



Redland
CITY COUNCIL

TRADE WASTE MANAGEMENT PLAN

GL-1234-001

Approved By:	General Manager Infrastructure & Operations
Approved Holder:	Senior Trade Waste Officer

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Department: Infrastructure & Operations
Group: Water & Waste Infrastructure
Approved by: Acting General Manager Infrastructure & Operations
Approved: 18 January 2016

Effective date: 18 January 2016
Version: 6
Review date: 31 January 2019
Page: 4 of 41

SCOPE

This plan has been developed to provide information for business and industry on trade waste management methodology and requirements. It is applicable across Redland City Council (RCC).

PURPOSE

To ensure the effective management of commercial and industrial sewage discharged to the sewerage system which is in accordance with the principles of environmental sustainability and is in a manner which safeguards public health and employee safety and is consistent with Council's legal responsibilities and obligations.

DEFINITIONS

Act	Act means the <i>Water Supply (Safety & Reliability) Act 2008</i> and any other Act or Regulation attached to it pertinent to trade waste.
Additional charge	A charge for an additional load to the sewerage system.
Additional load	A waste discharge that exceeds the Sewer Admission Limits Agreement - see "Trade waste agreement".
Allowance	A factor that is determined by council and which is subject to change when required.
Annual charge	A utility charge for a category of trade waste for the cost to council of: administration of the trade waste service; and audit inspection and testing of premises.
Approval / Approved	Means approved by council.
Arrestor waste	Refer "Regulated waste".
Arrestor	An apparatus designed to intercept and retain silt, sand, oil, grease, sludge and other substances in a waste discharge.
BCCMA	<i>Body Corporate and Community Management Act 1997</i>
Biosolids	The treated solids (sludge), mainly organic, produced by sewage treatment.
BOD	Biochemical oxygen demand. Test to determine oxygen requirement for biochemical degradation of organic and inorganic material.
BUGTA	<i>Building Units and Group Titles Act 1980</i>
Cleaner production	Methods used to remove pollutants before they can enter the trade waste stream. For example, pre cleaning plates with paper towels before washing.
COD	Chemical oxygen demand. Test to determine organic and inorganic material that is subject to oxidation by a strong chemical oxidant.
Council	In this plan a reference to council means RW acting on behalf of RCC or any person appointed or authorised by RCC to act on behalf of council as the case may require.
Deemed to comply	Deemed to comply to sewer admission limits.
Domestic sewage	The liquid or liquid borne waste discharged to sewer from a toilet, shower, sink, bath, or similar fixtures designed for use in private dwellings.

Effluent	The liquid discharged following a wastewater treatment process.
Generator	Refer "Trade waste generator".
Generator identification number	On application by a person on the approved form, RW must assign the person a generator identification number.
Grease trap waste	Refer "Regulated waste".
Grease trap	Refer "Arrestor".
Human wastes	Human faecal substances and urine.
Inspection chamber	An access constructed in a drainage system to facilitate inspecting, testing or the clearance of obstructions.
Interceptor trap	Refer "Arrestor".
Interceptor waste	Refer "Regulated waste".
Owner	As defined in the <i>Local Government Act 2009</i> .
Premises	A lot as defined in section 1.3.5 of the <i>Integrated Planning Act 1997</i> , or for a lot under <i>BCCMA</i> or <i>BUGTA</i> – the common property for the lot.
Premises group	The land comprised in 2 or more premises, all the owners of which have mutual rights and obligations under <i>BCCMA</i> or <i>BUGTA</i> for the purpose of their respective ownerships, and includes the common property forming part of: (a) if the premises are lots included in a community titles scheme under <i>BCCMA</i> – the scheme land for the scheme; or (b) if the premises are lots under <i>BUGTA</i> – the parcel of which the premises form part.
Prohibited substances	Any object or substance that is not approved by RCC, in writing, that is thrown, deposited or discharged into the sewer or an opening, pipe or receptacle connected to sewer, other than domestic sewage.
RCC	Redland City Council
Redland Water	A commercial business unit of RCC responsible for water distribution and sewerage management.
Regulated waste	Non-domestic waste as mentioned in Schedule 7 of the <i>Environmental Protection Regulation 1998</i> (whether or not it has been treated or immobilised) and includes; (a) for an element – any chemical compound containing the element and (b) anything that has contained the waste.
RW	Redland Water
Sewage	Wastewater from the community including all faecal matter, urine, household and commercial wastewater that contains human waste.
Sewerage or sewerage system	Infrastructure used to receive, transport and treat sewage or effluent, and consisting of some or all of the following; (a) sewers (b) access chambers (c) vents (d) engines (e) pumps (f) structures (g) machinery (h) outfalls (i) works not mentioned in (a) to (h).
Stormwater drainage	A drain, channel, pipe, chamber, structure, outfall or other work used to receive, store, transport or treat stormwater.

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Surfactants	The key ingredient of detergents, soaps, emulsifiers, wetting agents and penetrants. Anionic surfactants react with a chemical called methylene blue to form a blue-chloroform-soluble complex; the intense colour is proportional to concentration.
Trade waste	The water-borne waste from business, trade or manufacturing premises, other than: (a) waste that is a prohibited substance; or (b) human waste; or (c) stormwater.
Trade waste approval	Written approval by RCC for a person to discharge trade waste to RCC's wastewater system. It states the terms and conditions to be met by the trade waste generator and the owner/authorised agent with respect to the discharge of trade waste into RCC's wastewater system.
Trade waste generator	Any person, owner, occupier, company or body whose activity produces or has the potential to produce trade waste.
Trade Waste Officer	Trade Waste Officer means a person holding appointment as a trade waste officer of RCC.

ACTIONS AND RESPONSIBILITIES

1. Trade waste policy and management framework

1.1 Introduction

This plan details the minimum requirements for pre-treatment equipment and includes recommendations on cleaning requirements and cleaner production to help:

- safeguard public health and the environment;
- prevent harm or injury to sewerage employees;
- exclude harmful substances that could compromise the integrity of the sewerage system;
- equitably recover the cost of trade waste services to commerce and industry;
- provide operational data on the volume and composition of industrial and commercial effluent;
- encourage waste minimisation and cleaner production;
- promote water conservation;
- assist RCC meet its statutory obligations;
- conform with the Australian Sewage Quality Management Guidelines.

Trade waste is defined as: “any liquid waste other than domestic waste discharged to sewer”.

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 require treatment to a standard that will maintain or enhance receiving water quality and environmental values.

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

A person must not discharge trade waste into (a) stormwater drainage; or (b) sewerage other than under a permit or approval issued or given by a local government under the *Local Government Act 2009*.

RCC provides a sewerage system primarily for the transport and treatment of domestic sewage. RW, a commercial business unit of RCC, is responsible for sewerage management. Payment for this service is collected through wastewater charges on each rateable property. This system may also be used, with the approval of Council, for the acceptance and treatment of trade waste. As trade waste imposes an additional load on the sewerage system, trade waste charges are applied as an additional wastewater charge.

RCC is required to meet the conditions of the environmental authority (licence), issued by Environment & Heritage Protection for its sewerage system including the disposal and reuse of treated effluent and biosolids. RCC is also required by the *Water Supply (Safety & Reliability)*

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Act 2008 and the *Environmental Protection (Water) Policy 1997* to fully assess the effect of trade waste on the sewerage system and the environment before issuing a trade waste approval.

Under the *Environmental Protection Act*, RCC 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*. It would also be a failure of the person's general environmental duty under the *Environmental Protection Act*. The stormwater system must only be used for the disposal of uncontaminated stormwater runoff.

A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm.

Domestic sewage consists mostly of water which, after treatment to reduce biodegradable material, suspended solids and nutrients, can be disposed of in accordance with its environmental authority requirements. RCC is actively seeking opportunities to reuse and recycle treated effluent and biosolids.

Trade waste may have an organic strength many times that of domestic sewage and may overload the treatment facility. Trade waste may also contain a variety of 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 treat. These substances may:

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

To ensure the continued protection of our environment and waterways, RCC'S policy is to accept, subject to conditions, biodegradable waste into the sewerage system provided that:

- the system is of adequate capacity to effectively collect, transport and treat the waste; and
- all practicable waste minimisation, recycling and reuse options have been applied by the trade waste generator.

Discharge of waste containing substances in amounts liable to be toxic or hazardous to the sewerage system, treatment process, personnel or the environment is prohibited. RCC may consider the acceptance of trade waste containing toxic or hazardous substances and non-degradable pollutants to sewer only after the waste has been pre-treated by on-site "best practicable treatment" to ensure sewer admission limits are not exceeded.

In order to maintain community confidence in RCC's wastewater operations, and in line with national practice, trade waste approvals are available for public scrutiny. Commercially confidential details will be withheld.

1.2 Objectives

- To safeguard public health and the environment.
- To prevent harm or injury to sewerage employees.
- To safeguard the sewerage system against damage, blockage or surcharging.
- To exclude non-biodegradable and potentially harmful substances that may:
 - lead to non-compliance with the conditions of RCC's environmental authority issued by the Department of Environment Heritage & Protection;
 - cause the treatment process to fail;
 - render effluent or biosolids unacceptable for reuse or disposal;
 - cause physical damage to infrastructure; or
 - cause any other detriment to the environment.
- To equitably recover the cost of services to commerce and industry, including the cost of conveyance, treatment and disposal and maintenance and repair of damage to the sewerage system.
- To provide operational data on the volume and composition of industrial and commercial effluent to assist in the operation of the sewerage system, the design of augmentations or new sewerage systems, and waste management reporting.
- To encourage waste minimisation and cleaner production, including waste prevention, recycling, and pre-treatment.
- To promote water conservation.
- To assist RCC meet its statutory obligations.
- To conform with the Australian Sewage Quality Management Guidelines 2012, Acceptance of Trade Wastes (industrial wastes), Agriculture and Resource Management Council of Australia and New Zealand and Australian and New Zealand Environment and Conservation Council, November 1994.

1.3 Process

RCC aims to achieve these objectives by a process which is transparent, equitable, accountable, abreast of best practice, and responsive to changing community needs and concerns.

1.4 Policy instruments

The objectives will be achieved using a combination of policy instruments, including:

- sewer admission limits (acceptable concentration limits for sewerable wastes);
- conditional trade waste approvals;
- "user pays" pricing; and
- effluent improvement programs.

A list of legislation relevant to trade waste control and acceptance to sewer is given in Associated Documents. This is not, nor is it intended to be, a complete listing of all legislation pertaining to the control of trade waste.

1.5 Delegations and Appointments

1.5.1 The Service Manager, Group Manager and General Manager have:

- financial delegation for the approval of expenditure;
- delegation to issue and administer a notice under section 34 of the *Water Supply (Safety and Reliability) Act 2008*.

1.5.2 Each trade waste officer has appointment as an authorised person under the *Local Government Act 2009*.

2. Trade waste control

2.1 Application and approval process

It is an offence to discharge trade waste to the sewer unless a trade waste approval has been issued (*Water Supply (Safety & Reliability) Act 2008*). A sewerage service provider may give a person approval to discharge trade waste into the sewerage infrastructure; (see section 180).

A trade waste approval is a written approval stating the requirements and conditions under which a discharge is allowed and is approved by the Service Manager. Two types of approvals are referred to in this plan – category 1 and category 2 wastes. Trade waste generators are classified as either category 1 or 2 depending on the waste load imposed on the sewer.

Any person or business wishing to discharge trade waste to sewer must make written application for an approval to discharge. Applicants should contact RCC's trade waste office for advice on the type of application required and the procedures for obtaining approval (Appendix 2).

Applications should be lodged prior to commencement of trading. Examples of appropriate times for lodging applications may include:

- during the processing of a building application for new premises or extensions intended for industrial and/or commercial usage;
- change in tenancy of such premises;
- change of ownership of such premises;
- shop fit-outs of such premises;
- during the processing of an application to strata title such premises;
- existing premises where trade waste is generated and no trade waste approval has been issued; or
- where a change in process technology occurs.

Liquid waste disposal contractors wishing to discharge septic tank, portable toilet waste or other approved holding tank or liquid waste to the sewer or wastewater treatment plant must be licensed (section 13) and must apply for an approval.

An application form and advice on how to complete the form may be obtained in person from RCC or at www.redland.qld.gov.au.

Failure to provide all required information will result in delays in approvals.

Any plumbing and drainage work associated with the installation of any treatment process shall be in accordance with the *Plumbing and Drainage Act 2002*, *Standard Plumbing and Drainage Regulation 2003*, National Plumbing and Drainage Code (AS/NZS 3500), and all work must be carried out by a licensed plumber and drainer.

General advice on treatment and disposal options for non-sewerable waste may be obtained from RCC, however advice should also be sought from appropriately licensed liquid waste disposal contractors and private consultants.

A trade waste approval is specific to the property and business and copies are issued to both the property owner and the business owner. The property owner is the approval holder and is the primary point of contact regarding the approval and responsible for the payment of charges.

Where several businesses generating trade waste operate on a property, a separate application must be submitted for each business.

Separate businesses are identified as ones which are operating:

- at separate locations on the property or under separate lease agreements with the property owner; and
- under different business names.

Separate businesses typically have separate staff structures, financial structures and operational activities. However they may have the same business owner.

An area within the premises of one business which is sub-leased to another business is not regarded as a separate trade waste generator. The major lease holder must accept final responsibility for the trade waste activities of the sub-leased area.

2.2 Discharge categories

All trade waste accepted to sewer will be classified according to the following 2 categories for the purposes of a trade waste approval and charging.

Parameter	Category 1 low strength and volume	Category 2 high strength and volume
Biochemical oxygen demand (BOD ₅), mg/L	<600	>600
Chemical oxygen demand (COD), mg/L	<1500	>1500
Suspended solids, mg/L	<600	>600
Total oil & grease mg/L	<200	>200
Total Nitrogen, mg/L N	<150	>150
Total Phosphorus, mg/L P	<50	>50
Volume, kL/annum	Subject to approved drainage design.	Subject to approved drainage design.
Charges	See section 7.1.1.	See section 7.1.1.

Acceptance of any waste is conditional on compliance with the sewer admission limits or unless otherwise approved. It is the responsibility of the trade waste generator to ensure limits are not exceeded.

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In the event of any significant change in discharges by a category 1 generator, the waste will be treated as a category 2 waste for the purposes of charging and monitoring.

2.3 Approval category 1 and 2

A trade waste generator producing waste assessed as suitable for sewer discharge and classified as Category 1 or 2 may be issued with a trade waste approval and shall remain in force for the specified period unless cancelled. Trade waste approvals are not transferable.

The approval states the terms and conditions the holder of the approval must observe to discharge trade waste to Council's sewerage. These may include, but are not limited to:

- expiry/renewal date;
- generator identification number;
- the location of the premises and nature of the occupancy;
- the type and composition of trade waste that may be discharged;
- a statement that the quality of waste shall comply with the sewer admission limits as specified in Appendix 1 and details of any allowed variations;
- additional charges in accordance with 7.1.3;
- the quantity of trade waste that may be discharged;
- the rate of discharge, including maximum rate of discharge;
- the time when trade waste may be discharged;
- the period for which trade waste may be discharged;
- the method for estimation or measurement of discharge volume;
- provisions for measurement and sampling of discharge prior to entry to sewer;
- details of any pre-treatment required;
- conditions for maintenance of, and removal of waste from, pre-treatment equipment including the frequency of cleaning;
- records to be kept concerning the cleaning and maintenance of pre-treatment equipment;
- a statement that trade waste charges apply and shall be paid in accordance with section 7, and
- any other conditions considered by council to be appropriate.

When the trade waste applicant is not the owner of the premises, a copy of the approval will also be supplied to the owner because of the owner's responsibilities for payment of trade waste charges.

2.4 Approval category 2 – separately metered

A very large trade waste generator producing waste assessed as suitable for sewer discharge and classified as category 2 will be issued with a written trade waste approval. The approval shall remain in force for the specified period unless cancelled. Trade waste approvals are not transferable.

The approval states the terms and conditions the holder of the agreement must observe to discharge trade waste to sewerage. These include the above approval conditions with additional conditions, if required, as follows:

- details of self regulation monitoring program including:
 - sampling point;
 - frequency of sampling;
 - method of sample collection and type of sample to be collected;
 - analyses required;
 - methods of analyses;
 - requirement for a NATA-accredited laboratory, data transfer and availability to Council;
- type, design and location of flow measuring equipment and requirements for calibration;
- methods to be used for estimation of data lost due to failure of sampling program or flow measurement instrumentation;
- provision for measurement and sampling of discharge prior to entry to sewer;
- records to be kept concerning the cleaning and maintenance of pre-treatment equipment and disposal of waste;
- the obligation of the trade waste generator concerning any variations to operation or treatment processes that may affect discharge quantity or quality including change of business type.

When the trade waste generator is not the owner of the property, a copy of the approval will also be forwarded to the owner because of the owner's responsibility to pay trade waste charges. Commercial confidential details will be withheld.

2.5 Suspension or cancellation of trade waste approval

Council reserves the right to amend, suspend and cancel trade waste approvals as outlined in section 182 of the *Water Supply (Safety & Reliability) Act 2008*.

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.

2.6 Penalties and recovery of costs

RCC may prosecute any person who commits a breach of the *Water Supply (Safety & Reliability) Act 2008* or the *Local Government Act 2009* and its subordinate legislation, or who refuses or neglects to comply with any direction or requirement pursuant to the above legislation, or other relevant legislation. Penalties are set out in the above legislation, and include substantial fines.

RCC may recover costs of repairing the damaged sewerage system from anyone causing damage to the sewerage system by discharging unauthorised material, making an unauthorised connection or interfering with infrastructure.

3. General requirements for trade waste generators

3.1 Sewer admission limits

Any waste discharged to RCC's sewer shall comply at all times with the trade waste sewer admission limits as set out in Appendix 1 unless otherwise specified in the trade waste approval. These limits are subject to periodic review.

The sewer admission limits, unless otherwise specified in the trade waste approval, are absolute maximums.

Trade waste streams that are not compatible in character may not be combined. The trade waste stream and domestic waste stream should, wherever practicable, discharge separately to the sewer. Where there is a common sanitary drain, allowance for the domestic component will be made to estimate the actual trade waste component strength.

Trade waste generators are encouraged to implement waste minimisation practices and install best practice pre-treatment processes to reduce both the volume and the contaminant load of wastes discharged to sewer.

The dilution of trade waste with water to achieve compliance with the sewer admission limits is prohibited. RCC has obligations to avoid sewer overflows and consequently may impose an additional charge or limit for additional discharges to sewer.

3.2 Effluent improvement programs

For Category 1 waste, an approved pre-treatment system and maintenance program should provide a satisfactory effluent to comply with sewer admission limits.

RCC, at its discretion, may reach agreement with a Category 2 trade waste generator for the acceptance of waste to sewerage that exceeds the sewer admission limits. Additional charges (section 7.1.2) may apply for such parameters.

Where such an agreement is made, the trade waste generator is to prepare an effluent improvement program for approval. This program would include:

- a description of the effluent quantity and quality;
- provision for monitoring and reporting waste quantity and quality;
- an examination of waste prevention and recycling options;
- an examination of options for the conservation of water;
- a program involving the development of waste reduction and pre-treatment aimed at reducing contaminant levels over a period of not more than 3 years to the prescribed admission limits. An action program must be provided, including expected outcomes, timelines and milestones;
- preparation of a report for Council, including a summary of achievements and options.

Existing category 2 trade waste generators required to develop an effluent improvement program will be advised of this requirement in writing. If the generator has not completed a satisfactory effluent improvement program, the generator is required to show cause and request an extension of time with reasons. RW may issue a new trade waste approval, subject to conditions that:

- (a) a satisfactory effluent improvement program be submitted within 28 days; and
- (b) that the trade waste approval may be varied after submission of the effluent improvement program as necessary to enforce the implementation of the program.

3.3 Cleaner production

Category	Benefit
Financial	<ul style="list-style-type: none"> • Reduction in waste treatment, raw materials and other operating costs. • Reduction in potential environmental liabilities and avoidance of statutory compliance costs. • May lead to insurance savings/improved credit rating as a result of reduction in risks and liabilities. • May provide enhanced access to capital from financial institutions and lenders. • Will often find low capital projects that provide significant return, many projects will pay back within short time frames.
Legal	<ul style="list-style-type: none"> • Ability to meet statutory obligations. • Provide evidence of due diligence.
Organisational	<ul style="list-style-type: none"> • Protection of public and employee health and safety. • Increased productivity. • Increased staff motivation via employee participation in idea generation and implementation. • Support of employees, communities, customers and the public.
Technical	<ul style="list-style-type: none"> • Increased process efficiency. • It may encourage innovation in design.
Community	<ul style="list-style-type: none"> • Assists a company to meet the requirement being increasingly demanded of industry by the community, that industry should accept environmental responsibility and, in return, the community is likely to grant industry "right to operate".
Market based/promotional	<ul style="list-style-type: none"> • Reduces consumer risks associated with products containing hazardous materials. • Demonstrates a company is willing to accept the challenge of continuous improvement and to operate in an ecologically sustainable manner. • Better public image and ability to have credible "green marketing". • Potential for increased share price and market share.
Environmental	<ul style="list-style-type: none"> • Efficient use of resources. • Reduction in waste emissions.

4. Pre-treatment processes and equipment

4.1 Arrestors

Where arrestor installations are required to pre-treat waste before discharging to sewer, they must be of an approved design and capacity. Trade waste drainage and wastepipes are to be installed using trade waste approved materials (AS/NZS 3500.2:2003 – Section 2.4).

Maintenance and cleaning of arrestors shall be carried out at least every 3 months or by approval, within a specified time period complying with conditions of the trade waste approval and must be carried out by an approved waste transporter under the *Environmental Protection Act 1994* and the *Environmental Protection Regulation 1998*.

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Applications for the extension of the minimum maintenance period may be lodged with Council.

Where it is intended that several trade waste generators share the use of an arrestor, the following information is required on the approval application plan:

- the size of the arrestor;
- details of the loading to be discharged by each trade waste generator;
- the names of the businesses and shop number(s) sharing the arrestor;
- measuring and servicing agreements between generators for charging purposes.

Domestic waste, rain and stormwater must not be directed through the grease arrestor.

In a situation where an arrestor is required for pre-treatment but cannot be installed because of specific site constraints, an additional charge may be applied if the discharge is acceptable to sewer.

A hose tap for cleaning must be fitted within 3 metres of the arrestor.

Guidance on the sizing and installation of arrestors is available from:

- pre-treatment guidelines for trade waste discharges;
- the *Standard Plumbing and Drainage Regulation 2003* sections 39 and 40;
- Redland Water;
- sewerage inspector;
- private hydraulic consultants.

Each application will be assessed on the nature of the waste to be treated, the proposed treatment method, site location and potential effluent quality.

4.1.1 Grease arrestor

The maximum capacity of an individual grease arrestor shall be 5000 litres, the minimum size is 1000 litres. Where the design capacity requirement is greater than 5000 litres, these will be assessed on a case-by-case basis. Each arrestor is to be a discrete installation separately treating a defined waste stream.

All concrete grease, acid and silt arrestors shall be protected by an internal acid resistant protective coating that is installed:

- (a) during the manufacture of the arrestor; and
- (b) prior to the delivery and installation of the arrestor; and comprised of:
 - a spray-on protective coating; or
 - an epoxy protective coating; or
 - a liner made from a durable material.

One pre-treatment device per discharger is preferred.

Where it is not practicable to install one pre-treatment device per discharger and several trade waste generators must share the use of a grease arrestor, the following information is required to be clearly tabled on the plan submitted with the application for approval:

- the size of the arrestor;
- details of the loading to be discharged by each trade waste generator;
- the names of the businesses and shop number(s) sharing the arrestor.

NB. Please refer to Section 4.8 for sizing details for these proposed installations.

Grease arrestors must be located to allow appropriate access for inspection, pump out and cleaning, fitted with vents, a full length and width opening that may require gas tight covers and frames. Where practicable and within 3 metres, a hose cock with suitable backflow prevention is to be provided for cleaning. The location must be approved prior to installation.

The use of solvents, enzymes, mutant or natural bacterial cultures, odour control agents or pesticides in grease arrestors is prohibited unless specifically approved. Conditional approval may be given to allow the trade waste generator to demonstrate that the product to be used does not adversely impact on the sewerage system or the environment.

Maintenance cleaning of grease arrestors shall be carried out on a regular basis in accordance with conditions of the trade waste approval by a waste transporter licensed under the *Environmental Protection Act 1994* and the *Environmental Protection Regulation*. The maintenance period may be changed at any time at the discretion of council.

In a situation where a grease arrestor is required for pre-treatment but cannot be installed because of specific site constraints, an additional charge (section 7.1.3) will apply.

4.1.2 Mineral oil separator

Appropriately sized mineral (petroleum) oil arrestors for the treatment of oily wastewater will be approved in most circumstances. Acceptable methods include:

- vertical plate separators;
- coalescing plate separators;
- membrane technology;
- diffused air flotation (DAF);
- chemical precipitation;
- hydrocyclones;
- triple stage interceptors; and
- other apparatus/methods.

Special maintenance schedules and maintenance procedures are required. Each application will be assessed on the nature of the oily waste to be treated, the proposed treatment method and site location. Removal of oily waste shall be done by a waste transporter licensed under the *Environmental Protection Act 1994* and the *Environmental Protection Regulation 1998*.

Subject to recommendations by the manufacturers of plate separators, "Quick Break Detergents" should be used with plate separation units.

4.1.3 Cooling tank

High temperature waste affects both the waste stream and the sewer system. Trade waste discharged to sewer must be below 38°C.

4.1.4 Dilution tank

A dilution tank may be required to balance high strength discharges.

4.1.5 Neutralisation tank

Where a waste is outside the acceptable pH range, it may negatively affect Council's sewer system, release toxic gases or cause corrosion. A neutralisation tank may be required to correct the pH and to allow a controlled discharge rate. The tank contains marble chips which must be replaced when spent. All neutralisation tanks must be lined with a corrosion resistant impervious liner or be wholly constructed of this material.

4.1.6 Silt arrestor

A silt arrestor is an above or below ground tank which collects and traps solids and silts. Some may be fitted with a grate and a removable basket.

4.2 **Dissolved air flotation**

Dissolved air flotation (DAF) units are designed to remove solids, grease and oil through the introduction of high pressure air into the waste stream.

4.3 **Dry basket arrestor**

A dry basket arrestor is a pit or tank which is fitted with a fixed screen or removable basket that catches solids. Lint traps and bucket traps are types of dry basket arrestors.

4.4 **Enzymes / micro-organisms**

4.4.1 Enzyme and bacterial cultures

Enzyme and mutant or natural bacterial cultures may be permitted for use in certain biological pre-treatment systems by way of specific approval. Applicants will need to demonstrate the product does not adversely impact on the sewerage system, the environment and minimum arrestor servicing is maintained.

4.4.2 Genetically modified organisms

The use of genetically modified organisms (GMOs) is regulated under the *Gene Technology Act 2000* (Commonwealth legislation) and the *Gene Technology Act 2001* (Queensland legislation).

Any person wishing to discharge commercial products containing GMOs to sewerage must first obtain approval from the Genetic Technology Regulator, Canberra for the release of organisms. Council may then grant approval to discharge to sewerage.

Laboratories and other facilities which culture, package or transport GMOs should have in place sufficient procedures and pre-treatment equipment to ensure that no live GMOs are discharged to sewerage.

4.5 **Food waste disposal units**

Food waste disposal units (garbage grinders/sink-to-sewer disposal units) may be approved for non-domestic use by specific approval. Where installation is approved, an annual charge based on motor power shall be made (section 7.1.5) for Category 1 approvals.

4.6 Devices that macerate or pulverise waste

Upon application and review, Council may accept discharge from devices used by care facilities to macerate or pulverise solid waste. The application is made as part of a plumbing application and must include all information about the proposed device and model. This is forwarded to the Trade Waste unit for review and is assessed on a case-by-case basis. The macerator must be used according to the manufacturer's instructions and any additional conditions imposed by Council. Council reserves the right to refuse installation or to order removal if it is deemed an unacceptable risk to the sewer infrastructure.

Solid waste includes, but is not confined to, sanitary napkins, placenta, surgical waste, disposable nappies, and paper-mache bedpan and urine containers.

4.7 Containment of toxic/hazardous substances

Any potentially toxic or hazardous substances shall be stored in bunded areas where leaks, spillage, or overflows cannot be drained by gravity or by any automated mechanical means to sewerage or the stormwater drainage system.

Bunding of toxic or hazardous substances shall be roofed and separated from stormwater ingress to meet recommendations of applicable guidelines, standards, or codes of practice.

Accidental spills or discharges must be immediately reported to Council's emergency number and Redland Water (refer to Appendix 2 for contacts).

4.8 Guideline for sizing of an arrestor

Fixtures/Fittings	Capacity (L)
Bain marie - water heated	Maximum capacity of the apparatus x 3
Floor waste via bucket trap or drain	50L for every 50 square metres of floor area or part thereof, plus the capacity of any connected apparatus
Sealed floor waste gully	The capacity of any connected apparatus
Cleaner's sink	30
Dishwasher - tunnel feed	Manufacturer's peak flow rate per hour x 3
Dishwasher – large (>1 outlet)	Manufacturer's peak flow rate per hour x 3
Dishwasher – medium (upright)	300
Dishwasher – small (under bench)	150
Glass washer - tunnel feed	Manufacturer's peak flow rate per hour x 3
Glass washing machine	150
Grease canopy, water cleaned and plumbed to sewer	50
Hand basin	30
Ice cream machine, plumbed to sewer	60
Laboratory sink, commercial	50
Laboratory sink, educational facility	22
Noodle cooker	100
Potato peeler, large industrial	Manufacturer's peak flow rate per hour x 3
Potato peeler, small retail	100
Rotisserie rack	100

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Fixtures/Fittings	Capacity (L)
Steamer roast oven/combi oven, plumbed to sewer	1000 plus 40per rack
Electric or gas /steamer cooker/kettle	200
Sink, depth greater than 300mm	300
Sink, depth up to and including 300mm	150
Trough up to 4 taps	40
Trough greater than 4 taps	40 plus 10 per additional tap
Tundish condensate (refrigerator / freezer condensate)	3
Tundish (except refrigerator / freezer condensate)	10 plus any connected apparatus
Wok burner dry	30 per water arm
Wok burner wet	Manufacturer's peak flow rate per hour x 3

5. Requirements for specific generators

The types of operations which are required to be registered as trade waste generators include but are not limited to the following. Typically the listed pre-treatment systems are required to be installed. The trade waste category given is a guide only, and each operation is categorised according to risk.

Industry	Discharge	Typical Category	Minimum pre-treatment
Engineering industries			
Automotive dismantlers; wreckers; mechanical workshop Service stations; refuelling bay Vehicle wash-bay; car detailing; commercial vehicle washing, manual or automatic; plant and equipment washing	Grease, oils, petroleum hydrocarbons, suspended solids, metals, solvents, detergents	1	Minimum 1000L pit with dry basket arrestor and minimum 1000L mineral oil arrestor. Units will be sized according to influent flow.
Panel beater; spray painting	Grease, oils, suspended solids	1	Minimum 1000L pit with dry basket arrestor and minimum 1000L mineral oil arrestor. Units will be sized according to influent flow. Discharge from a spray booth area is not permitted. Paint solvents, thinners are not permitted into the sewer.

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guideline document

GL-1234-001

Industry	Discharge	Typical Category	Minimum pre-treatment
Radiator repairs	Suspended solids, pH, heavy metals	1	Silt arrestor. Metal removal and pH adjustment may be required before discharge to sewer. * Capture the radiator fluid in a tray or container before removing the radiator from the vehicle. Radiator fluid may not be discharged to sewer. * Floor must be bunded to prevent spillage draining to sewer.
Major manufacturing industry	BOD/COD, grease, suspended solids	TBA	Liaise with Council
Food industries			
Food preparation but with no onsite cooking and no greasy waste including: * Coffee shop * Ice cream parlour * Juice bar	BOD, suspended solids	1	No pre-treatment required
Commercial cooking with the generation of greasy waste including: * cooking of meals, baking, cooking of meat or dairy products; * doughnut or pizza cooking; * fish and chips shops; * hostel or commercial accommodation; * child-care centres.	BOD/COD, grease, suspended solids	2	* Dry basket arrestor for floor waste if installed * Minimum 1000L grease arrestor
Butcher, chicken processing with no onsite cooking	BOD/COD, grease, suspended solids	2	* All drainage from sinks and floor waste to pass through a dry basket arrestor * Dry basket arrestor for floor waste if installed * Minimum 1000L grease arrestor
Fish and shellfish processing with no onsite cooking	BOD/COD, suspended solids	1	* All drainage from sinks and floor waste to pass through a dry basket arrestor * Dry basket arrestor for floor waste if installed
Major food processing industry	BOD/COD, grease, suspended solids	TBA	Liaise with Council
Medical industries			
Dental surgery	Amalgam silver, suspended solids	1	Standard filters required on spittoons

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GL-1234-001

Industry	Discharge	Typical Category	Minimum pre-treatment
Doctors' surgery; medical centre; hospital	Suspended solids, chemicals	1	Plaster arrestor - see photographic section
Optical glass manufacturing	Suspended solids	1	Silt arrestor
Funeral parlour, morgue, autopsy table	Suspended solids	1	Dry basket arrestor in floor waste. Screens at the table drainage outlet.
Animal industries			
Animal wash bay	BOD, suspended solids	1	Dry basket arrestor
Animal housing	BOD, suspended solids	1	Minimum 1000L silt arrestor may be required if sediment drains to sewer
Textile industries			
Dry cleaning	Dry cleaning fluids/solvents	1	* No pre-treatment required * Dry cleaning fluids must not be discharged to sewer
Laundry	Lint, high temperatures	1	* 1mm mesh lint screens internal or external to machines
Other requirements			
Bin wash	Suspended solids, BOD, grease	1	Dry basket arrestor in floor waste
Crafts		TBA	Assessment required
Hairdressing		1	No pre-treatment required
Laboratory (school)	Chemicals	1	1000L neutralisation tank
Laboratory (other)	Chemicals	TBA	Liaise with Council
Non-digital photographic processing and developing, X-ray processing, or graphic arts Printing Screen printing	Silver, thiosulphate, sulphite, ammonia	TBA	* Settling tank may be required * Neutralising tank may be required * Metal recovery unit * Flammable solvents must not be discharged to sewer
Swimming pools (municipal and commercial), hydrotherapy installations, ornamental ponds, recreational lakes	High flow rate, corrosion inhibitors, biocides	1	Settling tank may be required. Discharge flow restrictions may apply.
Cooling towers	Biocides, corrosion inhibitors	1	No pre-treatment is required.

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5.1 Medical, clinical, dental, veterinary and infectious wastes

Clinical and related waste should be managed in accordance with the requirements of the *Environmental Protection (Waste Management) Regulation 2000*.

Solid wastes from any hospital, clinic, office or surgery of a medical or veterinary facility or laboratory, convalescent or nursing home or health transport facility; including, but not limited to, hypodermic needles, syringes, instruments, utensils, swabs, dressings, bandages, or any paper or plastic item of a disposable nature, or any portions of human or animal tissue; shall not be discharged to the sewer.

The discharge to sewer of liquid wastes including faeces and body fluids from any hospital, clinic, office or surgery of a medical or veterinary facility or laboratory, convalescent or nursing home or health transport facility is permitted in accordance with the National Guidelines for Waste Management in the Health Industry 1999, National Health and Medical Research Council subject to approval.

Infectious or hazardous liquid wastes deemed to pose a threat to public health and safety may not be discharged to the sewer without approval. Such wastes shall require treatment to render them non-infectious or non-hazardous prior to discharge. When approved for discharge, trade waste charges will apply.

5.2 Landfill leachate and disposal facility wastewater

Leachate from landfill sites and wastewater from waste treatment/disposal facilities constitutes a trade waste and may not be discharged to sewer without approval through the issue of a trade waste approval.

Charges in accordance with the discharge category classification will apply.

5.3 Discharge from open areas

The discharge of stormwater and rainwater to sewer is prohibited.

5.3.1 Wash Bays

Wash bays in open areas must be roofed and bunded to prevent the ingress of stormwater into sewer.

5.3.2 Contaminated areas

The ingress of surface water from a potentially contaminated open area to sewerage can cause severe operational problems. However, there may be circumstances when it may be beneficial to accept these wastes to the sewer under strict controls.

The discharge to sewer from any potentially contaminated open area that is raised or bunded may be considered providing the potential quality and quantity requirements are acceptable. A plan detailing potential discharges and servicing is required to be developed for consideration.

Applicants should note that an open area approval is not an alternative to the appropriate management of polluted areas such as roofing or other methods to keep water away from the open area. Applicants must demonstrate too that all appropriate measures to keep runoff water away from the potentially contaminated open area have been taken.

A trade waste approval is required to discharge such waste.

All applications for sewer discharge from open areas must have controls incorporated in the design that will, in the opinion of council, ensure that:

- sewage blockages or overflows do not flow directly into stormwater drainage;
- waste discharge point is above flood, overflow relief gully, and finished surface level;
- all effluent is pumped to sewer at an approved rate;
- all discharge to sewer ceases automatically after a predetermined level of rainfall volume (mm) and/or intensity (mm/hr) are approved;
- the "first flush" volume is collected and segregated during wet weather with additional runoff directed to the storm water system. Applicants should seek advice on the required "first flush" volume to be collected;
- the "first flush" volume collected is pumped to sewer, after any necessary pre-treatment, no sooner than one hour after the cessation of rain;
- an approved device for the determination of sewer discharge flow and volume to be installed:
 - potential sewage discharge or backflow from sewerage is prevented from entering the stormwater system;
 - regular maintenance and cleaning of approved apparatus is acceptable;
 - work in cleaning the apparatus must be carried out by an approved operator.

Charges in accordance with the discharge category classification will apply.

5.4 Discharge of liquid wastes from vessels, vehicles and aircraft

5.4.1 Vessels

Depending on the quality, the discharge of certain galley and toilet wastes from vessels may be permitted via approved "pump out" facilities at ports and marinas. The operator of such facilities must hold an approval for discharge to sewerage.

The discharge of both treated and untreated sewage can only occur in accordance with the *Transport Operations (Marine Pollution) Act 1995*.

Charges in accordance with section 7.2.5 will apply.

The discharge of untreated bilge water to the sewer is prohibited. Accidental spills or discharges must be immediately reported to Council's emergency number and Redland Water (refer to Appendix 2 for contacts).

5.4.2 Buses, aircraft, recreational vehicles

The discharge of toilet waste from buses, aircraft or recreational vehicles may be permitted at approved discharge locations such as bus or transport depots, terminals, caravan parks and by liquid waste transporters. The owner of the premises or facility must hold a trade waste approval and discharge and disposal must be in accordance with the approval conditions. Accidental spills or discharges must be immediately reported to Council's emergency number and Redland Water (refer to Appendix 2 for contacts).

Charges in accordance with section 7.2.5 will apply.

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5.5 Regulated, tank and arrestor wastes

Removal of regulated waste shall only be by approved waste transporters licensed by the *Environmental Protection Act, Environmental Protection Regulation 1998* and transported, stored, treated or disposed of in accordance with the requirements of the *Environmental Protection Regulation 1998* and the *Environmental Protection (Waste Management) Regulation 2000*.

No person shall discharge or cause to be discharged directly or indirectly to sewerage, wastes from any waste transport vehicle without a trade waste approval.

Removal and disposal of septic tank waste, portable toilet waste and holding tank waste shall only be done by a licensed waste transporter. Such waste may be disposed of to sewerage in accordance with trade waste approval conditions.

Waste from grease and oil arrestors, other than treated effluent from approved installations (section 13.2), shall not be disposed of to the sewerage system. Such wastes shall be disposed of in a manner and/or at an approved site in accordance with requirements of the *Environmental Protection Act* and the *Environmental Protection Regulation 1998* and the *Environmental Protection (Waste Management) Regulation 2000*.

All waste transporters shall maintain records to account for all waste collected and disposed of within or outside Redland City.

Trade waste charges in accordance with Section 7.2.5 are invoiced to the transporter for waste received at RW's designated waste disposal sites.

Advice on the disposal of non-sewerable liquid waste may be obtained from RCC.

6. Trade waste charges and fees

Under POL-1837 Council has a policy for the making and recovery of rates and charges. Wastewater charges are levied under sections Chapter 2 Part 7 of the *Local Government (Finance, Plans & Reporting) Regulation 2010* made under the *Local Government Act 2009*. Charges to be levied for the ensuing financial year will be determined by council resolution passed before or at the same time as the budget in any financial year. Wastewater and trade waste charges for the current financial year are listed in council's annual budget resolutions and are also available from RCC at www.redland.qld.gov.au.

Trade waste charges are in addition to other wastewater charges. Commercial wastewater charges are based on sewer units derived from the number of toilet pedestals and urinals rated on the property. Trade waste charges are based on effluent and wastes entering the sewerage system and treatment.

Trade waste remissions are approved by the relevant Service Manager or Group Manager up to the level of 10% of their financial delegation.

Remissions above these levels are referred to the General Manager.

6.1 Wastewater charges for trade waste

6.1.1 Methodology

The trade waste discharge is divided into 2 categories for administration and treatment for charging purposes (Section 6).

A trade waste generator charge is applied to all categories as a minimum charge for recurring administration and overhead costs associated with trade waste control.

Accounts for trade waste discharged to sewer will be:

- (a) forwarded 4 times a year;
- (b) a debt due by the owner of the property (who may not necessarily be the trade waste generator);
- (c) obligations for payment of charges are in accordance with payment of rates;
- (d) recoverable in the same manner as general rates.

6.1.2 General trade waste charges

A property becomes subject to trade waste charges effective from the trade waste approval and/or business start date. Charges are based on the actual quality and quantity of waste and discharge for the period, not on figures described in the trade waste approval.

Charges will be determined as follows:

Category 1 - trade waste generators:

- A *trade waste generator* charge which is a charge for access to the sewer.
- A *trade waste discharge treatment* charge which is a quantity charge on the total annual volume of trade waste discharged to the sewer to be calculated as follows:

$$C = Q \times k$$

where:

- C is the annual charge (\$)
- Q is the annual volume (kL) which is determined as defined in section 11.1, and
- k is the unit charge rate (\$/kL). The unit charge, k, incorporates both volume and load costs based on domestic strength sewage, is based on the total cost of providing and maintaining the sewerage system for the total annual wastewater flow to the sewerage plant(s).

Category 2 - trade waste generators:

- A *trade waste generator* charge which is a charge for access to the sewer.
- A *trade waste discharge treatment* charge which is a quantity and quality charge on the total annual discharge of trade waste to the sewer. Quality charges shall be made for BOD₅ (or alternatively COD), total suspended solids (TSS), total Nitrogen (TN), total Phosphorus (TP), total oil and grease (TOG). The calculation is as follows:

$$C = Q \times a + \frac{Q \times X_{\text{BOD}} \times N_{\text{BOD}} + Q \times X_{\text{TSS}} \times N_{\text{TSS}} + Q \times X_{\text{TKN}} \times N_{\text{TN}} + Q \times X_{\text{TP}} \times N_{\text{TP}} + Q \times X_{\text{TOG}} \times N_{\text{TOG}}}{1000}$$

where:

- C is the total annual charge (\$);
- Q is the total annual discharge volume (kL) which is determined as defined in section 11.2;
- a is the category 2 unit charge for volume (\$/kL). This is the unit charge for the volume component only and should not be confused with “k” (Category 1) which is a volume-based charge which reflects the total cost of operation and treatment for the sewerage system for both volume and mass load based on domestic strength sewage;
- X_{BOD} , X_{TSS} , etc, are the average concentrations of the pollutants BOD, TSS, etc (mg/L); and
- N_{BOD} , N_{TSS} , etc, are the unit charges for the pollutants BOD, TSS, etc (\$/kg).

All Category 2 customers are charged at “deemed-to-comply” except for customers who were already Category 2 before July 2008. It is assumed that Category 2 customers meet sewer admission limits and are not charged over-limit strength.

For deemed-to-comply customers, TN is charged up to 50mg/L and TP is charged up to 10mg/L instead of 150 and 50 mg/L respectively as these strengths would be more closely related to domestic strength.

Deemed to comply parameters are:

Parameter	Strength
Biochemical oxygen demand (BOD ₅), mg/L	600
Chemical oxygen demand (COD), mg/L	1500
Suspended solids, mg/L	600
Total oil & grease mg/L	200
Total Nitrogen, mg/L N	50
Total Phosphorus, mg/L P	10

Deemed-to-comply customers may prefer to provide NATA accredited sampling results to RCC, which could be lower than the above parameters, for charge calculation.

6.1.3 Additional charges for over-limit discharge

This charge applies:

- where council agrees to accept to sewerage, waste which has properties in excess of those defined in the general limits (Appendix 1) of the sewer admission limits and the conditions of such acceptance are defined in the trade waste approval;
- or
- where a trade waste generator discharges waste to sewer in excess of the limits defined in the trade waste approval or the sewer admission limits (Appendix 1) without approval to exceed the limits;
- or
- where in a specific case of a Category 1 generator that does not have a grease arrestor, an additional charge based on concentrations of pollutants is added to the volume charge of the generator. The period of this charge is subject to approval.

This charge shall apply to each non-complying parameter in addition to the general charges under section 7.1.2.

The formula for calculation shall be:

$$\text{Charge} = (\text{actual} / \text{approved})^d \times \text{charge rate (\$/kg)} \times \text{kg pollutant}$$

where

- **d** is a constant to be determined by Council;
- the minimum ratio for (*actual / approved*) is 1.0;
- *approved* means the sewer admission limit value or other negotiated value defined in the trade waste approval;
- *actual* means the actual quantity or concentration value which has been admitted to the sewer (same units as *approved*); and
- an example of the *charge rate* and *kg pollutant* is shown in the Category 2 charges calculation in section 7.1.2 where N is the *charge rate* and $Q \times X \div 1000$ is the *kg pollutant*.

The period of the charge will be the time period, based on the sampling frequency, over which the limits are considered by RW to have been exceeded. Sampling charges are to be borne by the discharger.

6.1.4 Equivalent arrestor charges

This charge applies where an existing waste stream requires the installation of an arrestor to provide best practice pre-treatment for Category 2 wastes, but site-specific conditions do not allow for appropriate devices to be installed.

In addition to the normal Category 2 charges (section 7.1.2), a charge equal to the average cost paid by other trade waste generators of similar waste type and quantity, to have arrestors regularly cleaned, may apply.

6.1.5 Charges for food waste disposal units

Trade waste generators with food waste disposal units (garbage grinders, fruit and vegetable peelers) shall be charged an amount based on the power of the motor. This charge will apply in addition to general charges under section 7.1.2.

	Rated power, watts	Units [#]
Category A	< 400	2C
Category B	400-700	6C
Category C	700-1000	8C
Category D	1000-1500	12C
Category E	1500-2000	14C
Category F	> 2000	16C

C is equivalent to the annual domestic sewage unit charge.

6.2 Trade waste fees

6.2.1 Charging

Trade waste fees may be charged in accordance with Council's debtor management policies.

6.2.2 Inspection and analysis fees

The trade waste charges in all categories (section 7.1.2) allow for routine inspections and quality compliance analyses. Where additional inspections and laboratory analyses are required because of non-compliance with trade waste approval conditions, full costs will be recovered from the owner of the property.

Inspection fees shall be based on the time spent on site and travel to and from the site.

6.2.3 Application fees

No application fee applies.

6.2.4 Annual charge

An annual charge shall be charged for all category discharges. The charge will be subject to annual review.

6.2.5 Septic tank and other liquid waste fees

Licensed waste transporters (section 13) and other persons disposing of septic tank, portable toilet or other approved liquid waste to the sewer or sewage treatment plant under approved conditions shall be charged on a calculated volume basis (\$/kL) which takes account of both the volume and strength of the waste.

6.3 **Changes to the use of premises**

The owner of premises subject to a trade waste approval shall notify council in writing within 20 working days of any change to the premises that affects the trade waste approval.

When the owner of premises the subject of the trade waste approval notifies Council of a change to the premises caused by the cessation of business, the owner of the premises shall also give council verification that any pre-treatment apparatus, no longer being used, has been cleaned out and/or serviced.

6.4 **Refunds on cessation of discharge**

If a holder of an approval ceases to discharge between billing periods, a refund will be offered for the annual charge on a pro rata basis. Should the owner of the premises fail to notify RCC of a change of ownership, termination of a business or demolition of a building within 20 working days of the occurrence of such an event, no refund will be granted.

6.5 **Trade waste and owner water sub-meters**

If required for trade waste billing, sub-meters are to be fitted at the property owners' expense and in a position where they may be easily and safely read.

6.6 **Damaged, missing or inaccurate meters**

Where a trade waste or owner sub-water meter is found to have been removed/ damaged/ reading inaccurately or has ceased to register, the generator is to have this meter replaced or repaired at their cost and at the direction of Council.

Should this meter affect the calculation of a discharge charge, the current reading will not be used. Instead the charge will be calculated using the highest of any historical data (based over the previous 3 years) relating to that meter or to an industry average: whichever is the highest.

6.7 Home businesses

Businesses working from home which are full time enterprises are considered to be trade waste dischargers and charges according to category will apply.

Part time Category 2 type dischargers such as cooking meals will be considered trade waste dischargers and trade waste charges will apply.

Businesses working from home such as hairdressers, jam makers, sandwich makers and green caterers (Category 1) working up to 3 days a week are not considered to be trade waste generators.

6.8 Community service obligations

Under POL-2659 Community Benefit Policy for Fees and Charges Discounts, Council may provide discounts on trade waste charges to community groups.

Application for classification as a concessional property is made under POL-2658 Community Service Obligation policy and associated guidelines.

For businesses on concessional properties no trade waste discharge treatment charge applies. Payment of the trade waste generator charge is still required.

Regular use of a commercial kitchen (4 times or more per week) is deemed to be commercial use and all trade waste charges apply whether or not the property is classified as concessional.

6.9 Remissions on trade waste charges

Upon application Council may provide remissions on trade waste discharge treatment charges.

- Either the property owner or the business owner may submit the application.
- The application may be made by writing a letter to Council or by completing the appropriate Council form, and with the provision of all supporting information and documents. The application is forwarded to the trade waste officer for initial assessment.

Situations in which a remission may be allowed are:

- (a) where water meter consumption is used to estimate trade waste volume and where a water leak occurs on the property such that the leaking water does not enter the sewer system or does not classify as trade waste. Evidence must be provided about the nature of the leak and that it has been fixed;
- (b) where it can be demonstrated that the methodology used to calculate the trade waste charge was not accurate or not applicable at the time.

Where the water consumption volume must be estimated due to a leak:

- After the leak is repaired 2 meter readings 2 weeks apart are taken in order to confirm the leak has been repaired successfully. The first reading is taken immediately after the leak is repaired.
- The water consumption is estimated in accordance with POL-2592 Concealed Leaks policy:
 - In the first instance the consumption measured by the customer over the 2-week period is used to estimate the consumption for the period under review.

- If the readings provided by the customer are not considered representative, consumption may be estimated from the customer's average water consumption for previous billing periods. Provided they are applicable, the previous 4 billing periods are averaged.
- The remission calculation is based on the difference between the actual water consumption and the estimated water consumption.

The remission will be applied as an adjustment to the customer's property account.

The maximum period for which the remission is calculated is 2 reading periods.

Application for the remission must be made within 4 months of the issue of the charge.

A register will be kept of all charge remissions given.

Circumstances outside this policy may be considered on a case-by-case basis in accordance with POL-3114 Exceptional Circumstance Waiver Policy.

7. Determination of discharge quantity and quality

7.1 Determination of discharge quantity

7.1.1 Category 1 and 2

In the absence of an approved trade waste flow meter, the volume of trade waste discharged shall be estimated from total metered water consumption, less an allowance for domestic waste based on 75 kL/annum per pedestal and an allowance for water consumed on the property, based on a discharge factor.

Investigations have established a basis for estimation of the proportion of water consumption discharged as trade waste by various types of trade and manufacturing processes. These will form the basis of the initial fraction applied when an approval is issued. Where there is no fraction available, 100% discharge will be assumed.

Where individual trade waste generators have information that would indicate a departure from these bases, application may be made for reconsideration of the fraction used.

Where the balance from the main water meter consumption must be allocated to several trade waste businesses, this is done proportionately according to

- a sizing assessment of the trade waste fittings which discharge to sewer; and
- the hours of operation.

High volume Category 1 trade waste generators may, and are encouraged to, install an approved flow measurement device to be calibrated as specified in the approval conditions.

7.1.2 Category 2 (separately metered trade waste)

The volume of trade waste discharged to the sewer shall be measured by an approved flow measurement device calibrated as specified in the approval. This should be located on the trade waste discharge stream, which should be separate from the domestic waste discharge stream.

Where the flow measured includes domestic waste, an allowance of 75 kL/annum per pedestal shall be made.

Trade waste generators exempt from installing a flow measurement device shall have the volume of discharge estimated as under section 11.1.

Additional charges may be applied for over limit waste discharges 7.1.3.

7.2 Determination of discharge quality

7.2.1 Category 1

Quality measurements for Category 1 discharges are required for compliance checks only. This shall be done as part of the inspection and monitoring program. The cost shall be covered by the annual trade waste charge except where additional inspection and testing is required because of non-compliance. Additional charges are levied to the holder of the approval as prescribed in section 7.1.3.

7.2.2 Category 2

(a) Requirement for quality measurements

Quality measurements are required for both charging and compliance purposes for large heavy customers such as food manufacturers and chemical industries that are not deemed to comply, and must be consistent with RCC inspection and monitoring results.

For charging purposes, an approved self-monitoring system by the trade waste generator shall be used to collect sufficient data to enable the average mass load for the designated charging period to be calculated. Where pre-treatment is required to meet sewer admission limits for specified parameters, self-monitoring will be required for those parameters, or a suitable surrogate, to confirm satisfactory pre-treatment.

Requirements for self-monitoring and auditing shall be specified in the approval.

The holder of the approval shall meet all costs of self-monitoring.

RCC shall inspect the premises and collect and analyse samples for overall assessment of compliance with sewer admission limits and approval conditions as part of its inspection and monitoring program. The cost is covered by the annual trade waste charge. Where additional inspection and testing is required to be done as a result of non-compliance, the costs will be levied to the holder of the approval as prescribed in section 7.1.3.

(b) Use of quality data

All sample analysis results will be assessed after each sampling event. The contaminant mass load for each charge parameter is calculated and compared to sample analysis data collected over the previous 4 account periods. Additional sampling may be required for the current account period.

(c) Application of quality data

- If the contaminant mass load for a charge parameter is less than the rejection limit, the result is included in the charge calculation.

- If the contaminant mass load for a charge parameter is greater than the rejection limit but less than or equal to the exclusion limit, it is not used for the charge calculation but is included in future statistical calculations.
- If the contaminant mass load for a charge parameter is greater than the exclusion limit, it is not used for the charge calculation and is excluded from future statistical calculations.

(d) Definitions

- Rejection limit: 1.5 standard deviations above the mean of the last 4 billing periods.
- Exclusion limit: 3 standard deviations above the mean of the last 4 billing periods.

7.2.3 Deemed to comply

For small discharges such as restaurants where no data analysis is available to provide an accurate charge, 'Deemed to comply' to sewer admission limits will be used to calculate quality charges.

Billing methodology and discharge factors used for individual businesses are approved by the Service Manager.

8. Audit, inspection and monitoring

8.1 Inspections

For the purpose of monitoring and auditing the conditions of discharge, RW shall routinely and randomly inspect all premises occupied by the holder of a trade waste approval.

Inspections will include, but may not be limited to, the following:

- check of all chemical storage areas to ensure that they are properly bunded and are not improperly connected to sewer;
- check that there are no illegal stormwater connections to the trade waste system or sewerage;
- check that there are no illegal trade waste connections to stormwater or sewer and that there is no potential for trade waste to overflow improperly to sewer, stormwater or waterways;
- check pre-treatment facilities are regularly and properly serviced and standby equipment is available where necessary;
- check monitoring of strength and flow is undertaken as required under the trade waste approval;
- check work practices do not result in a breach of the trade waste approval or legislation.

8.2 Dye test

A Council officer may need to ascertain whether specific waste streams or processes are connected to the trade waste pre-treatment system. A fluorescent dye is added to the waste stream and the device examined for evidence of dye.

8.3 Inspection chambers and/or gauging facility

Category 2 waste shall be discharged to the sewerage system via a suitable inspection chamber and/or gauging facility. The inspection chamber and/or gauging facility shall be located on the trade waste discharge line in an area which is accessible at all times to Council's officers thus allowing for sampling and/or monitoring equipment to be installed and operated.

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A suitable 240-volt power outlet and a standard water supply outlet with back-flow prevention device installed within 3 metres of the grease arrestor in accordance with AS3500 Part 1, AS2845.3 and approved at all gauging facility sites.

For new Category 1 and 2 installations, the trade waste discharge line shall be separate from the domestic waste discharge line. For existing installations, retrofitting is not required except where it may be done during any proposed upgrading or alterations to the installation.

Where a commercial or industrial premise generates trade waste but does not discharge trade waste to the sewerage system, suitable inspection access shall be installed on the sanitary drain, in an accessible location, prior to leaving the property and/or connecting into the sewer. This is to enable monitoring of waste discharges.

Arrestor trap installations and other pre-treatment devices on premises discharging category 1 waste shall have inspection access provided externally to the building, within the premises, at finished ground level.

9. Discretionary power

Notwithstanding the provisions of this policy, given the complexity of many industrial wastes and the need to protect RCC's sewerage system and employees, and the environment, acceptance of any given trade waste to sewer shall always be subject to approval by RCC.

Under section 34 of the *Water Supply (Safety and Reliability) Act 2008*, Council may give a notice to do remedial work and may recover certain costs. This also serves as a notice under section 132 of the *Local Government Act 2009*.

Under section 193 of the *Water Supply (Safety and Reliability) Act 2008*, Council may issue a fine if a business discharges trade waste to sewer without an approval.

10. Records and reports

Council will develop a trade waste database for the purpose of maintaining, in a publicly accessible form, information on waste generation within council's local government area. The database will list information on trade wastes routinely produced by commerce and industry, by location, volume and character. A component of the database will contain trade waste information based on information produced by holders of trade waste approvals, and from monitoring conducted by or under council direction.

The trade waste database will facilitate the local recycling and reuse of wastewater, and will assist Council in wastewater management planning and reporting.

11. Implementation

This plan will become effective immediately and will be implemented over a phase-in period of 12 months or by an agreed date for existing businesses. New businesses will be required to fully comply with the policy from their date of commencement.

Appendix 1 Sewer admission limits

The upper limits for the quality of trade waste discharged to the sewer for all categories are set out below. They are subject to periodic review.

Schedule I GENERAL LIMITS

Parameter	Concentration, mg/L except *
Temperature *	< 38°C
pH *	6 - 10
Biochemical oxygen demand (BOD ₅)+#	600
Chemical oxygen demand (COD)+#	1500
Total organic carbon (TOC)+#	1200
Suspended solids+#	600
Total dissolved solids (TDS)+#	10000
Total oil/grease (hexane 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 works discharge.
Odour *	Not detectable in 1% dilution or causing an odour problem in Council's wastewater system
Chlorine (as Cl ₂)	10
Sulphate (as SO ₄ ⁻)#	2000
Sulphite (as SO ₂)	100
Surfactants - Anionic (MBAS)	500
Aluminium (as Al)#	100
Iron (as Fe) #	100
Ammonia plus ammonium ion (as N)#	100
Total Nitrogen (as N)#	150
Total Phosphorus (as P) #	50
Manganese (as Mn)	100

+ 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 (section 7.1.2) will apply.

Schedule II PROHIBITED DISCHARGES

- Prohibited substances as defined in Schedule 1 of the *Water Supply (Safety & Reliability) Act 2008*.
- Radioactive substances except as allowed for under *the Radiation Safety Act 1999* and *the Radiation Safety Regulation 2010*.
- Pathological and infectious waste and Cytotoxic waste except as allowed for under the *National Guidelines for Waste Management in the Health Industry*, National Health and Medical Research Council, 1999.
- Genetically modified (engineered) organisms.

Schedule III SPECIFIC LIMITS - INORGANIC

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

Schedule IV 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*
Hexavalent	10	
Cobalt (Co)	10	30
Copper (Cu)	10	75
Lead (Pb)	10	30
Mercury (Hg)	0.05	0.15
Nickel (Ni)	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 the UDML limits will be required to take measures to meet the UDML. This may involve treating to a lower concentration than indicated above.

* For discharges below the LDML, hexavalent Cr must be reduced to trivalent Cr.

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Schedule V. SPECIFIC LIMITS - ORGANIC

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	
Azinphos-methyl	0.1
Azinphos-ethyl	0.1
Coumaphos	0.1
Demeton	0.1
Dichlorvos	0.1
Dimethoate	0.1
Disulfoton	0.1
Fenitrothion	0.1
Fenthion	0.1
Malathion	0.1
Methamidophos	0.1
Mevinphos	0.1
Omethoate	0.1
Oxydemeton-methyl	0.1
Parathion	0.1
Triazophos	0.1
Trichlorfon	0.1
Pesticides: organochlorines	
Aldrin	0.001
Chlordane	0.006
DDT	0.003
Dieldrin	0.001
Heptachlor	0.003
Lindane	0.100

+ This category covers all pesticides other than those specifically listed under organophosphate and organochlorine pesticides.

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

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Appendix 2 Trade waste charges

Trade waste charges are determined each year at Council's annual budget meeting for the following parameters:

Trade waste charges are calculated quarterly and billed to the property owner to appear on the following rate notice.

Trade waste charges	Charge type
Trade waste generator charge	Fixed annual fee for each trade waste generator
Trade waste discharge treatment charge – volume, \$/kL	Dependant on trade waste discharge volume.
Trade waste discharge treatment charge – quality - \$/kg	Dependant on trade waste discharge strength.
	BOD
	COD
	NFR
	Oil & grease
	Nitrogen
	Phosphorus
Constant "d" for use when determining "additional charge" for excess strength waste	

12. Contact information

Office hours Senior Trade Waste Officer P 07 3829 8843
M 0417 732 408

After hours Redland City Council emergency service P 07 3829 8999
F 07 3829 8765

Appendix 3 Trade waste sample collection methodology

Grease arrestors (traps)

The collection of trade waste samples from grease arrestors must be carried out using a standardised methodology by competent persons for samples to reflect actual discharge conditions. This, in turn, ensures that the samples collected are truly representative and that the trade waste fees and charges applied through the sample analysis results are based on true operating conditions. Samples may be “grab” or time based samples.

Failure to properly collect samples may result in financial penalties to dischargers that might otherwise have been avoided.

Sampling timing

Samples must be collected in the middle period between grease arrestor cleaning events to reflect an “average pollutant level” of the arrestor. Sampling at other times results in incorrect sample results which can lead to incorrect trade waste charging.

Where samples are believed to have been collected too early, an audit sample may be collected and analysed by RCC and the costs charged to the discharger.

Sampling

Samples must be collected in a manner that reflects actual operating conditions. Hence, the following sampling technique must be employed.

Grease arrestor with separate inlet and outlet

- (a) The arrestor inlet and outlet caps are removed.
- (b) The trapped outlet pipe of the arrestor is cleared of fats and other obstructions using a hose or by pouring sufficient water into the pipe to clear the obstruction(s) from the outlet pipe. This is required to obtain a “clean” sample.
- (c) If there is no flow through the arrestor, flow is simulated by pouring at least 20 litres of water down the inlet pipe. The sample can then be collected from the arrestor outlet when, and only when, a representative discharge is observed. Pouring more water down the inlet pipe may be required to attain true discharge conditions.

Grease arrestor with internal outlet

Where a trap has no external outlet pipe and discharges directly past the last baffle, the area behind the last baffle and before the outlet pipe is to be thoroughly cleaned and the flow simulation above then carried out.

Samples shall not be collected from inside a grease arrestor. The analysis of these samples will be rejected.

The analysis result samples that are collected at times outside the recommended times may be rejected.

A 2 litre sample of the trade waste is to be collected for analysis and kept in a cool condition.

Analysis should be carried out by a NATA registered laboratory; or one that meets *Australian Standard 9001*.

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REFERENCE DOCUMENTS

This guideline has been developed to support the application or administration of POL-1234 Trade Waste Policy.

ASSOCIATED DOCUMENTS

Legislation and Standards

- *Water Supply (Safety & Reliability) Act 2008*
Water Supply (Safety & Reliability) Regulation 2011
- *Environmental Protection Act 1994*
Environmental Protection Regulation 2008
Environmental Protection (Water) Policy 2009
- *Local Government Act 2009*
- *Plumbing and Drainage Act 2002*
Plumbing and Drainage Regulation 2003
Standard Plumbing and Drainage Regulation 2003
- *Radiation Safety Act 1999*
Radiation Safety Regulation 2010
- *Gene Technology Act 2001*
Gene Technology Regulation 2002
- *Australian Gene Technology Act 2000*
- Australian Sewage Quality Management Guidelines 2012
- National Guidelines for Waste Management in the Health Industry, National Health and Medical Research Council, 1999.

Trade Waste fact sheets and forms

- FS508 trade waste fact sheet
- B9151 A guide to trade waste
- CSRWTW001 Application for approval to discharge trade waste into sewer
- CSRWTW002 Application for amendment of approval to discharge trade waste into sewer
- CSRWTW004 Trade waste water leak application
- CSRWTW005 Request for review of trade waste decision
- CSRWTW006 Guideline for grease arrestor sizing

Other Council documents

POL-1837 Revenue policy
POL-2592 Concealed Leaks policy
POL-2658 Community Service Obligation
POL-2659 Community Benefit Policy for Fees and Charges Discounts
POL-3114 Exceptional Circumstance Waiver policy

DOCUMENT CONTROL

- Only the General Manager Infrastructure & Operations can approve amendments to this guideline. Please forward any requests to change the content of this document to the Manager.
- Approved amended documents must be submitted to the Corporate Meetings & Registers team.