Townsville City Council
Trade Waste Management Plan
2019

Trade Waste Management Plan

DISCLAIMER

In the event that any Queensland or Commonwealth Act or regulation or a Townsville City Council local law contradicts this management plan, the provisions of the Act, regulation or local law will apply.

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Trade Waste Management Plan

Contents

List of tables

Trade Waste Management Plan

1 Framework for managing trade waste

1.1 Introduction

Townsville City Council provides a sewerage system primarily for the transportation and treatment of domestic sewage. The system is funded by users through infrastructure and sewerage charges on each serviced property. Efficient functioning of the sewerage system is essential to the safety and amenity of the people of Townsville.

The secondary use of the sewerage system is accepting certain waste water produced by a industrial, commercial and trade activities, which is commonly known as trade waste. The sewerage system is capable of accepting liquid trade waste provided that the discharges are planned, known and controlled within acceptable limits. To ensure the sewerage system is protected, under Queensland law it is an offence to discharge trade waste to sewer without complying with the conditions of a trade waste approval.

Trade waste may be generated at a property by activities conducted by the property owner, or by the activities of one or more tenants or occupiers of the property, but in every case it is the property owner that is responsible for the discharge of trade waste to Council's sewer, making the property owner responsible for obtaining and ensuring compliance with the trade waste discharge approval.

Trade waste generators who choose not to, or are unable to, discharge to sewer will have to manage the wastewater by other means, such as:

- having the waste treated at an approved treatment facility
- obtaining an environmental authority under the Environmental Protection Act to treat the waste before discharge to the environment
- reuse and/or resource recovery.

This Trade Waste Management Plan sets out the way in which Council will manage trade waste discharged to Council's sewer.

Due to the additional loading that trade waste imposes on the sewerage system, trade waste dischargers are charged for their trade waste discharge.

To reduce the load on the system, Council requires most trade waste to be pre-treated before discharge.

1.2 Purpose

This trade waste management plan (TWMP) sets out how Council manages trade waste discharges and meets its obligations under legislation and its relevant environmental authorities. It is an instrument under Council's *Trade Waste Policy*. This plan provides guidance to potential or current trade waste customers, as well as Council staff, on the management and regulation of trade waste in Townsville.

1.3 Trade waste legislation

The *Water Supply (Safety and Reliability) Act 2008* (WS Act) **prohibits the discharge of trade waste into the sewerage system without approval** from Townsville City Council. That Act gives Council authority to set trade waste approval conditions, and issue, suspend and cancel trade waste approvals.

The *Local Government Act 2009* (LG Act) gives Council authority to levy utility charges and enter property for trade waste and other purposes.

Trade waste approval conditions, particularly discharge limits, are designed to ensure that Council sewerage treatment processes comply with the *Environmental Protection Act 1994* (EP Act). The **discharge of trade waste to stormwater drainage is prohibited** under the EP Act.

A summary of legislation relevant to trade waste control and acceptance to sewer is given in Appendix B.

1.3.1 Relevant offences

This is a summary of relevant offences. For more details see the relevant section of the Acts.

Under Section 193 the WS Act it is an offence to:

- 193(1) Discharge trade waste into Council's infrastructure without approval.
- 193(2) Discharge a prohibited substance into Council's infrastructure.
- 193(3) Discharge water from an ornamental pond, pool or the filtration system from a swimming pool without written approval from the service provider.

Under the State Penalties Enforcement Act 1999:

- These offences are infringement notice offences for which an infringement notice fine may be issued (Schedule 1 of the State Penalties Enforcement Regulation 2014).
- If an authorised person reasonably believes a person has committed an infringement notice offence, the authorised person may serve an infringement notice on the person for the offence.

1.4 Australian Sewage Quality Management Guidelines

The Water Services Association of Australia (WSAA) has developed the *Australian Sewage Quality Management Guidelines* to provide service providers with a mechanism to assist them with a strategic, process driven approach to source management that complements water industry practice. These national guidelines provide a framework for managing all inputs to sewer, including trade waste and were used to guide this TWMP.

1.5 Definition of trade waste

The WS Act defines **trade waste** as:

> *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.

For the purposes of this management plan, trade waste discharge to the sewerage system includes, but is not limited to, wastewater discharged from:

- business/commercial activities (e.g. beautician, hairdresser, hotel, motel, restaurant, café, takeaway, butcher, service station, supermarket, dentist, shopping centre)
- community/public activities (e.g. craft club, school, college, university, hospital, nursing home)
- any process connected with the preparation of food on premises other than private residences;
- industrial activities
- trade activities (e.g. mechanics; spray painters)
- mobile trade activities (e.g. mobile carpet cleaner, mobile bin wash)
- medical, dental or veterinary activities
- agricultural, horticultural, scientific research or experimental activities
- car wash used in the operation of a commercial business such as car yard, or for a fee
- municipal or commercial swimming pools (filter backwash).

and

- any matter discharged from any laundry, used for any institution, hotel, motel or similar establishment, or used for commercial purposes
- leachate from any landfill
- waste from any cooling, refrigeration or air-conditioning system installed on commercial premises
- any ship's ballast
- polluted storm-water run-off from a commercial property
- run-off from water used to extinguish a fire or to deal with any other hazard;
- wastewater from any commercial activities carried out at residential premises
- wastewater transported by vehicle, including septic effluent and portaloo waste
- chemical toilet waste disposed at a sewage dump point.

Trade waste does not include:

- wastewater from toilets, hand wash basins, shower and bath wastes derived from all premises and activities mentioned above and discharged directly to sewer
- wastewater from residential toilets, kitchens, bathrooms or laundries (i.e. domestic sewage), discharged directly to sewer

» residential swimming pool filter backwash (which is addressed in Council's *Residential Pool Wastewater Disposal Policy*).

Trade waste has commonly been referred to as 'liquid trade waste', 'industrial wastewater', 'industrial effluent', 'trade effluent' or 'trade wastewater'. The term 'trade waste' is used throughout this TWMP.

1.6 Trade Waste Policy

Council has a *Trade Waste Policy*, the purpose of which is to provide a trade waste disposal framework for commercial and industrial trade waste in accordance with the principles of environmental sustainability and in a manner which safeguards public health and is consistent with Council's responsibilities and obligations under Queensland legislation.

The *Trade Waste Policy* can be viewed on Council's website.

1.7 Trade waste objectives

Council has five key objectives when managing trade waste:

» ensure the safety of people

» protection of assets

» protection of treatment processes

» facilitation of regulatory compliance

» facilitation of recycling of effluent and biosolids.

In addition, Council aims to:

» equitably recover the cost of managing trade waste, including the cost of conveyance, treatment and disposal, and maintenance and repair of damage to the sewerage system

» encourage waste minimisation and cleaner production, including waste prevention, recycling, and pre-treatment

» promote water conservation

» prevent environmental harm

» meet its statutory obligations.

2 Customer service charter

2.1 Council services

As part of its commitment to minimising the volume and impact of trade waste, Council provides services to assist businesses to comply with their trade waste obligations:

- Council officers are available by appointment to provide trade waste information and to assist with trade waste approval applications.
- Council officers can provide advice of a general nature about trade waste procedures, including basic pre-treatment requirements, cleaner production or waste minimisation strategies. (*Note that specialist advice should always be sought to address specific site requirements*).

Industrial or commercial trade waste dischargers with complex production or pre-treatment needs are likely to require engineering advice to develop waste minimisation plans and to demonstrate that pre-treatment solutions sufficiently treat their wastewater to meet Council's sewer admission limits.

2.2 Obligations

2.2.1 Obligations of Council

Council recognises that allowing the discharge of trade waste to sewer provides benefits to the economy of Townsville, and may allow better protection of the natural environment, by providing a cost-effective service for disposing of trade waste.

Council is under no legal obligation to accept trade waste discharged to the sewer. Any decision to accept trade waste is based on Council's assessment of whether:

- the proposed discharge will compromise any existing or potential re-use of effluent or biosolids
- the discharge will harm the sewerage system, the environment or the health and safety of anyone working on the sewerage
- the sewage treatment plant to treat the discharge is capable of treating the discharge to an acceptable standard, and has the available capacity
- Council has the ability to adequately recover the costs of managing the waste.

In addition, Council will act and make decisions in accordance with the principles of local government and public sector ethics as defined in the LG Act and the *Public Sector Ethics Act 1994*.

2.2.2 Approval holder's obligations

The WS Act makes it an offence to discharge trade waste to sewer without approval.

Trade waste is discharged to sewer as a result of the property owner's infrastructure being connected to Council's sewer, and the property owner allowing trade waste to be generated on the property. Therefore, it is the property owner who is the trade waste discharger, making the property owner responsible for obtaining a trade waste approval and ensuring constant compliance with the approval conditions.

It is important to note that trade waste is frequently generated by persons who are not the owner of the property on which the trade waste generating activity is being conducted - for example, a mechanic leasing a stand-alone workshop, or the multiple tenants of a shopping centre food court. In all such cases it is the property owner who is the trade waste discharger, and it is the property owner who must have a trade waste approval.

The property owner must ensure that:

- a trade waste approval is applied for and obtained before trade waste is discharged from the property
- all trade waste generators on the property are aware of the approval conditions and about this Trade Waste Management Plan
- all discharge of trade waste from the property is in full compliance with the approval conditions – including in particular conditions about the regular maintenance of pre-treatment equipment
- Council is immediately advised (preferably before) a change to the trade waste discharge occurs
- the works required under any remedial notices issued by Council are completed within the time stated in the notice
- Council is reimbursed its costs for undertaking any works it carries out under a remedial notice
- trade waste charges are paid

The trade waste discharger (property owner) is responsible for paying trade waste charges levied by Council. Any arrangement between the discharger and a trade waste generator about reimbursement of those charges is a private matter in which the Council has no role.

2.2.3 Trade waste generators' (occupier's) rights and obligations

As noted in clause 2.2.1, one or more trade waste generators might be producing the trade waste that the property owner is discharging to Council's sewer.

Trade waste generators:

- must at all times assist the trade waste discharger to comply with the approval conditions

- may make a trade waste application on behalf of the trade waste discharger, but the landowner will be the holder of any approval and ensure that trade waste charges are paid
- must provide safe and timely access to Council's officers for the purposes of undertaking trade waste inspections.

2.3 Powers of Council

2.3.1 Right to enter property

Council's Trade Waste Officers are authorised persons under the LG Act and have powers to enter property, conduct inspections and issue notices and directions.

2.3.2 Right to take remedial action

Council officers are also local government workers under the LG Act. If a trade waste discharger or trade waste generator has not undertaken specified action required under the remedial notice within the required timeframe, a local government worker may

- enter the property, without permission of the occupier; and
- take the required action, in accordance with a reasonable entry notice.

The costs Council incurred in taking the action may be recovered from the person who failed to take the action.

3 Trade waste approvals

3.1 Trade waste approval applications

Any property owner who intends to discharge trade waste to sewer must make an application to Council for trade waste approval. The application can be made on behalf of the property owner by the proposed trade waste generator. The application must be made using an *Application to discharge trade waste to sewer* form, available from Council.

A trade waste approval is separate to a hydraulics approval and must be applied for separately. A hydraulics approval involving trade waste pre-treatment devices cannot be issued without a trade waste approval having been issued also.

3.1.1 Information required

Applications for a trade waste approval must include:

- details of trade waste generating business/es contributing to the trade waste discharge from the property, including a description of activities linked to each trade waste generating area
- details of each trade waste generator including hours of operation, and contact details
- hydraulic plans showing location of any pre-treatment, sampling points, connections to sewer
- details of the pre-treatment system, including manufacturer, model, capacity and maintenance strategy
- the Council barcode number (if attached) for each pre-treatment device
- if there is more than one pre-treatment device, clarification about which pre-treatment equipment services which tenancy/generator
- a statement that the pre-treatment equipment is accessible for maintenance and that lids are of an airtight type
- where trade waste is to be pumped, the type and rating of the pump, and where oily water is to be pumped, a statement that the pump will be of a non-emulsifying type
- confirmation that any detergents to be used are quick-breaking
- details (location, type) of any trade waste effluent meters
- if there is no direct metering of trade waste, the water meter number/s and location of the meter/s
- information about any non-trade waste use of water from that water meter, such as irrigation, number of toilet pedestals, process water

- for external areas, features to prevent stormwater ingress to sewer such as
  - bunding
  - stormwater diversion system
  - roofing design
- any additional information required by Council.

Category 2 applicants (see Section 4.2), must include:

- a description of the effluent quantity and quality, including the anticipated type, concentration and load of pollutants, and range of temperature and pH
- an estimate of peak trade waste flow rate (litres per hour), including information on how the flow rates were determined, and clarification of flow to each pre-treatment device
- type of pre-treatment proposed including design details and performance criteria
- strategy for operating and maintaining the pre-treatment
- a plan for regular monitoring and reporting of discharge quantity and quality
- location, nature and chemical composition of all substances stored/used on site and relevant MSDS sheets
- methods of disposal for other wastes that are not to be discharged to the sewerage system
- any relevant environmental impact assessments
- design certification by a qualified and suitably experienced hydraulics designer
- any additional details as requested by Council.

3.1.2 When to make an application

Trade waste dischargers must make a trade waste application in the following circumstances:

- when any discharge to Council sewer in accordance with the definition in section 1.5 is expected or occurring
- existing premises where trade waste is generated and discharged to Council's sewerage system and no trade waste approval has been issued
- change of ownership of premises discharging trade waste to sewer
- when a change in process technology or business activity occurs that may affect trade waste quality or quantity.

Applicants are encouraged to contact Council early in a project cycle to ensure required pre-treatment equipment is appropriately designed and installed.

3.2 Assessment of trade waste applications

Under the WS Act, the Chief Executive Officer (CEO) of Council is responsible for the issuing of trade waste approvals. This power has been delegated by the CEO to the relevant staff within Council.

The responsible Council officer will consider each application for the discharge of trade waste to the sewerage system, and either issue a trade waste approval, with conditions, or refuse the application.

Factors that Council may consider in assessing a trade waste application include, but are not limited to:

- the potential for the trade waste discharge to impact on public health
- the possible impacts the discharge may have on the environment (land, water, air, noise or nuisance)
- the potential impacts of the discharge on the health and safety of Council staff
- the possible impact of the discharge on sewerage infrastructure or sewage treatment processes
- the capability of the sewerage system (reticulation and treatment components) to accept the quality and quantity of trade waste proposed for discharge to the system
- the impact the trade waste may have on the ability of the sewerage system to meet other legal requirements including Council's environmental authorities
- The potential impacts of the discharge on management practices for effluent and biosolids produced from the sewage treatment process
- compliance of the proposed trade waste discharge with Council's sewer admission limits
- the adequacy of the proposed maintenance program of pre-treatment facilities and the discharge monitoring program (if applicable)
- the adequacy of the pre-treatment process(es) to treat the trade waste to a level acceptable for discharge to the sewerage system, including proposed safeguards in the event of the pre-treatment system's failure
- whether appropriate safeguards are proposed to avoid the discharge of other wastes to the sewerage system that are not included in the approval
- the adequacy of chemical storage and handling facilities, and the proposed safeguards for preventing the discharge of chemicals to the sewerage system;
- whether prohibited substances are proposed to be discharged
- the potential for stormwater ingress into the sewerage system and adequacy of stormwater controls
- waste minimisation and water conservation programs.

3.3 Sewer admission limits

Council has developed a suite of standard sewer admission limits to ensure that trade waste discharges do not cause an excessive detrimental impact to:

- worker and public safety
- sewerage infrastructure
- treatment plant processes
- effluent or biosolids reusability
- the environment.

These sewer admission limits describe the maximum level of contaminants (concentration and/or mass based) allowable in trade waste discharged to Council's sewerage system. No person shall discharge trade waste into Council's sewerage infrastructure if any substance exceeds the sewer admission limits unless otherwise approved as a specific trade waste approval condition (See Appendix C Sewer admission limits).

Where the sewer admission limits are silent for any particular contaminant, the discharge must not contain any detectable level of that contaminant.

3.4 Risk assessment

Each trade waste application will be assessed for the level of risk that the discharge poses to the sewerage system, including the impact to the infrastructure, treatment process, quality of effluent and biosolids and health and safety risks. The assessed risk rating is used to prioritise trade waste management activities, guide the assessment process, and influence the approval conditions.

The risk classification system considers:

- volume of discharge (relative to the catchment volume)
- type of contaminants
- type and complexity of pre-treatment
- number of trade waste generators on the property
- compliance history, including adequacy of servicing pre-treatment.

For approved trade waste discharges, the risk rating also reflects the level of management required by Council to ensure compliance with the approval. This management includes routine compliance inspections, effluent quality monitoring, assessment of quality data and response to any breaches of the approval conditions. The lower the risk rating number, the more compliance management is required and the higher the annual trade waste fee to cover the cost of this management. The risk assessment process is described in Appendix G.

3.5 Refusal of an application

Council may refuse to accept any trade waste to its sewerage system if it reasonably believes that the proposed discharge poses an unacceptable risk. If Council refuses an application a statement of reasons

for the refusal will be provided on request. The applicant may re-apply, nominating a pre-treatment technology that will meet Council's sewer admission limits or otherwise addressing Council's concerns. In the meantime, the applicant must make alternate arrangement for trade waste disposal.

Any applicant aggrieved by a decision in relation to the issuing or refusal of a trade waste approval may make an application for an internal review to Council, or undertake formal proceedings in accordance with the *Judicial Review Act 1991.*

3.6 Approval details

3.6.1 Approval conditions

Trade waste approvals will be issued with relevant conditions that may include, but not be limited to, conditions related to the:

- duration of the approval
- trade waste flow volume
- trade waste flow rate
- trade waste quality
- discharge times
- trade waste pre-treatment infrastructure and maintenance
- monitoring requirements
- other site-specific requirements
- trade waste charges and charging methodology
- trade waste customer category and risk rating
- water meters, discharge flow-meters or other devices related to charging methodologies
- trade waste discharge factor for each listed meter.

In determining conditions related to trade waste quantity and flow rate, consideration may also be given to the capacity of the receiving sewer system or any relevant development approval conditions for the premises.

3.6.2 Duration of approval

Trade waste approvals will be valid from the date of issue and charges will apply from that time. If trade waste discharges commenced prior to the approval, trade waste charges may be levied from that date (i.e. backdating of charges).

Approvals will continue until terminated by Council or the approval holder.

The holding of a trade waste approval does not automatically entitle an approval holder to a continuation of the approval.

Higher risk or temporary approvals may have an expiry date. In these cases discharge of trade waste after the expiry date is not permitted unless written approval is obtained from Council.

3.6.3 Approvals transferable

Council must be advised of any change of ownership or use of a property in respect of which there is a trade waste approval.

A trade waste approval is issued to the owner of a property.

If the trade waste activities have ceased prior to or at the time of a change of ownership, no fresh approval will be issued.

If the trade waste activities continue unchanged after a change of ownership, a new approval will be issued to the new owner.

If the trade waste activities changed with the change of ownership, a trade waste assessment will be undertaken on the new trade waste activity.

3.6.4 Breaches of a trade waste approval

When a trade waste discharger or trade waste generator becomes aware of a breach or potential breach of the conditions of a trade waste approval, the discharger or generator must advise Council by telephone on 13 48 10 as soon as they become aware of the breach. If requested by Council, this must also be in writing within the timeframe set by Council, setting out:

- the nature of the breach or potential breach
- an explanation of the cause of the breach or potential breach
- trade waste effluent analysis results and/or flow measurements (if relevant)
- actions that have been taken to control the non-compliant discharge
- what action is proposed to prevent its recurrence.

If conditions of a trade waste approval are not being adhered to, or a person is contravening a relevant clause of the WS Act or any other relevant legislation, Council may issue a remedial notice to the Trade waste discharger or trade waste generator requiring that they take action to remedy the non-compliance, in accordance with section 138AA of the LG Act. For example, a remedial notice might require:

» an approval holder to have a pre-treatment device serviced, maintained, installed or removed

» a trade waste discharger or trade waste generator to remove any equipment that allows unauthorised trade waste discharges to Council's infrastructure.

Depending on the nature and severity of the breach, Council may also cancel or suspend the approval under section 3.6.6 of this TWMP.

3.6.5 Modifications to an approval

An approval may be modified by way of renewal, cancellation, or a new approval at any time. Changes are likely to occur if and when there are changes to the trade waste generating activities on the premises. Approval holders must promptly advise Council of any:

- changes to name, address and contact details of any occupier/generator
- changes to the nature of any occupier's trade or business on the premises
- new trade waste generating activities on the premises
- any significant changes to the composition of approved trade waste prior to discharging such trade waste into Council's sewerage infrastructure
- any alteration or addition to the trade waste generating processes or the quantity and quality of trade waste discharged
- any changes to the infrastructure used to pre-treat trade waste prior to discharge
- any misrepresentation or mistake in, or omission of relevant facts from, the trade waste approval application.

Council will assess the potential impact of these changes and modify, replace or cancel the approval if required.

3.6.6 Cancellation/suspension of approval

Council may cancel or suspend a trade waste approval if:

- the approval holder has contravened a condition of the approval
- the approval is no longer appropriate because circumstances under which trade wastes are generated by the holder have significantly changed since the approval was given
- urgent action is necessary in the interests of public health or safety to prevent environmental harm or prevent damage to the sewerage system, or
- trade waste charges are outstanding for more than 12 months.

Cancellation or suspension of a trade waste approval will be undertaken in accordance with section 182 of the WS Act.

If a trade waste approval is suspended or cancelled, discharge of trade waste to the sewer must stop immediately from the date nominated on the cancellation or suspension notice.

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, will continue to have force and effect after the suspension or cancellation of the trade waste approval.

An approval holder wishing to cancel a trade waste approval must give Council written notification that includes:

- the proposed cancellation date
- the general reason for the cancellation
- nomination of a contact person for Council officers to arrange a final inspection prior to cancellation
- details about the future use of the site, if known.

All drainage and pre-treatment devices no longer in use must be decommissioned to Council's approval and in accordance with the conditions of the approval and the Queensland plumbing and drainage regulations.

Trade waste charges will continue to apply until a final satisfactory inspection is carried out and the approval cancelled by Council.

3.6.7 Failure to obtain an approval

A person who fails to obtain written approval from Council under section 180 of the WS Act prior to discharging trade waste to sewer, or continues to discharge after a trade waste approval has expired or been suspended or cancelled, is guilty of an offence under section 193 of the WS Act and could incur a maximum penalty of 1665 penalty units.

3.6.8 Council issued approvals

If the Council believes that it is appropriate to do so, Council may issue an approval without an application being made if the property has been identified as discharging trade waste or having a trade waste pre-treatment device fitted to Council's infrastructure.

4 Trade waste categories

Trade waste customers are divided into 2 main categories:

- Category 1
- Category 2.

Each of these categories is managed differently.

4.1 Category 1 customer

Category 1 customers are commercial operators that discharge trade waste of a consistent quality that can be easily pre-treated using standard technologies such that the risk to our sewerage system is usually low.

Provided that the pre-treatment is appropriately sized and maintained in accordance with the trade waste approval conditions, adequate housekeeping practices are implemented and the trade waste discharged is consistent with the approved business activity, the approval holder will be deemed to comply with Council sewer admission limits, unless sampling and analysis of the discharge indicates otherwise.

Category 1 customers are further divided into sub-categories based on the dominant business activity on the premises.

4.1.1 Category 1.1: Retail food

This category generally applies where any food is prepared and where cooking is carried out and greasy or oily waste can be produced. These premises require a grease trap. This includes, but is not limited to restaurants, cafés, take-away food outlets, function centres, hospital and nursing home kitchens, caterers, butchers, delicatessens, retail bakeries, supermarkets, green grocers, food processors, and home caterers.

4.1.2 Category 1.2: Automotive industry

Primarily from the automotive industry, or mechanical and engineering businesses with vehicle and machinery wash bays, that generates oily waste.

4.1.3 Category 1.3: Other commercial activities

These customers usually have a range of low concentration contaminants, including high temperature and suspended solids. Required pre-treatment depends on the business type. Businesses activities (industrial/commercial) include car washing/bin washing areas, commercial or coin operated laundry activities, commercial pool operations, chemical waste disposal (ezy dump), hairdressing activities, pedicure operations, pet washing and residential/units with a serviceable device to the car wash/bin wash area.

4.1.4 Category 1.4: Low risk food generators

These are for food premises not discharging high strength, greasy or oily waste, such as sandwich bars, coffee shops and canteens where no cooking is involved. These businesses usually do not require pre-treatment or regular inspections.

4.1.5 Category 1.5: Multiple generators

This category may be used if there is more than one type of trade waste generating activity on the property. Depending on the circumstances, and in consultation with the property owner, separate trade waste approvals may be issued.

4.1.6 Category 1.6: Access fee only

These are trade waste activities where discharge volume is low, often difficult to determine and where discharge quality is likely to be within Council's sewer admission limits. Trade waste approval is required, but discharge volume fees will not be levied. Annual sewer access fees only will apply. These businesses and activities include:

- beautician
- dental technician
- dental surgery
- dry cleaners
- doctor's surgery
- optical lens grinding
- florist
- tattooist
- funeral parlour
- laser hair removalist (epilator)
- bin or vehicle wash area – residential/units (where no serviceable device is installed)
- pool/fountain filter backwash (other than commercial pools).

4.2 Category 2 Customers

Category 2 - Customers are generally industrial users that generate a type of waste that:

- is inconsistent, i.e. has varying concentrations of several different contaminants
- requires pre-treatment other than basic pre-treatment
- after pre-treatment, has contaminants in concentrations that exceed Council's sewer admission limits.

The following customers will also be managed as Category 2:

- Customers with a risk rating of 1, 2 or 3 (see section 3.4)
- Customers requiring a trade waste improvement plan (see section 7.1)
- Customers requesting a variation assessment (see section 10).

Category 2 generators may include, but are not limited to, food and beverage manufacturers, industrial laundries, chemical manufacturers, petrochemical industries, metal finishers, abattoirs, waste processors, laboratories (other than school laboratories), hospitals and universities.

Category 2 customers are expected to install sufficient pre-treatment to ensure the discharge quality consistently meets Council's sewer admission limits. It is the responsibility of the approval holder to determine the type of pre-treatment required, as well as the operation and maintenance strategy.

4.3 Special discharges

On occasion, Council is asked to accept special, one-off, discharges of trade waste to sewer. These applications will be treated as Category 2 customers and application fees will apply. Upon application, Council will assess the waste quality and its suitability of disposal to sewer, and if acceptable to go to sewer, will quote a cost to discharge to sewer.

The trade waste approval for these special discharges may be issued to the property owner, generator or transporter, depending on the circumstances and in consultation with the applicant.

4.4 Specific waste types

4.4.1 Prohibited substances

Under the WS Act a person must not discharge any prohibited substance to the sewer. Prohibited substances are fully defined in Schedule 1 of the Act. Trade waste approval will not be given for the discharge of any prohibited substance.

4.4.2 Septage

Septage from a septic tank is considered a prohibited substance and therefore cannot be discharged to the sewer.

Tanker loads of domestic septage and holding tank waste, collected by licensed transporters, may be discharged to a designated septage receival facility in accordance with a trade waste approval.

Discharge of waste from portaloo and commercial vehicles or vessels may be accepted to sewer, but only in accordance with the conditions of a trade waste approval.

4.4.3 Recreational vehicles, caravans and boats

The discharge of toilet waste from private vehicles or vessels, may be permitted at approved discharge locations with a “Dump Ezy” or similar facility, such as service stations, parks, caravan parks and marinas. The operator of the premises on which such facilities are located must hold a trade waste approval.

Applications for trade waste approval of a caravan dump point will be assessed with consideration of sewer capacity, security of dump point and type of vehicles to be permitted to use.

4.4.4 Stormwater

Stormwater is a prohibited substance and must not be discharged to sewer. This includes roof run-off.

Any external connection to sewer must be designed to prevent rainwater entry to drains, in accordance with the *Plumbing and Drainage Act 2018*. This may include:

- roofing
- bunding
- stormwater diversion system.

It will be a condition of a trade waste approval that any stormwater diversion must be serviced regularly with evidence of this servicing provided to Council.

5 Pre-treatment requirements

5.1 Category 1 Customers

Most Category 1 (commercial) trade waste customers require basic pre-treatment to ensure that contaminants, particularly solids, oils and greases, are kept out of Council's sewer.

Basic pre-treatment types and requirements for each commercial business type are described in Appendix D and Appendix E.

If a Category 1 trade waste customer intends to install trade waste pre-treatment of a type inconsistent with those specified in section Appendix D the customer must make a *Category 2 industrial customer trade waste application*. That application will be assessed in accordance with Section 3.2 to ensure the trade waste meets Council requirements.

5.2 Category 2 Customers

Council does not prescribe pre-treatment types for Category 2 (industrial) trade waste customers. It is the responsibility of each Category 2 customer to ensure that their pre-treatment is sufficient. Council will require Category 2 customers to submit evidence of the effectiveness of their pre-treatment arrangements. It is strongly recommended that proposed Category 2 customers consult with technical advisory services (e.g. hydraulic, chemical treatment and engineering consultants) to assist in the design and sizing of trade waste pre-treatment infrastructure and to certify as to the adequacy of the design.

It must be noted that some treatment systems require state government approval.

5.3 Installation and maintenance of pre-treatment

Pre-treatment devices must:

- be Council approved
- be certified by an approved and suitably qualified hydraulics designer if requested by Council
- comply with all requirements of the *Plumbing and Drainage Act 2018* and associated regulations and codes
- be installed in accordance with the manufacturer's specifications
- be installed in the approved location and plumbed in accordance with the approved hydraulic plans
- provide a safe and accessible sample collection point to allow a sample of the effluent to be taken prior to the discharge of effluent to the sewerage system
- be properly operated and maintained such that it remains in a sanitary and efficient operating condition at all times
- be accessible for the required maintenance.
- be serviced and maintained as per the conditions and service schedule as laid out in the permit approval

- Council's trade waste approvals stipulate that each customer only has approval to discharge trade waste to Council's system if the customer is complying in all respects with the conditions of the approval. It follows that any customer not complying with the approval conditions will be committing an offence under section 193(1) of the *Water Supply (Safety and Reliability) Act 2008* if they do not immediately cease all discharge to sewer.

  Specifically, any customer who does not maintain and pump-out their pre-treatment device in accordance with the stated conditions will be liable to prosecution and subject to sewer loading charges.

Council will require customers to provide evidence (e.g. service receipts and any other relevant documentation) that demonstrates appropriate maintenance of pre-treatment devices.

5.4 Barcodes

Council will adhere a barcode on or adjacent to each approved pre-treatment device to allow for the tracking of service and maintenance activities on the device.

5.5 Approved service contractors

Council maintains a list of approved service contractors for cleaning and servicing of pre-treatment and stormwater diversion equipment.

To be on the approved list, service contractors must commit to:

- servicing pre-treatment or stormwater diversion devices as per the approval conditions
- at the time of each service, assessing each device for damage (e.g. broken baffles) and maintenance requirements
- advising Council if, in their opinion, the specified service frequency is inappropriate; and
- providing to Council, monthly and in approved electronic form, details of devices serviced, including date of service, Council barcode number and maintenance requirements.

Customers may use service providers that have not been approved by Council. To verify that the work has been performed to the required standard, Council may elect to have the non-approved service provider's work inspected by a Council staff member at the customer's expense.

5.6 Register of authorised pre-treatment

Pre-treatment devices listed on the *Register of Authorised Basic Pre-treatment Products* maintained by Queensland Urban Utilities (www.urbanutilities.com.au.) meet Council's requirements if appropriately installed and maintained.

Council may develop its own register of authorised pre-treatment devices to assist customers and their hydraulic consultants to identify and install devices that meet Council's requirements.

6 Inspections and auditing

Council will undertake an inspection and auditing program to ensure compliance with this management plan and trade waste approvals.

Townsville City Council will undertake inspections of the premises of approved, proposed or suspected trade waste dischargers. These inspections include:

- initial inspections
- routine compliance inspections
- follow up inspection
- investigation inspection
- customer request inspection.

6.1 Cost of inspections

See Section 8 for details of trade waste charges.

6.2 Initial inspections

Initial inspections are performed prior to, or just after, the submission of a trade waste application and preferably before any liquid trade waste is discharged to the sewerage system from the site. They are often used to assist applicants complete the trade waste application.

Depending on the type of business, this inspection may consider:

- type of business/es to be conducted on the site
- source points for the generation of liquid trade waste
- proposed quantity and quality of the liquid trade waste to be discharged
- proposed start date for the commencement of liquid trade waste discharge to sewer
- pre-treatment installed or proposed.

6.3 Routine compliance inspections

For the purpose of monitoring and auditing the conditions of discharge, Council officers may inspect the premises of all trade waste approval holders to:

- check that all conditions in the trade waste approval are being complied with
- check that the trade waste generating activities on-site are as per the trade waste approval
- assess compliance with any previous maintenance request or other relevant direction from Council
- assess the overall condition of the pre-treatment device and whether the designated service frequency is adequate
- take samples of trade waste discharge, if required

- view maintenance, service and calibration records (where relevant)
- assess work practices to ensure that trade waste volume and contamination is minimised
- provide general advice on trade waste management.

In addition, the inspector may check that there are:

- no unauthorised trade waste connections to sewer
- no illegal stormwater connections to the sewer
- no potential for trade waste to flow to stormwater or waterways.

6.4 Follow up inspection

Follow up inspections are required where incidents or breaches have occurred during a previous inspection site visit. The re-inspection may ascertain that:

- the incident of non-compliance has been rectified
- procedures have been initiated to prevent re-occurrence
- steps have been taken to modify the pre-treatment
- steps in a trade waste improvement program have been completed
- no action has been taken to rectify the cause of the incident or breach, in which case further compliance action may be undertaken, including suspension or cancellation of the trade waste approval.

6.5 Investigation inspection

Investigation inspections are performed predominantly on a reactive basis following either:

- a complaint from an external source, or
- Identification of an illegal discharge entering the sewerage system or treatment plant.

The purpose of these inspections is to track down and stop the source of the unauthorised discharge. The person responsible for the discharge may:

- have any trade waste approval suspended or cancelled
- be fined for breaching WS Act
- be prosecuted for breaches of the WS Act, and/or
- be charged a fee for repairs to any damage to the sewerage system caused as a result of the non-compliant discharge.

6.6 Customer request inspection

A trade waste customer may request an additional inspection from Council for the purposes of assessing some component of their trade waste activity, such as the pre-treatment service frequency.

7 Non-compliance process

Trade waste discharged under a trade waste approval must comply with every condition of the trade waste approval, and to the extent that they are not specifically altered by trade waste approval conditions, every provision of this TWMP.

Actions that Council may take in the event of a breach of the trade waste approval include (but not limited to):

- require a trade waste improvement plan (see below)
- require more regular pre-treatment maintenance
- require each batch of trade waste to be stored, pending sample analysis and approval to discharge
- issuing a remedial notice
- issuing a show cause notice
- issuing a penalty infringement notice (fine)
- suspension of trade waste approval
- cancellation of trade waste approval
- prosecution.

7.1 Trade waste improvement plan

Council may require any future, or current, customer who is unable to meet Sewer Admission Limits, or who has high risk trade waste generating activities, to prepare for Council approval, a trade waste improvement plan (TWIP).

A TWIP is a program that details the activities to be undertaken by the approval holder, which will:

- reduce the load of contaminants to the sewer
- allow the discharge to sewer to meet Council's sewer admission limits
- reduce the risk to Council from trade waste generating activities
- Otherwise meet conditions of the trade waste approval, Council's Trade Waste Management Plan 2019, or any relevant legislation.

A TWIP should:

- include a description of the trade waste quantity and quality
- state the objectives to be achieved
- include an investigation of the options for improving discharge quality to meet the trade waste sewer admission limits (or reach a level that is as low as practicably possible), including investigation of waste reduction, recycling and water conservation options
- detail the particular actions to achieve the objectives, taking into account best practice environmental management

- nominate the day by which each action will be completed
- include a monitoring and reporting program to assess compliance
- be prepared and endorsed by a suitably qualified person (e.g. consulting process/ environmental engineer).

Council may also require the TWIP to detail:

- how trade waste will be stored pending sample analysis and approval to discharge
- description of trade waste generating activities, discharge practices and chemical storage procedures
- on-site procedures and work instructions relating to the management of trade waste and the trade waste pre-treatment system
- notification procedures for spills, pre-treatment system failure or accidental or slug discharges to Council's sewerage infrastructure, and/or
- employee training plans related to trade waste activities or incidents.

Council will assess the TWIP, and, at its sole discretion, may accept, accept on condition, or not accept the TWIP. Where the TWIP is accepted, a trade waste approval will include a requirement to meet the commitments of the TWIP and may include additional trade waste charges.

Where the TWIP is not accepted, Council will advise the approval holder of the reasons and may seek further information or representations from the discharger. If a TWIP is not accepted by Council, suspension or cancellation of the trade waste approval may occur.

8 Trade waste charging

Trade waste charges and fees are levied under Chapter 4 of the LG Act. These charges are set to equitably recover the operating cost of providing wastewater services to commerce and industry. The capital costs of providing sewerage infrastructure are recovered through infrastructure contributions.

Trade waste charges and fees are published annually on Council's website townsville.qld.gov.au.

Trade waste charges may include:

- application fee
- annual access fee
- trade waste volume charge
- contaminant charges
- septage disposal charge
- special disposal charge
- sewer loading fee
- additional inspection fees
- recovery of costs for damage.

The annual access fee, trade waste volume charge, contaminant charge and sewer loading charge will be levied on the twice yearly Council rates notices as a utility charge.

The application fee, additional inspection and septage disposal charges will be charged directly to the trade waste approval holder or applicant.

8.1 Application fee

Application fees apply to cover the costs of assessing the trade waste application. For Category 1 customers, the application fee is listed in Council's Schedule of Fees and Charges (Planning Services, Schedule 16). For Category 2 customers, this price will depend on the complexity of the application and will be available on quotation.

8.2 Annual access fee

Each trade waste customer will be charged an annual access fee, to cover the costs of compliance management. The access fee depends on the level of compliance required, which in turn depends on the risk rating of the customer (See Section 3.4 Risk assessment).

8.3 Trade waste volume charge

Each trade waste customer will be charged on the volume of waste discharged to sewer. The unit volume rate ($/KL) is published annually by Council.

Council's sewerage system is designed to transport and treat wastewater from predominantly domestic sources. Wastewater from industrial and commercial sources (trade waste) is likely to have a much

higher volume and level of pollutants than domestic sewage, which consequently costs Council more to transport and treat.

The unit volume rate allows for both the volume of wastewater, and the load of pollutants to be treated. The rate varies for each sub-category depending on the anticipated level of pollutants for that sub-category. Pollutants of concern for Category 1 customers are organic load, including oils and grease (measured as chemical oxygen demand (COD)), and total suspended solids (TSS).

The industry standard level of these pollutants for each sub-category for Category 1 users is as described in Table 1. Other pollutants are assumed to be at normal domestic strength.

The volume charge is based on an actual measurement, or an estimate of trade waste volume. (See Section 9).

For Category 2 customers, the volume rate does not include the cost to Council of managing the level of contaminants above the normal domestic strength. This will be charged separately as contaminant charges.

Table 1. Category 1 assumed wastewater strength

SUB CATEGORY	COD (mg/L)	TSS (mg/L)	TKN (mg/L)	TP (mg/L)	SO4 (Mg/L)
Category 1.1 Food	1500	500			
Category 1.2 Automotive	900	400			
Category 1.3 Laundries & Car washes	700	300			
Category 1.4 Low Risk Food	500	300			
Category 1.5 Multiple	1500	500			
Category 1.6 Access Fee Only	500	200			
Approximate domestic strength[1]	500	200	50	8	70

[1] Estimate of normal domestic strength based on Cleveland Bay Purification Plant Planning Report 2009

8.4 Contaminant charges

Category 2 trade waste customers may have a range of pollutants that can impact on the sewerage system, increasing the cost to transport and treat. Where the concentration of contaminants exceeds normal domestic strength, Category 2 trade waste customers will also be charged on the additional load to sewer of:

- chemical oxygen demand (COD)
- total suspended solids (TSS)
- total Kjeldahl nitrogen (TKN)
- total phosphorus (TP)
- other contaminants as determined in the trade waste assessment.

The contaminant charge will be based on the total load of contaminants to sewer. For each contaminant, calculate by:

$$C = V * (x – d) * n/1000$$

Where

C = Total annual contaminant charge ($)

V = Total annual trade waste volume (kL)

n = Unit charge rate for contaminant ($/kg)

x = Average concentration of contaminant (mg/L)

d = normal domestic concentration of contaminant (mg/L)

The unit charge rates ($/kg) for each contaminant are published annually by Council.

For contaminants discharged in excess of the sewer admission limits, and in accordance with a trade waste approval, additional charges may be set as part of the approval.

Each Category 2 trade waste approval will include conditions requiring the approval holder to undertake a sampling and analysis program, depending on the type of activity and likely trade waste pollutants. The load of each contaminant to be charged will be determined from the average of the sample analysis data collected for the billing period.

In determining the average concentration for the period, Council may exclude some values if they are considered extreme, either significantly higher or lower than the long term average. This data verification will be undertaken in consultation with the trade waste customer.

In some circumstances, such as a customer who routinely discharges similar concentration of pollutants, the pollutant load may be based on an agreed concentration level, rather than on sampling and analysis.

8.5 Septage disposal charge

Where Council allows the disposal of septage at a septage receival facility, this will be charged per litre according to the rate set in the annual Schedule of Fees and Charges.

8.6 Special disposal charges

When Council is proposing to accept special discharges of trade waste, Council in advance will provide a quotation of its charges for that approval.

The charge will be calculated with regard to the type and concentration of contaminants present in the discharge, and the amount of time required for Council staff to assess and process the trade waste application.

8.7 Sewer loading fee

A sewer loading fee will be applied to trade waste discharges that occur when Council has determined that pre-treatment is required and:

1. The required pre-treatment is not installed; or
2. The required pre-treatment is not fully functional, including when the required pre-treatment device is not being maintained in accordance with the service maintenance schedule.

The charge will be calculated with regard to the type and concentration of contaminants present in the discharge and to:

- cover Council's costs of managing the discharge (including the cost of clearing blockages that may have been contributed to by the discharge) and the cost of any additional treatment that Council considers appropriate;
- provide equity with other trade waste customers who have paid for the installation and regular servicing of their pre-treatment; and
- provide an incentive for businesses to install adequately sized and functioning pre-treatment devices.

The sewer loading fee will be levied in addition to the normal trade waste charges.

8.8 Additional inspection charges

The annual access fee allows for a maximum number of hours for Council to undertake inspections and compliance auditing. When additional inspections or auditing are required (e.g. due to non-compliance with trade waste approval conditions, or when a customer requests a review of the trade waste approval), full costs will be recovered from the holder of the trade waste approval.

The cost of inspections and auditing will be based on the charge out rate for the relevant Council staff involved (as per Council's Schedule of Fees and Charges), including time spent on site and travel to and from the site.

The full cost of any laboratory analyses will also be recovered.

8.9 Recovery of cost for damage

Council may recover from the approval holder all costs to rectify any damage caused by the approval holder's trade waste discharged into the service provider's infrastructure other than in strict compliance with the relevant trade waste approval.

9 Determining trade waste volume

For charging purposes, the volume of trade waste discharged to the sewerage system is measured or estimated using:

- default method (based on water consumption)
- direct metering of the waste discharged
- trade waste discharge water consumption through sub-meters
- trade waste fixture unit assessment
- other methods.

The method for determining trade waste volume will be established during, or prior to, the assessment of the trade waste application or renewal, in consultation with the applicant.

In determining the appropriate method of calculating the trade waste volume, Council recognises that the resources expended in determining the volume, should be appropriate to the scale of the discharge, risk and other practical factors.

9.1 Default method - estimate based on consumption

Most trade waste customers have their trade waste volume estimated as a function of the water consumed on the property. This is considered the default method of charging trade waste.

The trade waste volume discharged to sewer is estimated from the metered water consumption, using allowances and a discharge factor to account for water consumed on the premises, or not discharged as trade waste.

This volume formula is:

$$V = (Q - p - a) * d$$

Where:

V is the estimated trade waste volume (kL)

Q is the annual volume of metered water consumption (kL)

p is the pedestal allowance (kL),

a is other allowances(kL)

d is the discharge factor (%)

The water consumption is determined from the main property meter, or relevant sub-meters.

9.1.1 Allowances

The pedestal allowance (p) allows for some human waste from the property, at a rate of 60 kL/pedestal/annum. The number of pedestals allowed is the number of pedestals downstream of the meter or sub-meter which feeds the trade waste generating activities.

In exceptional circumstances, Council may determine that it is appropriate to make a specific allowance for other non-trade waste consumption (a), such as water used for irrigation, exported as product, or used in domestic bathrooms, where this use is not covered by the discharge factor. It is preferred that this use is separately metered.

9.1.2 Discharge factors

The discharge factor estimates the proportion of the remaining water consumption that is trade waste related. When deciding what the appropriate discharge factor should be the assessing officer will consider any consumption of water not directed to trade waste activities, such as irrigation, pool refilling, domestic use, as well as any export of water from the property such as water used in coffees or post mix drinks.

Table 2. identifies industry standard discharge factors that will be adopted if there are no extenuating circumstances. Trade waste applicants are encouraged to discuss water consumption on site with the assessing officer. Any request to vary the discharge factor must be accompanied by appropriate justification and documentation.

Table 2. Discharge factors

CATEGORY	STANDARD (%)
Category 1.1 - Food	85%
Category 1.2 - Automotive	95%
Category 1.3 – Other Commercial Activities	85% Hairdresser - 95%
Category 1.4 – Low Risk Food	85%
Category 1.5 – Multiple Generators	85%
Category 1.6 – Access Fee Only	0
Category 2.0	Individual assessment

In some situations, it is not feasible to use the discharge factor to estimate the trade waste volume, e.g. customers:

- with very high total water consumption, such as defence bases, prisons and hospitals
- with high or variable irrigation use
- customers with high or variable domestic use, such as motels.

These customers are encouraged to install direct metering or sub-metering for more accurate assessment of trade waste volume.

9.2 Direct trade waste metering

For customers with large commercial or industrial flows, it is preferred that a trade waste meter is installed to measure the actual volume of trade waste discharged to sewer for billing purposes.

For some trade waste approval holders or applicants, the installation of a trade waste meter may be a requirement of the trade waste approval, depending on the flow, risk and accuracy of alternative methods.

Any trade waste customer may also install direct metering if desired. This would provide a more accurate measure of trade waste volume (or non-trade waste volume) than any other method, and therefore lead to more accurate trade waste charges.

A trade waste approval holder or applicant who intends to install a direct trade waste meter must nominate the type of meter proposed. Council will undertake an assessment of the proposed meter type to ensure it is fit for purpose, and in accordance with the Water Services Association (WSAA) *Trade Waste Metering Code of Practice WSA15-2014*.

9.3 Sub-metering of trade waste volume

A trade waste customer may choose to install a water consumption sub-meter that measures only the consumption of water used for trade waste purposes. This is useful in a complex with high domestic, irrigation or other non-trade waste consumption, with limited trade waste discharge, for example, the kitchen and laundry of a nursing home. Depending on the type of fixtures downstream of the sub-meter, a discharge factor or pedestal allowance may also be applied. This will be assessed by an assessing officer.

The installed sub-meter must meet Council approval. Readings from the sub-meter must be provided to Council as required and may be audited by Council from time-to-time.

9.4 Fixture unit assessment

For customers for whom the trade waste volume is low and/or difficult to determine, the trade waste volume may be estimated from the number and type of trade waste fixtures.

Trade waste fixtures are the plumbing installations that contribute to trade waste generation, such as sinks, dishwashers, bain-marie or potato peeler. Each kitchen fixture has been allocated a rating which

identifies the volume of wastewater generated compared to that generated by an equivalent person (EP) nominally 230 L/d. A Fixture Rating of 5 is equivalent to discharge from one EP.

The method allows for number of operating days, so trade waste volume, V, is estimated as:

V (kL) = (Total fixture rating) / 5 * 230 * (operating days per year) / 1000

Table 3. Trade waste fixture ratings shows the fixture rating of standard trade waste fixtures.

Table 3. Trade waste fixture ratings

Fixtures/Fittings		Fixture Unit Rating
Laboratory Sink/ Hair Wash Basin		1
Domestic Kitchen Sink/Commercial Bar Sink/ Rinse Sink		3
Commercial Sink (Pot/Utility) Per Bowl		5
Cleaners Sink		1
Hand Wash Basin		1
Floor Waste / Bucket Trap		1
Laundry Tub/Commercial Washing Machine		5
Wash Trough (school / workshop / warehouse etc.) Per Tap		1
Workshop Wash Down Pit / Bin Wash (Minor Commercial)		5
Workshop Wash Down Pit / Bin Wash / Grated Channel (Major Commercial)		10
Tundish (ac / hwu / ice well / coffee machine / Bain Marie / dental unit)		1
Glass Washing Machine		3
Dishwasher	Small (under bench) Large (commercial)	3 6
Wok Burner (Dry / Air cooled)		1
Wok Burner (Wet / water cooled) peak flow x 3 (6 L/m x 60mins x 3)		6
Combi oven (excl. chicken cookers) 100L/rack (racks = Max racks / 2) *avg 20 rack		6
Combi – Chicken cooker 100L/rack		6
Noodle Cooker / Rotisserie Rack / Soft Serve Ice Cream		2
Foot Spa (capacity L X 8 per day) Average Capacity 20L		3
Brat Pan (capacity L x 3 per day) Average Capacity 100L		5
Pool backwash (Commercial)		5

9.5 Other methods

Other methods of measuring trade waste that may be accepted include:

- pump hours and pump flow rating for pumped discharge to sewer
- machine hours (e.g. washing machines)
- measuring excluded water, such as irrigation.

Any proposed form of trade waste volume measurement should be discussed with the assessing officer.

9.6 Reduction in trade waste charges due to water leak

Where there has been an identified water leak, downstream of a property water meter, the estimate of trade waste volume may not be accurate, due to the high level of water consumption that was not being discharged to the sewer.

In this situation Council will consider a request for review of trade waste charges. For the purposes of this review, Council will require a statutory declaration from a licenced plumber regarding the nature of the leak, the destination of leaked water, the likely period during which the leak occurred and the date on which the leak was repaired.

If Council determines that the water leak did not result in discharges of trade waste to sewer, the trade waste charges for that period may be revised. To determine appropriate trade waste charges, an estimate will be made of trade waste volume using the default method based on the average water consumption for a period prior to the water leak. This period will be between six months to 24 months, or the period of occupancy of the current trade waste discharger, whichever is lesser.

10 Variation assessment

A trade waste customer who wishes to discharge a particular contaminant or contaminants at a higher concentration than that specified in the sewer admission limits, or for which the sewer admission limits are silent, needs to make a Category 2 trade waste application specifically requesting the variation to the sewer admission limits.

A request for variation should provide the following information:

- the concentration of the contaminant/s in the proposed discharge
- the daily and monthly load of the contaminant/s
- the timing of the proposed discharge (time of day, days of the week etc.)
- cleaner production and pre-treatment technologies that have been considered and those that are proposed to be used
- any other properties of the proposed trade waste discharge that may affect the sewerage system or affect the chemical characteristics of the contaminant/s in question (e.g. pH, temperature)
- an assessment of the impact that the proposed discharge will have on Council's treatment plant, effluent quality, biosolids quality, or any risks to health and safety.

When assessing the request for variation Council will consider:

- current Australian Sewage Quality Management Guidelines (WSAA, 2012) to identify if the contaminant in question has been identified as affecting safety, assets or treatment, and to seek the current Best Economic and Reasonable Pre-treatment (BEARPIT) concentration
- relevant legislation to determine if the contaminant has been identified as a prohibited substance and/or prescribed contaminant
- other available information on the contaminant, including safety data sheets, to assess its toxicity to humans or environment or flammability etc., and any recommended limits imposed by the relevant state, national or international bodies
- the safe level of the contaminant to guarantee worker safety and asset, taking into account complicating factors such as pH and temperature
- if biosolids are likely to be the limiting aspect, the available capacity to accept that contaminant at the relevant treatment plant
- the cost to treat and/or dispose of the contaminant
- for membrane filtration plants, the potential impact of the contaminant on the membranes (in consultation with the membrane supplier)
- whether the proposed discharge contaminant might trigger the need to renegotiate the treatment plant discharge licence issued under the EP Act
- any potential impacts of the contaminant on effluent reuse.

If the discharge has the potential to impact significantly on the treatment plant process or the environment, Council, or the relevant state government regulator, may require a toxicity assessment to be undertaken. The cost of this toxicity assessment will be the responsibility of the applicant.

Following the assessment of the application, Council may choose to accept the request for a variation to the sewer admission limits, in which case the approval may have specific restrictions, such as maximum contaminant concentration, or load and sampling requirements.

Appendix A Glossary

Accessible: Accessible, when applied to required pre-treatment monitoring or pre-treatment equipment, shall mean direct access without the necessity of removing any panel, door, vehicle, equipment, materials, or other similar obstruction.

Approval holder: A person to whom Council gives a trade waste approval (landowner).

Approved service contractor: A company or person for cleaning and servicing of trade waste pre-treatment and/or stormwater diversion equipment who has committed to meet Council's servicing requirements.

Arrestor: A trade waste pre-treatment device designed and installed so as to separate and retain deleterious or undesirable matter, such as grease, fat and silt, from trade wastes and permit less polluted trade wastes to discharge by gravity into the sewerage infrastructure.

Biosolids: The treated solids (sludge) mainly organic, produced by sewage treatment.

Chemical oxygen demand (COD): A measure of the oxygen required to oxidise organic material in wastewater by a strong chemical oxidant. COD is a measure of the organic and inorganic content, both biodegradable and non-biodegradable, of the waste, or more simply, the organic and inorganic strength of the liquid.

Council: Townsville City Council including delegated officers.

Contaminant: Any solid waste, sewage, refuse, sewage sludge, munitions, medical wastes, chemical wastes, biological materials, radioactive materials, heat, fragmented equipment, rock, sand, agricultural waste, industrial wastes, and with the characteristics of wastewater.

Council Officer (CO): A person holding appointment as a plumbing inspector of Townsville City Council carrying out trade waste work, or their supervisors.

Discharge: The introduction of a wastewater stream into the sewerage infrastructure.

Discharger: The person or entity responsible for the discharge of trade waste to the sewerage system. This may be the property owner, lessee or business owner.

Discharge factor: The percentage of the water supplied to the property, as measured by the water meter, which is discharged to the sewerage system as trade waste.

Domestic sewage: Faecal matter and urine of human origin and liquid household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings.

EP Act: *Environmental Protection Act 1994* (Qld).

Effluent: The liquid discharged following a wastewater treatment process.

Infringement notice offences: is an offence prescribed under the *State Penalties Enforcement Act 1999* to be an infringement notice offence.

kL: Kilolitre

LG Act: *Local Government Act 2009*

mg/L: Milligrams per litre

Occupier: The occupier means the person in actual occupation of the nominated premises, and includes a lessee or licensee under the *Land Act 1994* or tenant of the nominated premises, or, if there is no person in actual occupation, the person entitled to possession of the nominated premises.

Oil separator: A waste pre-treatment device designed and installed so as to separate and retain deleterious or undesirable matter, such as mineral oils, hydrocarbons and silt, from trade wastes and permit less polluted trade wastes to discharge into the sewerage infrastructure.

Owner: The Owner of Premise or a Premises Group as defined in the LG Act.

pH: A measure of the acidity or alkalinity of a substance, expressed in standard units.

Premises: Includes land, buildings and infrastructure from which trade waste is discharged.

Pre-treatment: The reduction of the amount of contaminants, the elimination of contaminants, or the alteration of the nature of contaminant properties in trade waste prior to (or in lieu of) introducing such contaminants into Council's sewerage infrastructure. This reduction or alteration can be obtained by physical, chemical, or biological processes; by process changes; or by other means (except by diluting the concentration of contaminants with water [potable or stormwater]).

Prohibited substance: A substance prescribed in Schedule 1 of the *Water Supply (Safety and Reliability) Act 2008*.

Quick break detergents: Detergents which emulsify oil and grease then break the emulsion in less than 30 minutes.

Regulated waste: As defined under the *Environmental Protection Act 1994.*

Remedial notice: A written notice that requires the owner or occupier of a property to take action under a Local Government Act in relation to the property

Risk rating system: An internal classification system to assess the relative perceived risk to Council's sewerage infrastructure from a trade waste discharge, and using a scale from 1 to 6 where 1 is high risk.

Septage: Any domestic and/or residential sewage from septic tanks.

Sewage: Liquid and water-carried wastewater from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, which are discharged to the sewerage infrastructure.

Sewer: Any pipe (other than a sanitary drain or soil pipe or waste pipe) used for carrying off sewage from premises.

Sewer admission limits: A suite of standards that details the maximum level of contaminants (concentration and/or mass based) allowable in a trade waste to be suitable for discharge to the sewerage infrastructure.

Sewerage Infrastructure: Infrastructure used to receive, transport and treat sewage and/or trade waste and consisting of some or all of the following - sewers, access chambers, vents, engines, pumps, structures, machinery, outfalls, and other works not mentioned forthwith.

Stormwater: Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation.

Suspended solids (SS): Suspended solids refer to the insoluble solid matter suspended in wastewater that can be separated by laboratory filtration and is retained on a filter.

Total oils and grease (TOG): The total amount of oil and grease in wastewater.

Townsville Water: A unit of Townsville City Council, which is a water and sewerage service provider under the WS Act

Trade waste: Water-borne waste from business, trade, or manufacturing premises, other than waste that is a prohibited substance; or human waste; or stormwater. As defined in Section 1.5.

Trade waste approval: A document issued by Townsville City Council allowing the discharge of trade waste into Council's sewerage infrastructure.

Trade waste discharger: The person, company or body that owns the property from which trade waste is discharged to the Council's sewer.

Trade waste generator: Any person, owner, occupier, company or body whose activity produces or has the potential to produce trade waste.

Trade waste improvement plan (TWIP): A plan that details the activities to be undertaken by the approval holder which will allow the trade waste discharge to meet the requirements of Council. Once approved, a TWIP will form a condition of the trade waste approval.

Wastewater: means the spent or used water generated on premises from industrial, commercial or manufacturing, and the combined waste stream when this water is mixed with domestic sewage.

Wastewater treatment plant (WWTP): That portion of the sewerage infrastructure designed to provide treatment of wastewater.

WS Act: *Water Supply (Safety & Reliability) Act 2008*

Appendix B Legislation relevant to trade waste

Environmental Protection Act 1994 (EP Act)

Environmental Protection Regulation 2019

Environmental Protection (Waste Management) Regulation 2000

Environmental Protection (Water) Policy 2009 (EPP (Water))

Plumbing and Drainage Act 2018

Plumbing and Drainage Regulation 2019

Public Health Regulation 2005

Water Supply (Safety and Reliability) Act 2008 (WS Act)

State Penalties and Enforcement Act 1999

Local Government Act 2009 (LG Act)

Appendix C Sewer admission limits

Parameter	Type	Limit (mg/L unless otherwise noted)	Limiting aspect
ammonia[2]	general	100	safety
cod	general	3000	environment
colour	general	no discernible	Environment/ treatment
gross solids	general	13 mm	asset
oil and grease	general	200	asset
petroleum hydrocarbons	general	30	safety
ph	general	6 to 9	asset
phosphorus	general	50	effluent
sulphate	general	500	safety/asset
sulphite	general	15	safety/asset
sulphide	general	5	safety/asset
suspended solids	general	1000	asset
electrical conductivity	general	<5000 uS/cm	Safety/assets
temperature	general	38 degrees C	asset
flammable / explosive substances	general	Prohibited	safety
radioactive isotopes	general	As specified in *Radiation Safety Regulation 2010*	safety
genetically modified organisms	general	Prohibited	environment
clinical waste	general	Prohibited	safety
fluoride	inorganics	30	effluent
cyanide	inorganics	1	safety
chlorine	inorganics	10	asset

[2] Where pH is maintained below 8, and temperature below 30 deg C, ammonia up to 200 mg/L may be accepted

Parameter	Type	Limit (mg/L unless otherwise noted)	Limiting aspect
chlorine (pool discharge)	inorganics	<5	asset
bromine	inorganics	5	safety
boron	inorganics	5	treatment
acetone	ketone	400	safety
methyl ethyl ketone	ketone	100	safety
aluminium	metals	50	environment
arsenic	metals	0.05	biosolids
cadmium	metals	0.1	biosolids
chromium	metals	3	biosolids
chromium (hex)	metals	<0.5	environment
copper	metals	5	treatment
iron	metals	10	treatment
lead	metals	1	biosolids
mercury	metals	0.01	biosolids
nickel	metals	1	biosolids
selenium	metals	0.3	biosolids
silver	metals	2	treatment
tin	metals	10	treatment
zinc	metals	1	biosolids
polynuclear aromatic hydrocarbons	organics	Prohibited	effluent
phenolic compounds	organics	1	treatment
ethylbenzene	petroleum hydrocarbon	1	safety
toluene	petroleum hydrocarbon	0.5	safety
xylene	petroleum hydrocarbon	1	safety
benzene	petroleum hydrocarbon	0.001	safety
trichloroethylene	VOC	0.1	safety
perchloroethylene	VOC	0.01	safety

Parameter	Type	Limit (mg/L unless otherwise noted)	Limiting aspect
chloroform	VOC	0.1	safety
halogenated voc	VOC	1	safety
acetaldehyde	aldehyde	5	safety
dimethyl sulphide	aldehyde	1	safety
formaldehyde	aldehyde	30	safety
propionaldehyde	aldehyde	5	safety
polyfluoroalkyl (PFAS)	organics	prohibited	environment

Appendix D Basic pre-treatment requirements

BUSINESS TYPE Categories 1.1 and 1.4 - Food service	Basic pre-treatment requirements
All food service businesses	In food preparation and handling areas install: - authorised in-sink basket traps being of self-closing or fixed screen type. - authorised floor wastes (where relevant) being of a basket trap of self-closing or fixed screen type.
All Food Businesses with a Food Licence discharging >250L/day	Must have pre-treatment.
Cafe/Canteen/Cafeteria cooking on site	Standard grease arrestor sizing.
Chicken (Fresh) cutting and preparation of fresh meat	Standard grease arrestor sizing.
Chicken Cooking (Minor Retail) BBQ, charcoal, rotisserie	Standard grease arrestor sizing.
Chicken Cooking (Major Retail) Direct cooker connection to sewer (i.e. steam “combi” oven)	Grease arrestor with a capacity greater than the peak hourly flow (L/hour), but minimum 3000L grease arrestor, not shared with any other waste stream.
Coffee Shop/ Sandwich Bar no cooking on site	No pre-treatment required.
Coffee Shop/ Sandwich Bar cooking on site	Standard grease arrestor sizing.
Commercial Kitchen hotel, motel, function centre, hospital	Standard grease arrestor sizing.
Community Hall Kitchens minimal food preparation at site	No pre-treatment required.
Community Hall Kitchens cooking on site	Standard grease arrestor sizing.
Doughnut Shop cooking on site	Standard grease arrestor sizing.
Fast Food Outlet – Major Franchise cooking on site	Grease arrestor with a capacity greater than the peak hourly flow (L/hour), but minimum 2000L grease arrestor.
Fish and Chip Shop	Standard grease arrestor sizing.
Food Processing	Standard grease arrestor sizing
Green Grocer	Standard grease arrestor sizing
Hotel/Motel/Bar/Nightclub no cooking on site	No pre-treatment required.

BUSINESS TYPE Categories 1.1 and 1.4 - Food service	Basic pre-treatment requirements
Hotel/Motel/Bar/Nightclub with counter lunches, cooking	Standard grease arrestor sizing.
Ice Cream Parlour	Standard grease arrestor sizing
Pizza Shop	Standard grease arrestor sizing.
Restaurant	Standard grease arrestor sizing.
School Canteen no cooking on site	No pre-treatment required.
School Canteen cooking on site	Standard grease arrestor sizing.
School Home Science/Hospitality Kitchen	Standard grease arrestor sizing.
Takeaway Food Shop no food cooked on site (i.e. sandwich bar)	No pre-treatment required.
Takeaway Food Shop cooking on site	Standard grease arrestor sizing.
Tertiary Institution Kitchen/ Canteen/ Cafeteria	Standard grease arrestor sizing.
Bakery (Retail) cooking on site (preparation of pastries, pies, sausage rolls etc.)	Standard grease arrestor sizing.
Butcher (Retail)	Standard grease arrestor sizing. All drainage from sinks and floor wastes must pass through an authorised basket trap of self-closing or fixed screen type.
Delicatessen no meat or hot food cooked on site	No pre-treatment required.
Delicatessen hot food cooked on site	Standard grease arrestor sizing.
Fresh Fish (Retail) no fish cleaned, filleted or cooked on site	No pre-treatment required.
Fresh Fish (Retail) fish cleaned, filleted or cooked on site	Standard grease arrestor sizing. In-sink basket traps of self-closing or fixed screen type.
Day Care Centre no cooking on site	No pre-treatment required.
Day Care Centre cooking on site	Standard grease arrestor sizing.
Hospital Kitchen	Standard grease arrestor sizing.
Nursing Home Kitchen	Standard grease arrestor sizing.
Retirement Village Kitchen	Standard grease arrestor sizing.

BUSINESS TYPE	Basic pre-treatment requirements

Category 1.2 - Workshops	
Automotive Industries - service stations, car detailers	Oil water separators and holding tank with a capacity greater than the peak hourly flow (L/hour).
Mechanical Workshop	Oil water separators and holding tank with a capacity greater than the peak hourly flow (L/hour).

BUSINESS TYPE Category 1.3 – Other commercial activities	Basic pre-treatment requirements
Photographic and Imaging	Operators in the photographic and imaging industry will need to demonstrate compliance with the *Water and Safety Reliability Act 2008* and the TCC Trade Waste Management Plan - Sewer Admission Limits
School Science Laboratory	Authorised silt trap or dilution chamber with a capacity greater than the peak hourly flow (L/hour). Neutralisation chamber may be required.
School Art Studio/Block	Silt arrestor with a capacity greater than the peak hourly flow (L/hour).
Carwash- roofed and bunded or with a diversion system	Oil silt arrestor with a capacity greater than the peak hourly flow (L/hour). Basket trap in floor waste being of self-closing or fixed screen type.
Bin Wash Commercial (bunded or diversion valve)	Silt basket arrestor
Cooling Tower – Condensate / Blowdown where this is the only discharge type	No pre-treatment required. Metering solution required.
Refrigeration Condensate	No pre-treatment required. Metering solution required.
Compressor Condensate (large scale)	Oil silt arrestor with a capacity greater than the peak hourly flow (L/hour). Metering solution required.

BUSINESS TYPE Category 1.3 – Other commercial activities	Basic pre-treatment requirements
Laundry coin operated only (not commercial)	No pre-treatment required. Discharge to be less than 38°C
Laundry commercial	Lint trap plus cooling pit
Dog groomer, pet shop (retail)	In-floor bucket trap, no organophosphates pesticides to sewer – Dry Basket Arrestors
Hairdresser	In-sink basket traps being of self-closing or fixed screen type.

BUSINESS TYPE Category 1.6 – Low volume commercial activities	Basic pre-treatment requirements
Beautician/Tattooist	No pre-treatment required.
Funeral Parlour	No pre-treatment required.
Bin Wash & Vehicle Wash Bays (no device fitted)	Basket trap in floor waste being of self-closing or fixed screen type.
Veterinary Practice	No pre-treatment required. No discharge of regulated waste
Mobile carpet cleaners	20 micron filter unit
Cooling towers	Discharge not to exceed 500 litres/day
Dental surgery / Dental technician	Amalgam trap and segregation of waste amalgam; Plaster trap
Dry cleaners	Solvent recovery unit
Florist	No herbicide to sewer
Optical lens grinding	Solids settlement pit
Mobile bin washing	Screening and temperature control (less than 38°C)

Appendix E Basic pre-treatment types

The most common types of basic pre-treatment are discussed below.

Basket arrestors

In areas where solid waste is likely to enter the sewer, such as sinks and floor wastes of hairdressers and food businesses, dry basket arrestors or scrap traps must be fitted. These should be designed such that drainage is restricted or stopped when the basket is removed for cleaning.

Grease arrestors

Fats, oils and grease can cause blockages in the sewer and damage pipes and pumps, which result in expensive repairs and/or overflows of sewage. Oils also impact the efficacy of the sewage treatment process and reduce the quality of effluent discharged to the environment. Grease arrestors (grease traps) are required for all food businesses that generate greasy waste to ensure that fats, oil and grease in the sewer is minimised.

To ensure that the grease trap is effective, it must meet Council specifications, and/or be a Council approved product, and be adequately sized (see below).

An application for plumbing approval from Council must include the capacity, make and model of any proposed grease arrestor. If the proposed grease arrestor complies with Council's list of authorised products, and meets standard sizing, then hydraulic approval will include acceptance of the proposed grease arrestor. Otherwise, written approval is required from Townsville City Council to allow the proposed grease arrestor to be considered fit for purpose.

➢ Grease arrestor installation

Grease arrestors must be appropriately installed in accordance with the *Standard Plumbing and Drainage Regulation 2019*, with the following additions:

- » Grease arrestors must have an outlet inspection opening, at least 100mm diameter to allow for inspection and sampling of effluent.
- » Grease arrestors shall be vented, size of vent to be minimum 100mm diameter.

➢ Grease arrestor sizing

Appropriate sizing of grease arrestors is necessary to satisfy a number of needs, such as providing adequate retention time to allow separation of grease/oil and suspended solids, reducing outgoing water temperature and having adequate holding capacity for separated materials, to minimise service frequency.

The size of a grease arrestor refers to the water volume.

Any new or replacement grease arrestor must be sized to the greater of:

- » 1000L plus 1000L per additional connected tenancy
- » 1000L minimum plus sized capacity taking into account the fixtures connected as per Table 4.

The capacity of the fixtures can be determined using fixtures rating in *Table 4. Grease arrestor fixture capacity*.

Table 4. Grease arrestor fixture capacity

Fixtures/Fittings		Capacity (L)
Laboratory Sink/ Hair Wash Basin		50
Domestic Kitchen Sink/Commercial Bar Sink/ Rinse Sink		150
Commercial Sink (Pot/Utility) Per Bowl		300
Cleaners Sink		30
Hand Wash Basin		30
Floor Waste / Bucket Trap		10
Laundry Tub/Commercial Washing Machine		300
Wash Trough (school / workshop / warehouse etc.) Per Tap		30
Workshop Wash Down Pit / Bin Wash (Minor Commercial)		250
Workshop Wash Down Pit / Bin Wash / Grated Channel (Major Commercial)		500
Tundish (ac / hwu / ice well / coffee machine / Bain Marie / dental unit)		10
Glass Washing Machine		150
Dishwasher	Small (under bench) Large (commercial)	250 See #
Wok Burner (Dry / Air cooled)		30
Wok Burner (Wet / water cooled) peak flow x 3 (6 L/m x 60mins x 3)		Min 1080
Combi oven (excl. chicken cookers) 100L/rack (Racks = Max racks / 2) *avg 20 rack		Min 1000
Combi – Chicken cooker 100L/rack		Min 1000
Noodle Cooker / Rotisserie Rack / Soft Serve Ice Cream		100
Foot Spa (capacity L X 8 per day) Average Capacity 20L		160
Brat Pan (capacity L x 3 per day) Average Capacity 100L		300
Pool backwash (Commercial)		230

* Example of 20 rack combi oven

Use the manufacturer's maximum peak flow rate per hour x 3 (peak flow rate = Litres per cycle x maximum cycles in an hour). Cycles must be the shortest cycle allowable by that unit. If this information is not available, a default calculation of 800 L will apply.

The maximum allowable capacity of any one grease arrestor is 3000L, unless Council provides written consent for other sizing (consideration must be given to the adequacy of the applied flow rate at the time of installation).

New trade waste applications with installed grease traps that are of insufficient size, or with no grease trap, will be assessed by Council officers. The trade waste discharge may be approved, subject to one or more of the following conditions:

- The grease trap is serviced more regularly (e.g. every 4 or 8 weeks).
- More thorough kitchen housekeeping practices are implemented.
- The approval holder pays a Sewer Loading Charge (see Section 8.7).
- An alternate grease removal device is installed to augment or replace the existing device.
- A plan to install a suitably sized grease arrestor is provided to Council.

➢ Grease arrestor maintenance

Regular cleaning of grease arrestors is required to ensure effective operation. A condition of each trade waste approval will be that Council sets the service frequency (period between grease arrestor cleans) of each arrestor. It can vary from weekly to annually, depending on waste accumulation rate, size of grease arrestor, kitchen practices and other factors. The frequency will be reviewed as part of routine compliance audit inspections, or on request by an approval holder (fees will apply)

Pre-treatment devices connected to Council's sewer system, but not in use (care and maintenance) will require a 12 monthly pump out and inspection by an approved service provider.

In assessing service frequency, Council will aim for:

- no more than 100mm of oil/grease accumulation in the last chamber
- total grease and solids accumulation not to exceed 25% of depth
- oil and grease in discharge to not exceed 200 mg/L.

At each service, it is required that:

- The grease trap is pumped out completely (this would include all chambers).
- The internal surfaces are scraped and hosed off, and the residue sucked out.
- Any maintenance requirements, such as broken baffles are noted;(this would be noted on the monthly service report sent to Council by the service provider).
- The trap is at least third-filled with water when complete. This is best done by the business operator in the first shift after servicing, i.e. leave the tap running for 30-60 minutes. (Refilling would also minimise the potential for the grease arrestor to "float", and subsequent plumbing damage). If an approved service contractor is used, Council is advised within a month of servicing that the service has been completed and of any maintenance issues noted.

If a non-approved service provider is used, Council must be advised 2 days prior to the service event, and the grease arrestor may be inspected by a Council officer immediately after servicing (at approval holder's expense), to ensure that the grease trap has been serviced adequately and maintenance requirements documented.

The use of solvents, enzymes, mutant bacteria, odour control agents or pesticide in grease arrestors is prohibited unless specified in the trade waste approval.

Oil and silt separators

Trade waste generated by the motor trades industry and any other business where oily waste is generated must be pre-treated using an adequately sized system that is designed for the removal of petroleum oil and silt.

Council's preferred oil and silt removal system includes:

- 100L silt trap
- holding tank (volume equal to or greater than oil separator capacity)
- non-emulsifying pump, sized so as not to exceed oil separator capacity
- oil water separator (coalescing plate or vertical gravity), to be sized according to rate of inflow (see manufacturer's specification), minimum capacity 1000 litres per hour
- waste oil collection
- use of quick-breaking detergents.

➢ Oil separator maintenance

Regular cleaning of oil separators is required to ensure effective operation. Council will set the service frequency (period between services) of each oil separator as part of a Category 1 trade waste approval. This is usually every 3 months. Maintenance should be in accordance with manufacturer's instructions.

Minimum service standard

Oil separators should be serviced by an approved service contractor.

- Remove obstructions from the grates and pit such as leaves, rags, plastic bags etc.
- Inspect the pit to ensure the float switch is working.
- Inspect the holding tank and remove any floating solids which may block the foot valve and pump.
- Remove and clean plate or coil pack with quick break detergents and pressure cleaner.
- Hose out oil water separator thoroughly back into the holding tank.
- Inspect the oil water separator checking the plate pack is secured to the base of oil separator.
- Check the filter sock if one is installed and clean with a quick break detergent or replace it if needed.

- » Check the oil skimmer level to see if it is set correctly by manually operating the pump.
- » Check the waste oil collection vessel connected to the oil water separator and empty into a waste oil storage container for collection by a licensed liquid waste transport contractor.
- » Inspect for any damage and correct operation.
- » Inspect pump for leaks.
- » Inspect holding tank and assess whether pump out is required.

➢ **Holding tank maintenance**

- » Manually operate the pump to reduce the volume of wastewater in the holding tank to the lowest level. (Raise the high level float to start the pump - check voltage first).)
- » Drain sludge from the oil separator back into the holding tank to be pumped out by licensed liquid waste transport contractor.
- » Remove and clean plate or coil pack with quick break detergents and pressure cleaner.
- » Hose out oil water separator thoroughly back into the holding tank.
- » Arrange for a licensed liquid waste transport contractor to pump out all of the wastewater in the holding tank at the completion of the above steps.
- » Reinstall plate/coil pack (anti surge) and secure to oil separator to stop pack from floating.
- » Close sludge valve.
- » Reinstall filter sock if one is fitted.
- » Fill oil separator with clean water.
- » Run on manual to reset oil skimmer level.

Council is to be advised within a month that the service has been completed and of any maintenance issues noted. It is preferred that this advice be provided by service contractors in a format suitable to Council. Servicing records (from service agent, waste contractor and/or in-house records) should be kept and made available to Council Officers when required.

➢ **Automatic grease recovery device**

Automatic grease recovery units/devices are not a substitute for a pre-treatment grease trap. Only in circumstances where is it physically impossible to retrospectively install a grease trap would these devices be considered. The applicant would attach with the application a case for the exemption with procedures. Council would assess the exemption on the basis of the strength and the volume of the discharge, positioning and other mitigating circumstances that may apply to the individual application. Successful exemption applications will incur a sewer loading fee (based on the volume size of the grease trap recommended for the discharge)

- **Automatic grease recovery device maintenance**

Refer to the manufacturer's maintenance recommendations.

Service maintenance records to be kept for weekly and quarterly service events.

To be kept on site and made available for Council inspection audits.

Captured oils to be disposed of by an approved trade waste service provider.

Appendix F Housekeeping for commercial customers

Kitchens

Most commercial kitchens are required to have an appropriately sized grease trap (See Appendix D). Maintaining adequate housekeeping practices in a kitchen can reduce the load on the grease trap, and subsequently reduce the service frequency. Practices that should be included in the kitchen include:

- Ensure gross solids are not discharged to any drain and sewer. Solid food scraps and residues from plates and kitchen equipment should be scraped into solid waste bins.
- Install, in all sink and floor drains, dry basket arrestors (strainers) with a fixed screen or an automatic closing mechanism that prevents discharge to sewer when the basket/strainer is removed.
- Educate occupiers and staff not to leave taps running.
- Install flow restriction devices where possible.
- Remove in-sink food waste disposal units.
- Recycle waste cooking oil.
- Allocate waste management responsibility to employees.

Food waste disposal units, such as garbage grinders and sink-to-sewer disposal units, are not encouraged as they place additional burden on Council's sewerage infrastructure, but may be approved for commercial use by specific application to Council. Where approved, food waste disposal units should be plumbed around a grease arrestor (where installed).

Motor trades

Trade waste generating activities in the motor trades includes:

- degreasing and washing of engines, gearboxes and automotive parts
- washing of workshop floors contaminated with hydrocarbons
- washing of motor vehicles, trucks and heavy machinery
- rub down and paint scrapings from panel and smash repair shops
- waste from flushing of radiators and engine blocks.

Trade waste generated by the motor trades industry must be pre-treated using an adequately sized pre-treatment system that is designed for the removal of petroleum oil and silt (see Appendix D Category 1.2).

Raw or depleted degreasing substances or baths of detergent cleaners, hydrocarbon cleansers, caustic soda, phenol/cresol solutions, cresylic acid and chlorinated hydrocarbons must not be discharged into sewer as trade waste. These wastes are regulated wastes that must be disposed off-site at a licensed treatment and disposal facility.

If detergents are being used in the generation of oily water wastes, then such detergents must be 'Quick Breaking' to rapidly break the emulsion and improve oil separation in the pre-treatment system. Detergents are considered quick breaking if the emulsion breaks (the oil separates from the water) within 30 minutes.

Other housekeeping methods that can be employed to reduce load to sewer include:

- Use dry cleaning methods, such as wiping up spills and sweeping, rather than hosing.
- Use absorbent packs available to soak up oil spills.
- Ensure all equipment is properly cleaned and maintained.
- Don't pour oil down the drain. Ensure that adequate storage is provided for used oil and that a collection program is arranged with an oil recycler.
- Use cleaning products that have a pH of 7-10 at working concentrations.

Chemical storage

Any activity that includes chemical storage areas must ensure that any leakage and spillage from these areas are not connected, by gravity or any automated means, to Council's sewerage infrastructure. Any wastewater collected from such areas may only be discharged to sewer after testing and approval by Council.

Photographic and imaging industry

Wastewater from the photographic industry, such as photographic labs, x-ray and graphic arts studios, may contain high concentrations of silver, ammonia and sulphur compounds. Prior to being granted approval to discharge such waste to sewer, operators in the photographic and imaging industry will need to demonstrate compliance with the *Water and Safety Reliability Act 2008* and the TCC Trade Waste Management Plan - Sewer Admission Limits.

Commercial wash bays

Discharges to sewer from bin wash and car wash facilities at commercial premises and residential unit complexes are considered trade waste and the property owner is required to hold a trade waste approval. Unless otherwise advised by Council, wash bays are required to have:

- a basket trap in floor wastes being of self-closing or fixed screen type
- adequate roofing and/or bunding in accordance with Council's standard drawings (contact Council's Assets and Hydraulic Unit for advice)
- stormwater diversion valve if unroofed.

Appendix G Risk assessment

Risk rating

For approved trade waste discharges, the risk rating reflects the expected level of management required by Council to ensure compliance with the approval.

Failure to comply with the conditions of the approval may result in a review of the risk rating which could result in increased charges for the approval holder via the annual access fee.

The lower the risk rating, the more compliance management is required and the higher the annual trade waste fee to cover the cost of this management.

Risk index

To determine the risk rating of a customer, Council determines the risk index.

The risk rating correlates to the risk index, as shown in Table 5.

Table 5. Risk rating

Risk Index	Risk Rating
140 +	1
90 - 139	2
65 - 89	3
50 - 64	4
40 - 49	5
0 - 39	6

The risk index methodology has been adapted from those used by other industry providers, including Water Corporation and Sydney Water, and considers:

- Volume of discharge (relative to the catchment volume)
- Type of contaminants
- Type and complexity of pre-treatment
- Number of trade waste generators on the property
- Compliance history, including adequacy of servicing pre-treatment.

The risk index is calculated by:

Risk index = V + S + P + M + C

Where:

V = Volume Score

S = Substance Score

P = Pre-treatment Score

M = Multiple Generators Score

C = Compliance History Score

➢ Volume score (V)

The higher the volume of trade waste discharged from a business the greater the potential for the waste to impact on the wastewater treatment plant (WWTP) to which it discharges. The score increases proportionate to the percentage of the maximum daily discharge to the WWTP average influent volume.

Table 6. Volume score

Fraction of Discharge Volume to WWTP influent volume (%)	Volume Score
<0.1	0
0.1 - < 0.5	5
0.5 - < 2.0	10
2.0 - < 6.0	25
6.0 - < 10	50
>10	100

➢ Substance score (S)

The substance score applies to both substances used in processes generating trade waste and which may potentially be present in the effluent, as well as those substances regularly discharged.

Substances are scored depending on the risk they pose to:

» The environment;

» Health and safety

» Sewage treatment processes

» Contamination of effluent and biosolids

They have been grouped in three categories of risk as shown in Table 7.

Table 8 includes substance scores for particular substances. Scores for any substance not included in this list should be interpolated from its risks to the system.

If there are multiple substances, only the highest score is applied.

Table 7. Substance risks

Score 20:	Score 40:	Score 70:
• Substances which may cause sewer blockages. • Substances which may cause undesirable effluent and sludge concentrations, but only if discharged in large amounts. • Substances which may cause damage to sewer system under some conditions. • Substances of minor WHS concern.	• Substances which are of moderate WHS concern, including those which are likely to be rendered harmless on contact with wastewater. • Substances of moderate concern with respect to accumulation in effluent or sludge.	• Substances of high WHS concern. • Substances of high concern with respect to accumulation in effluent or sludge. • Substances which may upset wastewater treatment processes if discharged in moderate quantities. • Substances of high concern with respect to damage to sewer system.

Table 8. Substance scores

Substance	Score	Substance	Score
Acids or Alkalis (bulk)	20	Mercury	70
Aluminium	20	Molybdenum Nickel	40
Ammonia	40	Nitrification Inhibitors	70
Arsenic	40	Nitrogen (Kjeldahl)	20
Barium	20	Oil and grease	20
Boron	20	Organics (Non readily biodegradable)	20
Bromine	40	Petroleum Hydrocarbon (Commercial)	20
Cadmium	40	Petroleum hydrocarbons (Industrial)	70
Calcium	20	pH	20
Chloride	20	Phosphorus	20
Chlorinated Hydrocarbons	70	Selenium	40
Chlorine	40	Silica (Si)	20
Chromium	40	Silver	70
Cobalt	20	Strontium (Sr)	20
Copper	70	Styrene	40
Cyanide	70	Sulphate	20
Flammables/explosives	70	Sulphide	20
Fluoride	20	Suspended Solids	10
Gluteraldehhyde	40	TDS	20
High BOD Formaldehyde	40	Temperature	10
Hydroflouric Acid	70	Thiosulphate	20
Iodine	40	Tin	20
Iron	20	Zinc	40
Lead	40	Chromium (Hex)	70
Manganese	20		

➢ Pre-treatment complexity score (P)

Pre-treatment that is complex, susceptible to failure and/or difficult to maintain causes risks to the sewerage system. Table 9 shows the score for various pre-treatment types. Where more than one type of pre-treatment device is involved, only the highest score is applied.

Table 9. Pre-treatment score

Pre-Treatment Device	Rating
No pre-treatment	0
Basic pre-treatment (adequately sized)	10
Basic pre-treatment (adequately sized) Self-Maintain	20
Basic pre-treatment (inadequately sized)	25
No pre-treatment where basic pre-treatment is required	30
Complex pre-treatment	40
No pre-treatment provided (where complex pre-treatment is required)	60

➢ Compliance score

A trade waste customer's previous failure to comply with conditions of the trade waste approval increases the risk to the system and the inspection and monitoring requirements. Table 10 shows the Compliance Score.

Table 10. Compliance score

Non–Compliant Events	Compliance Scores
None	0
Minor, Occasional (Admin/No Records)	10
Minor, Ongoing (Admin/No Records)	20
Significant, Occasional (Breach of Conditions/Maintenance/Admission Limits)	30
Significant, Ongoing (Breach of Conditions/Maintenance/Admission Limits)	50

➢ Multiple dischargers score

The number of separate businesses on a property increases the compliance inspection requirements and is included in the risk assessment as shown in Table 11.

Table 11. Multiple dischargers score

Number of dischargers	Multiple discharger scores
1 discharger	10
2 dischargers	20
3 dischargers	25
4 dischargers	30
5 dischargers	40
6-10 dischargers	50
10 or more dischargers	60