waste on a sewerage system and the environment before issuing a Trade Waste Approval.

Trade Waste may have an organic strength many times that of domestic sewage and may overload the treatment facility. Trade Waste may also contain other substances such as high levels of fats and grease, heavy metals, organic solvents and chlorinated organic substances, which sewerage systems are not designed to contain or treat. These substances may:

- a) pose a serious risk to the health and safety of sewerage workers;
- b) damage the infrastructure of sewerage systems;
- c) inhibit biological processes at treatment plants;
- d) accumulate in biosolids, making their reuse difficult or impracticable; or
- e) pass through treatment plants untreated resulting in environmental contamination.

To ensure the continued protection of our environment and waterways, Council's policy is to accept biodegradable Trade Waste into a sewerage system, subject to the conditions that:

- a) a sewerage system has adequate capacity to effectively collect, transport and treat the Trade Waste; and
- b) all practicable waste minimisation, recycling and reuse options have been applied by the Trade Waste Generator.

The discharge of waste containing substances in amounts liable to be toxic or hazardous to a sewerage system, treatment process, personnel or the environment is prohibited.

#### **4. CONTROL STRATEGIES**

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##### **4.1 ENFORCEMENT**

It is an offence under section 193 (Discharging Particular Materials) of the *Water Supply (Safety and Reliability) Act 2008* to discharge Trade Waste to a sewerage system without a Trade Waste Approval given by the Council under section 180 (Trade Waste Approvals) of the *Water Supply (Safety and Reliability) Act 2008*. Any person wishing to discharge Trade Waste to a sewerage system must apply for a Trade Waste Approval.

It is an offence under the *Local Government Act 2009* for a person to discharge waste (including Trade Waste) other than uncontaminated stormwater to stormwater drainage.

##### **4.1.1 Suspension or Cancellation of Trade Waste Approval**

Grounds for suspension or cancellation of a Trade Waste Approval and the procedures to be followed are defined in section 182 (Criteria for suspending or cancelling trade waste approval) of the *Water Supply (Safety and Reliability) Act 2008*.

Failure to pay charges and fees will constitute grounds for suspension or cancellation of a Trade Waste Approval. The terms and conditions of a Trade Waste Approval in respect of any matter occurring before the suspension or cancellation, including the payment of charges owing, shall continue to have force and effect after the suspension or cancellation of the Trade Waste Approval.

#### **4.1.1 Penalties and Recovery of Costs**

The Council may prosecute any person who commits a breach of the *Water Supply (Safety and Reliability) Act 2008* or the *Local Government Act 2009* and its subordinate legislation, the *Plumbing and Drainage Act 2002*, the *Standard Plumbing and Drainage Regulation 2003*, or who refuses or neglects to comply with any direction or requirement by Council pursuant to the above legislation. The legislation cited above provides for penalties, which include substantial fines.

Where it can be shown that a Generator has contravened, or is contravening, the above cited legislation or has failed to comply with the Generator's Trade Waste Approval, the Council may recover costs of repairing damage to a sewerage system caused by discharge of a prohibited substance by the Generator.

Notwithstanding the possession of a Trade Waste Approval, any illegal discharges or noncompliance with approval conditions by a Generator may lead to action being taken against the Generator under the provisions of the *Water Supply (Safety and Reliability) Act 2008*.

#### **4.1.1 Sewer Admission Limits**

The upper limits for the quality of trade waste discharge to the sewer for all categories are set out in Appendix C. The limits will be used in conjunction with the above enforcement to achieve compliance and approval for trade waste generators.

## **4.2 MONITORING**

A requirement of the trade waste approval will be for customers to provide evidence of pre-treatment activities and maintenance. Additionally, qualified plumbing inspector will conduct ad hoc inspections to ensure pre-treatment maintenance is being carried out adequately. The plumbing inspector should be mindful of business operation hours and try to minimise interruptions to commercial operations when conducting inspections.

## **5. APPLICATIONS AND CHARGES**

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### **5.1 TRADE WASTE APPLICATION**

A trade waste application is required upon a commercial entity requiring to discharge trade waste to Council's wastewater network. The trade waste application fee is a one-off standard fee to cover the assessment and processing of a trade waste application for consent to discharge trade waste to sewer. The fee is applicable to all new commercial and industrial customers who apply for approval. The fee is adopted as part of Council's annual fees; refer to Council website for current fee.

### **5.2 CHARGES**

The method for categorising customers based on the risk of their trade waste discharge to our sewerage system. A risk score is calculated for each commercial trade waste customer based on four applicable elements:

- a) Business activity - customers are grouped and scored by the business activity they conduct
- b) Substance of concern - a score is applied based on the substance considered to be of most concern to the operation of our sewerage infrastructure
- c) Pre-treatment - a score based on the pre-treatment required by the business activity
- d) Trade waste volume - a score is applied for the estimated trade waste volume discharged to sewer.

The trade waste charge is a recurrent annual utility charge for the acceptance of trade waste from a customer. Refer to Mareeba Shire Council Revenue Statement for the current years policies.

## **6. COMMERCIAL TRADE WASTE**

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Through the continued application of a risk ranking methodology for commercial trade waste customers we can facilitate efficient and effective allocation of resources to the achievement of corporate objectives. The objectives of our customer categorisation method are to:

- Allocate equitable charges for businesses with 'like' demands on the sewer.
- Set achievable compliance requirements for customers and increase voluntary compliance.
- Reduce costs for the service through improved administrative process
- Improve customer service through targeted use of resources

The trade waste categories provide a solid basis for segregating Commercial and Industrial trade waste customers.

Industrial trade waste will be considered and assess on individual basis and this trade waste plan should only be used as guide for determining the requirements for approval. Industrial customers include breweries, tanneries, electroplaters, refineries, landfills, food manufacturers and processors, abattoirs, large laundries, smelters, wineries, beverage manufacturers, pharmaceutical product manufacturers, chemical blenders and other activities which produce a high risk liquid waste.

This risk may result from large volumes of trade waste, high strength trade waste or a combination of the two. Industrial customers are those categorised as either Category 4 trade waste customers. Please contact Council and in regards to your proposed industrial trade waste.

### **6.1 CATEGORISATION BY RISK**

A technical and commercial risk assessment of trade waste impacts on our sewage infrastructure provides the basis for categorising our Commercial trade waste customers and applying the relevant trade waste charges.

- Customers are segregated into a category which best reflects their demand on the sewerage infrastructure, consequently improving the equitability of trade waste charges for the service,
- The categorisation and compliance requirements for each customer are consistently applied,
- Clearly identify activities that are commercial in nature (Category 1 and 2) to delineate customers whose activities require additional management through an individual contract for Category 3, 4, or industrial customers, and
- Ability to differentiate customers and target our resources towards the higher risk customers where the potential benefits to the customer and Mareeba Shire Council are the greatest.

## **7. RISK SCORE METHOD**

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### **7.1 INCORPORATING THE RISK SCORE**

The risk score methodology used to categorise commercial trade waste customers is an adaptation of a method outlined in the 'WSAA Australian Sewage Quality Management Guideline 2012 Appendix B' recognised nationally as the most comprehensive guideline to managing trade waste discharge to sewer. The calculation of a risk score for each customer is based on four applicable elements:

- (A) Business activity
- (S) Substance of most concern

- (P) Pre-treatment equipment required, and
- (V) Trade waste volume

The risk score provides a clear and transparent justification for placing a customer into a specific category. Businesses are grouped together on the basis that they conduct similar activities and are expected to discharge trade waste of similar quality which requires a typical level of pre-treatment before being suitable for discharge to sewer. The incorporation of a score for volume is designed to provide a measured indication of the expected trade waste demand placed on the sewerage infrastructure by a business.

### 7.2 RISK CATEGORISATION INPUTS

The trade waste risk score is the combined total of the business activity, substance, pre-treatment and volume scores:

$$\text{Trade Waste Risk Score} = (A+S+P+V)$$

The key inputs into the risk categorisation calculation are explained in more detail below:

#### 7.2.1 (A) Business Activity Score

Commercial trade waste customers are grouped by the business activity they conduct. The grouping is based on the premise that businesses conducting the same activity will produce a similar waste stream. The risk score attributed to each activity is based on consideration of the typical strength and composition of the waste stream, and the robustness and degree of control of the processes producing the waste stream.

Business activities have been assigned a trade waste code and relevant risk scores as shown in Table 1, Appendix A. Where an entity fits in one or more business code, the higher business activity score is applied.

#### 7.2.1 (S) Substance Score

A score is applied based on the substance considered to be of most concern to the operation of our sewerage infrastructure. Substances are grouped according to their risk to:

- Health and safety of our staff and the public
- The potential for damage of our sewerage infrastructure
- Our sewage treatment processes
- Our compliance with environmental discharge conditions
- Treatment Plants, and
- The cost to treat the waste.

The substance of most concern is used as the indicator for the substance score (e.g. for a restaurant the most common substance of concern is fat, oil and grease). If there are multiple substances present, only the highest score is applied. Substances are grouped into three categories and attract scores as shown in Table 2, Appendix A.

#### (P) Pre-Treatment Score

The type and complexity of a pre-treatment device required is largely dependent on the business activity being conducted and the substance of most concern within the trade waste discharge. For category 2 customers typical pre-treatment devices are acknowledged and widely accepted as the most appropriate way to treat trade waste to a suitable level prior to discharge to the sewer. Pre-treatment devices are given a risk score based on their complexity, susceptibility to failure and the difficulty of maintaining it in a satisfactory condition.

Where a pre-treatment device is required, but not installed the waste is considered to be untreated only the highest score is applied

Table 3, Appendix 1 lists typical pre-treatment devices and their associated risk score. Further information on the minimum requirements for pre-treatment devices can be found in our Pre-treatment Guidelines.

### **7.2.1 (V) Trade Waste Volume**

The previous three criteria are used to group 'like' businesses together, based on elements typical to the business activities. To categorise trade waste customers according to their demand on the sewer an additional score is applied for the estimated trade waste volume discharged to sewer. The applicable trade waste volume is calculated based on three inputs:

- Metered water consumption.
- Reduction in volume on the basis that 80 per cent of the metered consumption is discharged to sewer, known as the base volume. Refer to section 7.3 for more information on base volume.
- Application of discharge factors (DF) which reflect a percentage of metered water consumption considered to be trade waste discharged to sewer. Refer to section 7.3 for more information on discharge factors.

The applicable volume scores are shown in Table 4, Appendix A.

Appendix B provides examples of how the trade waste category is determined for some specific business activities.

## **8. DETERMINATION OF TRADE WASTE VOLUME**

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The following formula is used to determine a customer's trade waste volume:

$$\text{Trade Waste Volume} = (\text{FY17/18 water consumption} - \text{DR}) \times \text{BV} \times \text{DF}$$

### **8.1.1 Water Consumption**

The water consumption from the prior year or similar business activity will be used to determine the category that each business. Where properties have one water connection for multiple business the single water meter will be used to calculate the risk. The individuals can install a trade waste meter at their own cost, and this will be inspected once a year. An additional yearly inspection charge will be applied to properties that have a separate trade waste meter per the above scenario.

### **8.1.2 (DR) Domestic Residence**

If a domestic residence is connected to the same meter as the trade waste business, an allowance of 200kl will be subtracted from the water consumption before the base volume and trade waste discharge factor are applied.

### **8.1.3 (BV) Base Volume**

The base volume (BV) is equivalent to 80 per cent of the annual potable water meter consumption for the property receiving the trade waste service. This reduction is applied to account for water use which ultimately does not end up being discharged to sewer.

#### **8.1.4 (DF) Trade Waste Discharge Factor**

The trade waste discharge factor is the percentage of the base volume which is considered to be trade waste discharged to the sewer. The base volume includes both a trade waste and domestic portion, the trade waste discharge factor is applied to the base volume to represent the typical volume of trade waste expected to be discharged dependent on the business activity.

The trade waste discharge factors are shown in Table 5, Appendix A.

#### **Assumptions made on volumes**

The trade waste volume for customers is derived from water consumption data for a preceding 12 month period. Water consumption volumes are reduced where the property included a domestic residence. In situations where the meter data is not reflective of the trade waste activity, water meter data is not applied and the default volume was applied to these premises.

Water consumption data applied to new customers and review of the category of existing customers during the past period will be based off the most recent 12 months water usage applying the following rules:

- A default 200kL/annum is applied to all properties where consumption data is unobtainable or not reflective of the trade waste activity
- Where multiple properties are supplied by the same meter the potable water volume is divided equally among the properties serviced.
- Water consumption for new customers without applicable meter data may be reviewed after 1 year and re-categorised accordingly.

### **9. DEFINITIONS**

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To assist in interpretation, the following definitions shall apply:

Biosolids means solid or semisolid organic material obtained from treated wastewater, often used as a fertilizer or soil amendment

Pre-treatment device means equipment installed at a customer's property or business for the purpose of reducing or removing substances prior to the trade waste being discharged to sewer. Typical pre-treatment devices include grease traps used in the food service industry to remove fat, oil and grease and oil water separators used in the automotive industry to remove engine oil, grease and hydrocarbons.

Trade waste consent means the specific terms and conditions that must be complied with, in addition to any general terms and conditions of this Contract that are not inconsistent with those terms and conditions, for Mareeba Shire Council to accept discharge of Trade Waste to its Sewerage Infrastructure.

### **10. RELATED DOCUMENTS AND REFERENCES**

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### **11. REVIEW**

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It is the responsibility of the Manager Development and Governance to monitor the adequacy of this policy and implement and approve appropriate changes. This policy will be formally reviewed every four (4) years or as required by Council.

**12. APPENDIX A****12.1 TABLE 1 - BUSINESS ACTIVITY SCORE**

Trade Waste Code	Business Activity	Description	Business Activity Score
AP01	Nursing Home / Care Home (Kitchen)	Refers to facilities providing meals, laundry and hairdressing services for residents.	10
AM01	Hospital	Hospitals have number of waste sources. This refers to facilities providing meals for patients, laundry services and discharge from steriliser facilities. If café for public service reverts to MP01	10
BE02	Supermarket	This refers to supermarkets with more than ones of these activities; bakery, butchery, chicken cooking, deli and catering	15
BE02V	Green Grocer	This activity refers to fruit and vegetable preparation and sale only (no deli, butcher, bakery as per BE02)	5
BE05	Hairdresser/Beauty Salon	All hairdressers, barbers, & beauty salons	5
BE06	Laundromat (Coin Operated)	Commercial public access/use Laundromats. May include dry cleaners dependent on size.	5
BE07	Medical (inc. Dentist, Vet)	Refers to personal services including medical centre, dentist, nails, vet	5
BE08	Service Station Forecourt	Refers to all service stations with forecourt or refuelling locations that drain to sewer.	15
BE08B	Panel / Body Repair	Refers to automotive body repair, no servicing of mechanical parts	5
BE08P	Plant / Machinery Hire / Truck Wash	Refers to businesses hiring plant and equipment or washing down larger scale vehicles (e.g. Trucks). Main activity is service and wash down of equipment	15
BE09	Car Wash/Wash bay (Wand/ Hand)	Wash down facilities for light vehicles and small equipment	10
BE10	Vehicle Wash (auto/multi-lane)	Refers to businesses with automatic or multiple berth vehicle wash facilities	15
BE11	Animal Boarding	Refers to boarding kennels	5
BE13	Nursery/Horticulture	Nurseries and Landscape supplies	5
CF01	Child Care	Child care facilities providing hot food supplied by the business for the children	5
CF02	Primary/Secondary School	Refers mainly to canteen/kiosk/Home Ec'/Hospitality waste stream as primary waste. May also have laboratories and art facilities in secondary schools	5
CF04	Correction Centre	Refers mainly to canteen/kiosk/Home Ec'/Hospitality waste stream as primary waste. May also have laboratories/auto activities	5
CF05	Church / Place of worship	Refers to sites with kitchen facilities for use intermittently to cater for events	5
CF06	Community Centre / Hall	Refers to sites with kitchen facilities for use intermittently to cater for events	5
EF01	Licenced Club	Licensed club serving on site meals.	10
EF02	Pub / Bar / Hotel	Pub/Bar/Hotel with restaurant on site.	10



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FM01	Smallgoods, Butcher	All commercial butcher shops, smallgoods producers (Does not include abattoirs) and delicatessen.	10
FM05	Bakery	Classed as a bakery when food baked on premises. If not baked on premises business classed as a café	10
MM01	Factory / Workshop	Refers to wet workshops without car wash facilities; may include wash down areas.	15
MM02	Metal Finishing	Small scale powder coating and electroplating facilities discharging less than 2kL/day of rinse water to sewer at a maximum flow rate of 20L/minute	15
MP01	Restaurant/Café	All restaurants and cafes preparing food primarily for consumption onsite	10
MP02	Take Away/Fast Food	All Fast Food/Takeaway premise preparing food primarily for consumption off site	10
MP04	Catering	Businesses providing catering services for off-site functions	10
SF01	Sports Ground (Kitchen)	Refers to facilities at sports grounds (Canteens, Commercial Kitchens) primarily used to cater for specific events on weekends or specific week days. Not 7 day a week access to the consumer	5
SL01	Laboratories	Small scale service laboratories	10
SF07	Swimming Pools	Refers to properties discharging pool backwash to sewer	5
TW01	Unique Trade Waste Discharge	Unique business activity that does not fit any other code but can be managed under a consent	10

### 12.2 TABLE 2 - BUSINESS ACTIVITY/SUBSTANCE SCORE

Substance Impact	Substances	Potential Impacts	Substance Score
Low Impact	Suspended Solids (SS) Pool Filter Backwash Total Dissolved Solids (TDS)	Restricted sewer capacity Hydraulic overload	5
Medium Impact	Fat, Oil & Grease (FOG) MBAS (Detergents)	Sewer blockage Excessive foaming Biological inhibition	10
High Impact	Total Petroleum Hydrocarbons (TPH) Corrosive liquids Saline liquids	Flammable/Explosion Biological inhibition Sewer odours Reduced asset longevity	15

**12.3 TABLE 3 - PRE-TREATMENT SCORE**

Pre-Treatment Risk	Pre-Treatment fixtures	Pre-Treatment Score
Low Risk	Cooling facility Basket arrestors (in sink/in floor) Plaster trap Bottle trap Controlled Flow Amalgam separator Cleaner Production	5
Low - Med Risk	Grease Trap Neutralising Trap	15
Medium Risk	Oil/Water Separator – (coalescing plate separator, VGS, hydro cyclone)	18
High Risk	Solvent Separator pH dosing (automatic or manual dosing)	25

**12.4 TABLE 4 - VOLUME SCORE**

Lower KL per annum	Upper KL per annum	Volume Score
0	300	5
301	600	10
601	1100	20
1101	1101	30

**12.5 TABLE 5 - DISCHARGE FACTOR**

Trade Waste Code	Business Activity	Description	Trade Waste Discharge Factor (%)
AP01	Nursing Home / Care Home (Kitchen)	Refers to facilities providing meals, laundry and hairdressing services for residents.	30
AM01	Hospital	Hospitals have number of waste sources. This refers to facilities providing meals for patients, laundry services and discharge from steriliser facilities. If café for public service reverts to MP01	30
BE02	Supermarket	This refers to supermarkets with more than ones of these activities; bakery, butchery, chicken cooking, deli and catering	70
BE02V	Green Grocer	This activity refers to fruit and vegetable preparation and sale only (no deli, butcher, bakery as per BE02)	70
BE05	Hairdresser/Beauty Salon	All hairdressers, barbers, & beauty salons	25
BE06	Laundromat (Coin Operated)	Commercial public access/use Laundromats. May include dry cleaners dependent on size.	92
BE07	Medical (inc. Dentist, Vet)	Refers to personal services including medical centre, dentist, nails, vet	25

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BE08	Service Station Forecourt	Refers to all service stations with forecourt or refuelling locations that drain to sewer.	70
BE08B	Panel / Body Repair	Refers to automotive body repair, no servicing of mechanical parts	70
BE08P	Plant / Machinery Hire / Truck Wash	Refers to businesses hiring plant and equipment or washing down larger scale vehicles (e.g. Trucks). Main activity is service and wash down of equipment	70
BE09	Car Wash/Wash bay (Wand/ Hand)	Wash down facilities for light vehicles and small equipment	70
BE10	Vehicle Wash (auto/multi-lane)	Refers to businesses with automatic or multiple berth vehicle wash facilities	90
BE11	Animal Boarding	Refers to boarding kennels	25
BE13	Nursery/Horticulture	Nurseries and Landscape supplies	25
CF01	Child Care	Child care facilities providing hot food supplied by the business for the children	10
CF02	Primary/Secondary School	Refers mainly to canteen/kiosk/Home Ec'/Hospitality waste stream as primary waste. May also have laboratories and art facilities in secondary schools	10
CF04	Correction Centre	Refers mainly to canteen/kiosk/Home Ec'/Hospitality waste stream as primary waste. May also have laboratories/auto activities	30
CF05	Church / Place of worship	Refers to sites with kitchen facilities for use intermittently to cater for events	10
CF06	Community Centre / Hall	Refers to sites with kitchen facilities for use intermittently to cater for events	10
EF01	Licenced Club	Licensed club serving on site meals.	50
EF02	Pub / Bar / Hotel	Pub/Bar/Hotel with restaurant on site.	25
FM01	Smallgoods, Butcher	All commercial butcher shops, smallgoods producers (Does not include abattoirs) and delicatessen.	70
FM05	Bakery	Classed as a bakery when food baked on premises. If not baked on premises business classed as a café	25
MM01	Factory / Workshop	Refers to wet workshops without car wash facilities; may include wash down areas.	70
MM02	Metal Finishing	Small scale powder coating and electroplating facilities discharging less than 2kL/day of rinse water to sewer at a maximum flow rate of 20L/minute	90
MP01	Restaurant/Café	All restaurants and cafes preparing food primarily for consumption onsite	50
MP02	Take Away/Fast Food	All Fast Food/Takeaway premise preparing food primarily for consumption off site	50
MP04	Catering	Businesses providing catering services for off-site functions	50
SF01	Sports Ground (Kitchen)	Refers to facilities at sports grounds (Canteens, Commercial Kitchens) primarily used to cater for specific events on weekends or specific week days. Not 7 day a week access to the consumer	25
SL01	Laboratories	Small scale service laboratories	25
SF07	Swimming Pools	Refers to properties discharging pool backwash to sewer	25

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TW01	Unique Trade Waste Discharge	Unique business activity that does not fit any other code but can be managed under a consent	90*
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### 12.6 TABLE 6 - TRADE WASTE CATEGORY

Lower Risk Score	Upper Risk Score	Risk Category
0	34	1
35	55	2
56	70	3
71	100	4

### 13. APPENDIX B

#### Restaurant

A restaurant with 650kL potable water consumption per year:

Risk Criteria	Description	Risk Score
(A) Business Activity	Restaurant	10
(S) Substance of Concern	Fat, Oil, and Grease	10
(P) Pre-Treatment	Grease Trap	15
(V) Trade Waste Volume	$(650\text{KL} - 0) \times 0.80 \times 0.50 = 260 \text{ KL}$	5
Total Risk Score (Category)		40 (Cat 2)

A restaurant with 1300 kL potable water consumption per year with a domestic residence connected:

Risk Criteria	Description	Risk Score
(A) Business Activity	Restaurant	10
(S) Substance of Concern	Fat, Oil, and Grease	10
(P) Pre-Treatment	Grease Trap	15
(V) Trade Waste Volume	$(1300\text{KL} - 200) \times 0.80 \times 0.50 = 440 \text{ KL}$	10
Total Risk Score (Category)		45 (Cat 2)

**Hair Salon**

A restaurant with 650kL potable water consumption per year:

Risk Criteria	Description	Risk Score
(A) Business Activity	Hair Salon	5
(S) Substance of Concern	Total dissolved solids	5
(P) Pre-Treatment	Cleaner Production	5
(V) Trade Waste Volume	$(650\text{KL} - 0) \times 0.80 \times 0.25 = 130 \text{ KL}$	5
Total Risk Score (Category)		20 (Cat 1)

**14. APPENDIX C**

**Sewer Admission Limits**

The upper limits for the quality of trade waste discharged to the sewer for all categories are set out below. These admission limits shall apply from 01 January 2014. They are subject to periodic review.

**14.1. GENERAL LIMITS**

Parameter Concentration mg/L except

Temperature *	< 38oC
pH*	6 – 10
Biochemical Oxygen Demand (BOD <sub>5</sub> )	600 mg/L
Chemical Oxygen Demand (COD)	1200 mg/L
Total Organic Carbon (TOC)	1200 mg/L
Suspended Solids	600 mg/L
Total Dissolved Solids (TDS)	4000 mg/L
Total oil/grease (Freon extractable)	200
Gross Solids	non-faecal gross solids shall have a maximum linear dimension of less than 20mm and a quiescent settling rate of less than 3m/hr.
Colour*	limited such as not to give any discernible colour in treatment discharge.
Odour*	not detectable in 1% dilution or causing an odour problem in Council’s sewerage system.

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Chlorine (as Cl <sub>2</sub> )	10
Sulphate (as SO <sub>4</sub> ) <sup>#</sup>	2000
Sulphite (as SO <sub>2</sub> )	100
Surfactants – Anionic (MBAS)	500
Aluminium (as Al) <sup>#</sup>	100
Iron (as Fe) <sup>#</sup>	100
Ammonia plus ammonium iron (as N) <sup>#</sup>	80
Total Kjeldahl Nitrogen (as N) <sup>#</sup>	150
Total Phosphorous (as P) <sup>#</sup>	35
Manganese (as Mn)	100

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The total mass load and the capacity of the sewerage system to accept the load shall be considered for each application.

Council may in some circumstances accept waste containing higher concentrations of these substances. Additional charges for treatment will apply.

#### 14.2. SPECIFIC LIMITS – INORGANIC

Parameter	Concentration, mg/L
Boron (B)	100
Bromine (Br <sub>2</sub> )	10
Fluoride (F)	30
Cyanide (CN)	5
Sulphide (S)	5

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**14.3. SPECIFIC LIMITS – METALS**

Parameter	Maximum Concentration mg/L	Lower Daily Mass Load g/day
Arsenic (As)	5	15
Cadmium (Cd)	2	6
Chromium (Cr) Total	20	75 <sup>x</sup>
Hexavalent	10	
Cobalt (Co)	10	30
Copper (Cu)	10	75
Lead (Pb)	10	30
Mercury (Hg)	0.05	0.15
Nickel (N)	10	30
Selenium (Se)	5	15
Silver (Ag)	5	15
Tin (Sn)	10	30
Zinc (Zn)	10	75

The concentration values apply to discharges having a daily mass load between the Lower Daily Mass Load (LDML) and the Upper Daily Mass Load (UDML). For small discharges with a daily mass load below the LDML, no concentration limits apply. Dischargers who exceed Mareeba Shire Council's UDML limits will be required to take measures to meet the UDML. This may involve treating to lower concentration than indicated above.

<sup>x</sup> For discharges below the Lower Daily Mass Load, hexavalent Cr must be reduced to trivalent Cr.

**14.4. SPECIFIC LIMITS – ORGANIC**

Mareeba Shire Council may request specific, demonstrable evidence based on degradability and toxicity concerning substances listed below.

Parameter	Maximum Concentration, mg/L
Formaldehyde (HCHO)	50
Phenolic compounds (as Phenol)	100
Pentachlorophenol	5
Petroleum hydrocarbons	30
Halogenated Aliphatic hydrocarbons	5
Halogenated Aromatic Hydrocarbons (HAHs)	0.002
Polychlorinated biphenyls (PCBs)	0.002
Polybrominated biphenyls (PBBs)	0.002
Polynuclear Aromatic Hydrocarbons (PAHs)	5
Pesticides: General (insecticides / herbicides / fungicides)**	1.0
Pesticides: Organophosphates	0.1
Azinphos – methyl	
Azinphos – ethyl	
Coumaphos	
Demeton	
Dichlorvos	
Dimethoate	
Disulfoton	
Fenitrothion	
Fenthion	
Malathion	
Methamidophos	



Mevinphos

Omethoate

Oxydemeton – methyl

Parathion

Triazophos

Trichlorfon

Pesticides:      Organochlorines

Aldrin	0.001
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Chlordane	0.006
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DDT	0.003
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Dieldrin	0.001
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Heptachlor	0.003
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Lindane	1.100
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\*\* This category covers all pesticides other than those specifically listed under organophosphate and organochlorine pesticides.

**14.5. OTHERS**

Any substance not listed in the above tables is a prohibited discharge and may not be discharged without prior approval of the Mareeba Shire Council. Council may request specific, demonstrable evidence based on degradability and toxicity for any substance when assessing acceptance to the sewer.