Livingstone
SHIRE COUNCIL

Trade Waste Plan

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Approval and Version Control

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Revision

Version	Amendment Record	Revised By	Title
2		Carrie Burnett	Policy & Planning Officer
3	To include the requirement for premises with shared water meters to install sub-meters.	Sean Fallis	Manager Water and Waste Operations
4	Section 7 – Trade Waste Charges and Fees updated.	Nige Deacon Carrie Burnett	Manager Water and Waste Policy & Planning Officer

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1 Introduction

Liquid waste is produced by a variety of industrial, commercial and domestic activities. The *Environmental Protection Act 1994* provides a general prohibition against the pollution of the environment by the discharge of such wastes, except where the person or agency holds an environmental authority permitting such discharge.

All discharges to receiving waters are required to be treated to a standard that will maintain or enhance receiving water quality and environmental values.

Liquid waste generated by industry, small business and commercial enterprises is referred to as trade waste. Section 193(1) of the *Water Supply (Safety and Reliability) Act 2008* ('*the Act*') prohibits the unauthorised discharge of trade waste into Council's sewerage infrastructure. The options for producers of trade waste are to have it treated at an approved treatment facility, obtain approval from Council to discharge to its sewerage infrastructure or obtain an environmental authority under the *Environmental Protection Act 1994* to treat the waste themselves before discharging to the environment.

Livingstone Shire Council provides sewage infrastructure primarily for collecting and transporting and treating domestic sewage. Payment for this service is collected through sewerage charges on each rateable property. The sewerage infrastructure may also be used, with the approval of Council, for the acceptance and treatment of trade waste. As trade waste imposes an additional load on the sewage infrastructure, trade waste charges apply.

Council is required to meet the conditions of the environmental authority (licence) issued by the Department of Environment and Science for its sewage infrastructure including the disposal and reuse of treated effluent and biosolids. Council is also required by *the Act* to fully assess the effect of trade waste on the sewage infrastructure and the environment before issuing a Trade Waste Approval.

The discharge of trade waste to a stormwater drain is prohibited under s 79 of the *Local Government Act 2009*. The stormwater system must only be used for the disposal of uncontaminated stormwater runoff. Under the *Environmental Protection Act 1994*, Council is responsible for the investigation and where appropriate legal action against individuals and organisations that pollute waterways or stormwater systems.

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

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

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

To ensure the continued protection of our environment and waterways, if s 180(4) of *the Act* can be complied with, Council's policy is to accept, subject to conditions, biodegradable waste into the sewerage infrastructure if:

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

Discharge of waste containing substances in amounts liable to be toxic or hazardous to the sewerage infrastructure, treatment process, personnel or the environment is prohibited. Council may consider issuing a Trade Waste Approval for the discharge of toxic or hazardous substances and non-degradable pollutants to the sewerage infrastructure only after the waste has been pre-treated by on site best practice treatment to ensure sewer admission limits are not exceeded.

2 Definitions

To assist in interpretation, the following definitions shall apply:

Approval Holder	The holder of a Trade Waste Approval issued under s 180 of *the Act*.
Arrestor	An apparatus designed to intercept and retain silt, sand, oil, grease, sludge and other substances in a waste discharge.
Council	Livingstone Shire Council or any person appointed or authorised by Livingstone Shire Council to act on behalf of Council as the case may require.
Biosolids	The treated solids (sludge), mainly organic, produced by sewage treatment.
Industry Discharge Factors	The percentage of the water supplied to the property, as measured by the water meter, which is discharged to the sewerage infrastructure. The discharge factor includes all domestic, commercial and industrial sewage that enters the sewerage infrastructure from a property. Discharge factors may range from 0 to 100% and in exceptional circumstances maybe greater than 100% if additional material is added to the waste stream as part of the production process (refer Appendix 3).
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.
Effluent	The liquid discharged following a sewage treatment process.
Licensed Plumbing and Drainage Contractor	A plumber who holds a Queensland Building and Construction Commission (QBCC) Plumbing and Drainage Trade Contractor License.
Licensed Waste Transporter	A waste transporter who holds or is acting under an environmental authority for transporting waste.
Premises	Has the same meaning as premises under the *Act*
Prohibited Substance	A substance prescribed in Schedule 1 of *the Act.*

Schedule of Fees and Charges	Fees and charges adopted by Council available from Council's Customer Service Centre or at www.livingstone.qld.gov.au.
Sewerage Infrastructure	Has the same meaning as sewerage in *the Act*.
Sewer Admission Limits	The upper limits for the quality of trade waste discharge to the sewer (refer Appendix 1).
Stormwater Drain	Has the same meaning as stormwater drain in the *Local Government Act 2009*.
the Act	*Water Supply (Safety and Reliability) Act 2008.*
Trade Waste	Has the same meaning as trade waste in *the Act*.
Trade Waste Approval	An approval issued by Council under s 180 of *the Act* for an Approval Holder to discharge trade waste into Council's sewerage infrastructure.
Trade Waste Generator	Any person whose activities produce or has the potential to produce trade waste who does not have a Trade Waste Approval.
Regulated Waste	Refer to Schedule 7 of the *Environmental Protection Regulation 2008* (whether or not it has been treated or immobilised) and includes: a) for an element – any chemical compound containing the element; and b) anything that has contained the waste.

3 Trade Waste Policy

Purpose

To provide an approval process for the discharge of 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.

Objectives

- To safeguard public health and the environment;
- To prevent harm or injury to sewerage employees;
- To safeguard the sewerage infrastructure against damage, blockage or surcharging
- To exclude non-biodegradable and potentially harmful substances that may:
  - lead to non-compliance with the conditions of Council's environmental authority issued by the Department of Environment and Science;
  - cause the treatment process to fail;
  - render effluent or biosolids unacceptable for reuse or disposal;
  - cause physical damage to infrastructure; or
  - cause any other detriment to the environment.
- To equitably recover the cost of services including the cost of conveyance, treatment, disposal, maintenance and repair of damage to the sewerage infrastructure;
- To provide operational data on the volume and composition of industrial and commercial effluent to assist in the operation of the sewerage infrastructure, the design of augmentations or new sewerage infrastructure and waste management reporting;
- To encourage waste minimisation and cleaner production, including waste prevention, recycling and pre-treatment;
- To promote water conservation; and
- To assist Council in meeting its statutory obligations.

Process

Council aims to achieve these objectives with a process that is transparent, equitable, accountable, follows 'user pays' principals, consistent with best practice and responsive to changing community needs and concerns.

Policy Instruments

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

- Sewer admission limits (acceptable concentration/mass limits for liquid waste);
- Trade Waste Approvals;
- "User pays" pricing;
- Effluent Improvement Programs;
- Prohibition of discharge of substances; and
- Mandatory pre-treatment devices.

4 Control of Trade Waste

Under s 193 of *the Act,* it is an offence to discharge trade waste into Council's sewerage infrastructure unless a Trade Waste Approval has been issued by Council under s 180. Any person wishing to discharge trade waste to the sewerage infrastructure must apply for a Trade Waste Approval (refer to s 8).

A Trade Waste Approval is the written approval of Council which states the requirements and conditions under which discharge to the sewerage infrastructure is allowed.

Pursuant to s 79 of the *Local Government Act 2009*, a person must not put trade waste into a stormwater drain.

4.1 Suspension or Cancellation of Trade Waste Approval

The criteria for suspending or cancelling Trade Waste Approvals are covered in s 182 of *the Act*.

Terms and conditions of a Trade Waste Approval in respect of any matter occurring before a 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.

4.2 Penalties and Recovery of Costs

Council may prosecute any person who commits a breach of the appropriate provisions of *the Act*, the *Local Government Act 2009* or the *Environmental Protection Act 1994* and associated subordinate legislation, or who refuses or neglects to comply with any direction or requirement by Council pursuant to the above legislation. Penalties are set out in the above legislation and include substantial fines.

Council may recover the costs of repairing damaged sewerage infrastructure or stormwater systems from a person causing damage to these systems by discharging a prohibited substance or acting in a manner contrary to the relevant legislation.

5 Sewer Admission Limits

Any waste discharged to Council's sewerage infrastructure must comply with the sewer admission limits set out in Appendix 1 unless otherwise specified in the Trade Waste Approval. These limits are subject to periodic review.

The sewer admission limits, unless otherwise specified in the Trade Waste Approval, are absolute maximums.

The trade waste stream and domestic sewage stream should, wherever practicable, discharge separately to the sewerage infrastructure. Where there is a common sanitary drain, LSC will estimate an allowance for the domestic component based on connected pedestals to estimate the actual trade waste component strength.

Council requires trade waste generators to implement waste minimisation practices and install best practice pre-treatment processes to reduce both the volume and the contaminant load of discharges to the sewerage infrastructure.

The dilution of trade waste with water to achieve compliance with the sewer admission limits is prohibited. Council has obligations to avoid sewage overflows and consequently will impose limits on the rate and timing of trade waste discharges.

5.1 Effluent Improvement Programs

5.1.1 Category 1 and 2

- For Category 1 and 2 discharges, the installation of a properly sized, approved best practice pre-treatment device (refer Appendix 2), together with an acceptable maintenance program in accordance with the Trade Waste Approval conditions will be deemed to provide a satisfactory effluent with respect to the sewer admission limits.

5.1.2 Category 3

- Council may, at its discretion issue a Trade Waste Approval to accept discharges to the sewerage infrastructure that exceeds any of the sewer admission limits. Additional charges may apply for such parameters. Council is not under any obligation to accept category 3 discharges.
- If a Category 3 Trade Waste Approval is issued, Council may require an Effluent Improvement Program. This program should include:
    - a description of the effluent quantity and quality;
    - provision for monitoring and reporting waste quantity and quality;
    - an examination of waste prevention and recycling options;
    - an examination of options for the conservation of water;
    - a program involving the development of waste reduction and pre-treatment aimed at reducing contaminant levels over a period of not more than three years to achieve the prescribed admission limits with an action program including expected outcomes, timelines and milestones; and
    - a report for Council, including a summary of achievements and options.

6 Discharge Categories

All trade waste accepted to the sewerage infrastructure will be classified according to the following three categories for the purposes of a Trade Waste Approval and charging.

Parameter	Category 1 low strength / low volume	Category 2 high strength / low volume	Category 3 high strength / high volume
Biochemical Oxygen Demand (BOD_5), mg/l	< 300	< 300	>300
Chemical Oxygen Demand (COD), mg/l	< 600	< 600	> 600
Suspended Solids, mg/l	< 300	< 300	> 300
Total Kjeldahl Nitrogen, mg/l N	< 80	< 80	> 80
Total Phosphorus, mg/l P	< 15	< 15	> 15
Volume, kl/annum	< 250	> 250	Any volume
Charges	Annual Charge (refer to s 7.1.1)	Annual plus Quantity based charge (refer to s 7.1.1) Minimum charge applies	Annual plus Quantity plus Quality charge on total annual load (refer to s 7.1.1) Minimum charge applies

Category 1 approval holders do not incur additional treatment charges and only pay standard sewage charges, as their discharges are deemed to be at or below 'domestic strength' – i.e. the combined wastewater discharge is of a strength less than or equal to domestic sewage.

Acceptance of trade waste under any category is conditional on the discharge meeting Council's sewer admission limits (refer Appendix 1) unless otherwise specified in the Trade Waste Approval.

It is the responsibility of the Approval Holder to install, operate and maintain best practice pre-treatment devices or processes to ensure sewer admission limits are not exceeded.

In the event of a significant increase in the strength or volume of a discharge from a Category 1 or 2 Trade Waste Approval, the trade waste will be treated as a Category 3 discharge for the purposes of charging and monitoring.

7 Trade Waste Charges and Fees

Trade waste fees are levied under s 97 of the *Local Government Act 2009* and will be charged in accordance with the Schedule of Fees and Charges.

7.1 Trade Waste Charges

Trade waste is divided into three categories for charging purposes (refer to s 6). Charges cover the cost of treatment, recurring administration and overhead costs associated with trade waste control.

Accounts for trade waste charges will be issued half yearly on a Trade Waste Notice and be recoverable as a debt to Council in accordance with Council's Debt Recovery Policy.

Non-payment of trade waste charges by the due date may result in the Trade Waste Approval being suspended or cancelled.

7.1.1 General Trade Waste Charges

- Charges will be determined as follows:

Category	Annual	Volumetric	Quality
1	√		
2	√	√	
3	√	√	√

- **Annual Charge**

  A charge to cover the cost of administration, compliance inspections and overhead costs associated with trade waste.

- **Volumetric (Quantity)**

  The trade waste volume discharged to the sewerage infrastructure is estimated from the metered water consumption using a discharge factor to account for water consumed on the premises, or not discharged as trade waste. Where no discharge factor is listed for a particular type of business Council will make a determination at its discretion and advise the business owner.

Volumetric Charge Formula

C = V x r

Where: C = volumetric charge

V = the estimated trade waste volume (kl) (V = Q x d)

Q = the volume of metered water consumption (kl)

d = the discharge factor (%)

r = current volumetric rate*

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

Quality Charge Formula

C = [(B x V / 1000) x rb] + [(S x V / 1000) x rs]

Where: C = quality charge ($)

V = the estimated trade waste volume (kl) (V = Q x d)

Q = the volume of metered water consumption (kl)

d = the discharge factor (%)

B = average concentration of BODs

S = average concentration of suspended solids

rb = current BODs rate*

rs = current suspended solids rate*

* refer to Schedule of Fees and Charges

7.1.2 Additional Charges for Over Limit Discharge (Penalty Charge)

- This penalty charge applies:
  - Where an Approval Holder discharges to the sewerage infrastructure in excess of the limits defined in the Trade Waste Approval or the sewer admission limits without approval to exceed the limits.
- This penalty charge will apply to each non-complying parameter in addition to the general charges under s 7.1.1.
- The formula for calculation is:

  Penalty Charge = quality charge (C) x actual/approved $\times$ 1.0

  Where

  - approved means the sewer admission limit value or other value defined in the Trade Waste Approval.
  - actual means the actual sewer admission value based on sampling and testing.
  - the minimum ratio for actual/approved (as it refers to any volume or concentration) is 1.0; and
- The period of the charge will be the time period, based on the sampling frequency, between the identification of the exceedance and the next sample confirming rectification of that exceedance. The type and frequency of sampling will be specified in the Trade Waste Approval.

7.1.3 Meter Failure

- If the water meter fails, readings from the previous four billing periods will be averaged and used to calculate the sewerage charge. If the failure occurs before four billing periods have elapsed, available data will be used.
- If the trade waste sub-meter fails, the water meter and the trade waste sub-meter readings from the previous four billing periods will be used to estimate a discharge factor. This discharge factor will be used in conjunction with the meter readings from the current billing period to calculate the sewerage charge. If the failure occurs before four billing periods have elapsed, available data will be used.

7.2 Trade Waste Fees

7.2.1 Inspection and Analysis Fees

- Compliance with Trade Waste Approval
    - The annual fee in the Schedule of Fees and Charges for all categories covers ad hoc compliance inspections and auditing analyses conducted by Council.
- Non-Compliance with Trade Waste Approval
    - Where additional inspections and laboratory analyses are required because of non-compliance with Trade Waste Approval conditions, full costs will be recovered from the Approval Holder. The cost of inspection is listed in the Schedule of Fees and Charges.

7.2.2 Application Fees

- An Application for Trade Waste Approval must be accompanied by the prescribed application fee detailed in the Schedule of Fees and Charges. This charge covers administration plus the initial site inspection. Additional fees may be payable where return visits are required.

7.2.3 Septic Tank and Other Liquid Waste Fees

- Licensed waste transporters and other persons disposing of septic tank, portable toilet or other approved liquid waste to the sewage treatment plant under approved conditions will be charged on a calculated volume basis ($/kl) which takes account of both the volume and concentration of the waste.

8 Application Procedures

8.1 Application Procedure

Trade waste generators wishing to discharge trade waste to the sewerage infrastructure must submit a completed Application for a Trade Waste Approval.

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

- during the processing of a building application for new premises or extensions intended for industrial and/or commercial usage;
- change in tenancy of such premises;
- change of ownership of such premises;
- shop fit-outs of such premises;
- during the processing of an application to strata title such premises;

- existing premises where trade waste is generated and no Trade Waste Approval has been issued; or
- where a change in process technology occurs.

Liquid waste disposal contractors wishing to discharge septic tank, portable toilet waste or other approved holding tank or liquid waste to the sewage treatment plant must be licensed and hold a Trade Waste Approval.

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

Applications must include details of the proposed method of pre-treatment to be used to ensure discharge meets sewer admission limits (refer Appendix 1). A copy of the drainage plan including details of the pre-treatment device must be lodged with the application.

Plumbing and drainage work associated with installing any treatment process must be carried out by a licensed plumbing and drainage contractor and comply with the following:

- *Plumbing and Drainage Act 2002*;
- *Standard Plumbing and Drainage Regulation 2003*;
- National Construction Code (vol 3);
- Australian/New Zealand Standard Plumbing and Drainage Parts 1&2 (AS/NZS 3500.1 and 2); and
- Plumbing and Drainage permit and permit conditions.

Applicants are referred to the Minimum Pre-Treatment Requirements for Trade Waste Generating Processes (refer Appendix 2) for further guidance.

9 Refusal of an Application

Council may refuse to accept any trade waste to its sewerage infrastructure where a discharge is deemed to be unacceptable or that it poses too much risk and alternative arrangements for disposal will have to be made. 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 arrangements for trade waste disposal.

Where a trade waste generator is found to be discharging to Council's sewerage infrastructure without approval, Council will respond in accordance with relevant legislation.

10 Trade Waste Approvals

A trade waste generator producing waste assessed as suitable for sewer discharge may be issued with a written Trade Waste Approval.

The Trade Waste Approval states the terms and conditions which the Approval Holder must comply with. These may include, but are not limited to:

- the type and composition of trade waste that may be discharged;
- a statement that the quality of waste will comply with Council's sewer admission limits (refer Appendix 1) and details of any allowed variations;
- the quantity of trade waste that may be discharged;
- the rate of discharge, including maximum rate of discharge;
- the time when trade waste may be discharged;
- the period for which trade waste may be discharged;

- the method for estimating or measuring discharge volume;
- provisions for measuring and sampling discharge (including type and frequency of sampling) prior to entry to sewer;
- details of any pre-treatment required;
- conditions for maintenance of and removal of waste from pre-treatment equipment including the frequency of cleaning and nominated licensed waste transporter;
- records to be kept concerning the cleaning and maintenance of pre-treatment equipment; and
- reporting requirements related to the above.

A Trade Waste Approval is issued to the owner of a business and is transferable upon sale of that business. An existing Trade Waste Approval will be re-issued to a new business owner unless the new owner advises that:

- the trade waste activities have ceased (in which case the approval will be cancelled); or
- the trade waste activities are different from that specified in the existing approval (in which case the existing approval will be cancelled and a trade waste assessment will be undertaken on the new trade waste discharge activity).

11 Obligations

Both Council and the Approval Holder have obligations under the Trade Waste Approval. Key obligations are outlined below.

11.1 Trade Waste Generators

- The trade waste generator is responsible for requesting approval to discharge trade waste to the sewerage infrastructure.
- Once Council issues a Trade Waste Approval, the trade waste generator becomes an Approval Holder and is:
    - required to comply with relevant legislation, the Trade Waste Approval conditions and Council's Trade Waste Plan;
    - responsible for installing, operating and maintaining best practice pre-treatment devices and processes to reduce the volume and the contaminant load of wastes discharged to the sewerage infrastructure; and
    - required to maintain trade waste water meters in good working condition where applicable.
- The Approval Holder must advise Council of any change to the quality and/or quantity of trade waste generated.
- If requested by Council, the Approval Holder must supply the following documents:
    - Trade Waste Approval;
    - maintenance records;
    - disposal dockets;
    - Safety Data Sheets; and
    - any other relevant documents and notices.

11.2 Council

Where unauthorised discharge of trade waste to the sewerage infrastructure is detected, it is Council's responsibility to ensure that the unauthorised discharge is responded to in accordance with relevant legislation.

It is Council's responsibility to receive and process all Applications for a Trade Waste Approval and where appropriate, issue Trade Waste Approvals in accordance with s 180 of *the Act*.

It is Council's role to:

- Monitor trade waste generators;
- Monitor Approval Holders compliance with Trade Waste Approvals;
- Manage trade waste in accordance with this plan; and
- Respond to breaches of Trade Waste Approvals and *the Act*.

12 Inspection and Monitoring

It is the responsibility of the Approval Holder to ensure they comply with their Trade Waste Approval conditions. For the purpose of monitoring and auditing the conditions of a Trade Waste Approval, Council may routinely and randomly inspect all premises the subject of a Trade Waste Approval.

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

- Inspection of maintenance records;
- Inspection of sampling and discharge data records (if relevant);
- Check of all chemical storage areas to ensure that they are appropriately bunded;
- Check to ensure there are no stormwater connections to the trade waste system or sewerage infrastructure;
- Check to ensure there are no illegal trade waste connections to the stormwater or sewer and there is no potential for trade waste discharge to overflow improperly to sewer, stormwater or waterways;
- Check to ensure that pre-treatment facilities are regularly and properly serviced and standby equipment is available where necessary; and
- Assessment of work practices to ensure that they do not result in a breach of the Trade Waste Approval.

12.1 Inspection Chambers and/or Gauging Facility

Category 3 discharges will be permitted to enter Council's sewerage infrastructure through a suitable inspection chamber and/or gauging facility. The inspection chamber and/or gauging facility will be located on the trade waste discharge line in an area accessible at all times to Council, allowing for sampling and/or monitoring equipment to be installed and operated.

A suitable 240 volt power outlet and a standard water supply outlet with a back-flow prevention device, installed in accordance with relevant Australian Standards and legislation, is required at all gauging facility sites.

For new Category 2 and 3 discharges the trade waste discharge line must be separate from the domestic waste discharge line.

For existing approved facilities retrofitting is not required except where it may be done during any proposed upgrading or alterations.

If commercial or industrial premises generate trade waste but do not discharge it to Council's sewerage infrastructure, a suitable inspection point must be installed on the sanitary drain. The inspection point must be in an accessible location within the property boundary upstream of Council's sewerage infrastructure connection point. This enables checks to be made to ensure that trade waste is not being discharged to sewer.

Arrestor trap installations and other pre-treatment devices on premises discharging Category 1 and 2 discharge must have an inspection opening provided externally to the building, within the premises, at finished ground level.

13 Determination of Discharge Quantity

13.1 Category 1 and 2

The discharge quantity will be calculated by applying the industry discharge factors (refer Appendix 3) to the metered water consumption.

When a Trade Waste Generator shares a water meter with at least one other business and has the potential to generate a Category 2 discharge, the installation of a trade waste water meter may be required as a condition of Approval (refer Appendix 4).

13.2 Category 3

The volume of trade waste discharged to the sewerage infrastructure must be measured by an approved flow measurement device. This should be located on the trade waste discharge stream, which should be separate from the domestic waste discharge stream.

14 Determination of Discharge Quality

14.1 Category 1 and 2

Measurements relating to discharge quality for Category 1 and 2 discharges are required for compliance checks only and are in accordance with the Trade Waste Approval. It is the responsibility of the Approval Holder to undertake measurements and analysis and provide the results as detailed in the Trade Waste Approval or upon request.

Where additional inspection and testing is required because of a suspected non-compliance that is later substantiated, the additional costs incurred shall be met by the Approval Holder.

14.2 Category 3

Measurements relating to discharge quality for Category 3 discharges are required for compliance checks and charging in accordance with the Trade Waste Approval.

Council will inspect the premises and collect and analyse samples for overall assessment of compliance with sewer admission limits (refer Appendix 1) and Trade Waste Approval conditions as part of its inspection and monitoring program.

Where additional inspection and testing is required because of a suspected non-compliance that is later substantiated, the additional costs incurred must be met by the Approval Holder. Council will provide indicative cost estimates to the Approval Holder prior to completion of the testing.

15 Specific Requirements for Commercial and Industrial Wastes

15.1 Discharge from Licensed Waste Transporters

Council will only accept trade waste from a licensed waste transporter who holds a Trade Waste Approval.

Waste from grease and oil arrestors, other than treated effluent from approved installations (refer s 14.2), must not be disposed of to the sewerage infrastructure. Such wastes must be disposed of in a manner and/or at a site approved in accordance with the requirements of the *Environmental Protection Act 1994* and the *Environmental Protection Regulation 2008*.

15.2 Arrestor Installations

Where arrestor installations are required to pre-treat waste before discharge to sewer they must be of a design and capacity approved by Council.

15.2.1 Grease Arrestors for Food Premises

- For new or replacement basic pre-treatment devices the minimum size is 1000 litres.
- Where constraints exist, Council may, at its sole discretion, provide written consent to non-standard arrestor sizing if a request and justification is made in writing by a qualified hydraulic consultant or other suitably qualified person representing the applicant.
- Grease traps must be sized to provide a minimum of one hour retention at peak hourly trade waste flow.
- The peak hourly trade waste flow should be calculated using the total of the guideline flows attributable to each trade waste generating fixture (see Appendix 5).
- Alternative peak hourly flow estimates may be accepted where a hydraulic engineer or other suitably qualified person attests to the peak flow and design within a Trade Waste Approval (thereby providing a performance guarantee for the system design and taking responsibility for any failure to meet sewer acceptance criteria).
- The maximum capacity of an individual grease arrestor will be 5000 litres subject to Council approval. Where the capacity requirement for premises is greater than 5000 litres, additional arrestors will be used, with each arrestor to be a discrete installation separately treating a defined waste stream.
- Where possible, multiples of smaller sized grease arrestors are recommended.
- Where it is intended that several trade waste generators share the use of a grease arrestor, the following information must be clearly labelled on the plan submitted with the application for approval:
    - the size of the arrestor;
    - details of the average and peak loading to be discharged by each trade waste generator; and
    - the names of the businesses and shop numbers sharing the arrestor.
- Grease arrestors must be located to allow appropriate access for inspection, pump out and cleaning. A hose cock with suitable backflow prevention is to be provided for cleaning. The location must be approved by Council prior to installation.
- All grease arrestors will be fitted with full length and width opening, gas tight covers and frames.
- The use of solvents, enzymes, mutant or natural bacterial cultures, odour control agents or pesticides in grease arrestors is prohibited unless specifically approved by Council. Conditional

approval may be given to allow the trade waste generator to demonstrate to Council that the product to be used does not adversely impact on the sewerage infrastructure or the environment.

- Maintenance and cleaning of grease arrestors must be carried out on a regular basis (minimum quarterly) in accordance with conditions of the Trade Waste Approval by a licensed waste transporter.

15.2.2 On-site Waste Management Practices

- The following on-site waste management practices should be implemented by the business owner to reduce site costs and impact of trade waste on pre-treatment infrastructure:
    - maintain trade waste pre-treatment equipment;
    - ensure gross solids are not discharged to any drain or sewer;
    - solid food scraps and residues from plates and kitchen equipment should be scraped into solid waste bins;
    - dry basket arrestors (strainers) with a fixed screen or an automatic closing mechanism that prevents discharge to sewer when the basket/strainer is removed should be installed in sink and floor drains;
    - educate occupiers and staff not to leave taps running;
    - install flow restriction devices where possible;
    - remove in-sink food waste disposal units;
    - initiate recycling of waste cooking oil, paper, cardboard and glass; and
    - allocate waste management responsibilities to employees.

15.2.3 Mineral Oil Arrestors

- For new or replacement basic pre-treatment devices the minimum size is 1000 litres
- Appropriately sized mineral (petroleum) oil arrestors for the treatment of oily discharge will be approved in most circumstances. Acceptable methods include:
    - coalescing plate separators;
    - membrane technology;
    - dissolved air flotation (DAF);
    - chemical precipitation;
    - hydrocyclones;
    - triple stage interceptors; and
    - other apparatus/methods.
- Each application will be assessed on the nature of the oily discharge to be treated, the proposed treatment method and site location.
- Subject to recommendations by the manufacturers of plate separators, “Quick Break Detergents” may be used with plate separation units.
- Maintenance and cleaning of mineral oil arrestors must be carried out on a regular basis in accordance with conditions of the Trade Waste Approval. Removal of oily discharge must be carried out by a licensed waste transporter.

15.2.4 Other Arrestor Applications

- Arrestor installations may be used for other trade waste treatment applications such as:
    - silt separation;
    - oil and grease (non petroleum);
    - cooling;
    - neutralisation; and
    - other specific applications approved by Council.
- Each application will be assessed on the nature of the discharge to be treated, the proposed treatment method and site location.
- Maintenance and cleaning of arrestors must be carried out on a regular basis in accordance with conditions of the Trade Waste Approval by a licensed waste transporter.

15.3 Enzymes/Biological Additives

15.3.1 Enzyme and Bacterial Cultures

- Enzyme and mutant or natural bacterial cultures may be permitted for use in certain biological pre-treatment systems only after Council approval.
- Applicants will need to demonstrate to Council that the product to be used does not adversely impact on the sewerage infrastructure or the environment.

15.3.2 Genetically Modified Organisms (GMOs)

- Any person wishing to discharge commercial products containing genetically modified organisms to the sewerage infrastructure must ensure they comply with the transport, storage and disposal guidelines of the Australian Government's 'The Office of the Gene Technology Regulator'. Laboratories and other facilities which culture, package or transport GMOs are to comply with the transport, storage and disposal guidelines of the Australian Government's 'The Office of the Gene Technology Regulator' and must have in place sufficient procedures and pre-treatment equipment to ensure that no live GMOs are discharged to the sewerage infrastructure.

15.4 Commercial Swimming Pools/Ornamental Ponds

Filter backwash water and water from commercial and public swimming pools and ornamental ponds may not be discharged to sewer without a Trade Waste Approval.

15.5 Medical, Clinical, Veterinary and Infectious Wastes

Clinical and related waste should be managed in accordance with the requirements of pt 5B of the *Waste Reduction and Recycling Regulation 2011*.

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

Infectious or hazardous liquid wastes deemed to pose a threat to public health and safety must not be discharged to the sewer without a Trade Waste Approval. Such wastes will require treatment to render them non-infectious or non-hazardous prior to discharge.

15.6 Containment of Toxic/Hazardous Substances

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

Bunding of toxic or hazardous substances must meet recommendations of applicable best practice guidelines, standards or codes of practice.

15.7 Discharge of Liquid Wastes from Vessels, Vehicles and Aircraft

15.7.1 Vessels

- Depending on the quality, the discharge of certain galley and toilet wastes from vessels may be permitted via approved "pump out" facilities at ports and marinas. The operator of such facilities must hold a Trade Waste Approval.
- The discharge of untreated bilge water to the sewer is prohibited.

15.7.2 Buses, Aircraft, Recreational Vehicles

- The discharge of toilet waste from buses, aircraft or recreational vehicles may be permitted at approved discharge locations. The owner of the approved discharge locations where such facilities are located must hold a Trade Waste Approval.

16 Discretionary Power

Notwithstanding the provisions of this plan, due to the complexity of many industrial wastes and the need to protect Council's sewerage infrastructure, employees, and the environment, acceptance of any given trade waste to sewer will always be at the discretion of Council.

17 Implementation

This plan will become effective from the date adopted by Council. Businesses commencing after the plan is adopted will be required to fully comply with the plan from their date of commencement.

18 Records and Reports

Council may capture and record details of the quality and quantity of trade waste discharge from each Approval Holder.

Appendix 1

Sewer Admission Limits

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

Schedule i General Limits

Parameter	Concentration - mg/L
Temperature	45°C
pH	6-10
Biochemical Oxygen Demand (BOD5)	600 mg/l
Chemical Oxygen Demand (COD)	1500 mg/l
Total Organic Carbon (TOC)	1200 mg/l
Total Suspended Solids (TSS) #	600 mg/l
Total dissolved solids (TDS) #	10000 mg/l
Total oil/grease	200 mg/l
Gross solids	non faecal gross solids shall have a maximum linear dimension of less than 20 mm and a quiescent settling rate of less than 3 m/hr
Colour	limited such as not to give any discernible colour in treatment works discharge
Odour	not detectable in 1% dilution or causing an odour problem in Council's sewerage infrastructure
Chlorine (as Cl2)	10 mg/l
Sulphate (as SO-)#	1500 mg/l
Sulphite (as SO3)	15 mg/l
Surfactants - Anionic (MBAS)	500 mg/l
Aluminium (as Al)	100 mg/l
Iron (as total Fe) #	100 mg/l
Ammonia plus ammonium ion (as NH3)	100 mg/l
Total Kjeldahl Nitrogen (as N)	150 mg/l
Phosphorus (total P) #	50 mg/l

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

Schedule ii Specific Limits – Inorganic

Parameter	Concentration
Boron (B)	100 mg/l
Bromine (Br2)	10 mg/l
Fluoride (F)	30 mg/l
Cyanide (CN-)	5 mg/l
Sulphide (S--)	5 mg/l

Schedule iii Specific Limits – Metals

Parameter	Maximum Concentration mg/l	Maximum Mass Load g/day++
Arsenic (As)	5	15
Cadmium (Cd)	2	6
Chromium (Total Cr)	10	30
Cobalt (Co)	10	30
Copper (Cu)	10	30
Lead (Pb)	10	30
Manganese (Mn)	100	30
Mercury (Hg)	0.05	0.15
Nickel (Ni)	10	30
Selenium (Se)	5	15
Silver (Ag)	5	15
Tin (Sn)	10	30
Zinc (Zn)	10	30

++ Either the concentration or mass load method may be utilised, however once the mass load is exceeded only the concentration is to be used.

Schedule iv Specific Limits – Organic

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

Parameter	Concentration mg/l
Formaldehyde (HCHO)	50
Phenolic Compounds (as Phenol)	100
Pentachlorophenol	5
Petroleum Hydrocarbons	30
Halogenated Aliphatic Hydrocarbons	5
Halogenated Aromatic Hydrocarbons (HAH)	0.002
- Polychlorinated Biphenyls (PCB)	0.002
- Polybrominated Biphenyls (PBB)	0.002
Polynuclear Aromatic Hydrocarbons (PAH)	5
Pesticides	
- General (insecticides/herbicides/fungicides)	1
- Organophosphates	0.1
- Organochlorines	
Aldrin	0.001
Chlordane	0.006
DDT	0.003
Dieldrin	0.001
Heptachlor	0.003
Lindane	0.1

Appendix 2

Minimum Pre-Treatment Requirements for Trade Waste Generating Processes

This information has been provided as an indication of minimum pre-treatment requirements that may be required, however you are strongly advised to seek advice from a consulting engineer or ensure strict compliance with guidelines provided by the manufacturer of the arresting device or similar installation.

Processes are listed in the following Categories -

Arts, Crafts and Printing	Automotive	Day Care Centres
Food Services	Manufacturing	Medical, Optical and Veterinary
Pools	Professional Services	Shopping Centres

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
ARTS, CRAFTS AND PRINTING		
Crafts/Hobbies Less than 200l per day	Suspended Solids	No pre-treatment
Crafts (eg clubs, clay, pottery, gem stones, jewellery) 200l to 1000l/day	Suspended Solids	Plaster Arrestor
Crafts (secondary schools, cottage industries, clay pottery, gem stones, jewellery) in excess of 1000l/day	Suspended Solids	1000l General Purpose Pit
Fast Photo Processing (mini lab with wash water for film and paper processors)		See Photographic processing & developing
Fast Photo Processing (mini lab, **waterless** film and paper processors)		See Photographic processing & developing
Graphic Arts		See Photographic processing & developing
Photographic processing & developing	Silver, Ammonia, Thiosulphate, Sulphite	Silver rich solutions must either be secured for off-site disposal or pass through a silver recovery unit prior to discharge to sewer.
Screen Printing Photographic Stencil Development Stencil Cleaning Stencil Stripping	 Silver, Ammonia, Thiosulphate, Sulphite Suspended Solids Suspended Solids, Flammable, Solvents, Chlorinated Solvents Suspended Solids	 See Photographic processing & developing Settling tank/pit No discharge to sewer, surplus ink scraped off for re-use, solvent is filtered and re-used. Settling tank/pit. Minimum size to equal the actual volume from 1 hour of washing. Cleaning schedule required.

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
AUTOMOTIVE		
Auto Dismantling	Oil, Petroleum, Hydrocarbons, Metals, Suspended Solids, Grease	Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/equipment suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Car Body Repairs		See Panel Beating
Car Detailing	Oil, Grease, Suspended Solids	Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum size 1kl/hour. Consultants/equipment suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Engine/Gearbox Reconditioning, Parts Washing	Lead, Kerosene, Oil, Grease, Suspended Solids	Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/equipment suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council. Acid cracking, dissolved air flotation, pH correction, pH monitoring, flow measurement, trade waste sampling facility may be required. Trade Waste Consultant Recommended
Lawn Mower Repairs	Oil, Grease, Grass Solids	Gross solids removal plus hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/Equipment Suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Mechanical Workshop	Oil, Grease, Kerosene, Solids, Petroleum, Hydrocarbons	Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/Equipment Suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Panel Beating Spray Painting	Suspended Solids, Grease, Oil	Established premises may use an existing 1000l general purpose pit, providing it is in a satisfactory condition. For a new operation on the site, a hydrocyclone or a triple interceptor (TI) 1kl/hour minimum.
Radiator Repair	Suspended Solids pH Toxic Metals	pH adjustment to 9-10 prior to solids removal (settlement and filtration) and pH adjustment to 7-10 before discharge to sewer. Floor must be bunded to prevent spillage draining to sewer.

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Service Station (with mechanical workshop)	Oil, Grease, Petroluem, Hydrocarbons	Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/Equipment Suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Service Station covered forecourt only (no mechanical workshop)	Oil, Grease, Flammables	Covered forecourt discharge/run off is generally permitted – liaise with Council. Dry sweeping to be adopted.
Vehicle Washing (Roofed) Including machinery part, etc.	Suspended Solids Oil Grease	Wash area roofed and bunded to exclude rainwater, but include washwater. Basket/bucket trap/arrestor to screen out gross solids. Minimum size 1000l general purpose pit/tank (solids settlement pit/tank) or hydrocyclone or triple interceptor (TI) sized according to the influent flow rate, with an oil collection container and sludge withdrawal system, all within a roofed and bunded area. TI minimum size 1kl/hour. Overflow to sewer only from final compartment of pit/tank.
Vehicle Washing (open areas, un-roofed) Including machinery part, etc. **NB: open areas are not considered as an alternative to roofing**	Suspended Solids, Oil, Grease, Rainwater	Basket/bucket trap/arrestor to screen out gross solids. Minimum size 1000l general purpose pit/tank (solids settlement pit/tank) or Hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/Equipment Suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council. Area must be roofed if likely to be used during wet weather.
DAY CARE CENTRES		
Day Care Centre With food cooked and served on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Day Care Centre No hot food prepared or served		Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas.
FOOD SERVICES		
Abattoir		Trade Waste Consultant Recommended
Bakery (Retail) – Hot Bread, Cakes. (no pies or sausage rolls cooked on site)	BOD, Suspended Solids, Grease	Dry floor sweeping before washing, basket/bucket trap/arrestor if floor wastes in food preparation area. Written declaration required that no meat products are/will be made.

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Bakery (Retail) – Pies, Sausage Rolls (cooked on site)	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Boarding House/Hostel Kitchen	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Butcher – Retail	BOD, Suspended Solids, Grease	All drainage from sinks and floor wastes to pass through a basket/bucket trap/arrestor. Grease trap 1000l minimum capacity. **Grease trap size will be related to size of operation.**[1]
Butcher – Wholesale (cutting and dismantling pork and poultry)	BOD, Suspended Solids, Grease	Sweep up solids prior to wet cleaning. 3000l grease trap. Basket/bucket trap/arrestor if floor wastes in meat cutting and storage areas.
Butcher – Wholesale (cutting and dismantling not pork or poultry)	BOD, Suspended Solids, Grease	Sweep up solids prior to wet cleaning. 2000l grease trap. Basket/bucket trap/arrestor if floor wastes in meat cutting and storage areas.
Café/Canteen/Cafeteria Hot food cooked and served	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Chicken (BBQ/Charcoal) Cooking on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Chicken (fresh) retail only, with cutting and preparation of fresh meat	BOD, Suspended Solids, Grease	All drainage from sinks and floor wastes to pass through a basket/bucket trap/arrestor. Grease trap 1000l minimum capacity. **Grease trap size will be related to size of operation.**[1]
Coffee Shop/Sandwich Shop No cooking on site	Suspended Solids	Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. Written declaration that no hot food is/will be prepared or served.
Coffee Shop Food cooked on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Commercial Kitchen/Caterer	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1] If volume of wastewater exceeds 16kl/day a consultant is recommended.
Community Hall Kitchens Food cooked on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Confectionery		Trade Waste Consultant Recommended
Dairy Products including milk, butter, cheese, yoghurt, ice-cream		Trade Waste Consultant Recommended
Delicatessen Food cooked on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Delicatessen – no meat cooked on site. No hot food prepared or served		Written declaration that no food is/will be prepared or served. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas.
Dessert Restaurants		See Restaurants
Doughnuts – cooking	Grease	Grease trap 1000l minimum capacity. All floor wastes to drain through the grease trap. **Grease trap size will be related to size of operation.**[1]
Fast Food Outlets (McDonalds/KFC/Pizza Hut/Dominos/Hungry Jacks)	BOD, Suspended Solids, Grease	Grease trap minimum size 1500l. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Fish – fresh (retail) No cooking on site	Suspended Solids (eg scales and fish gut)	All drainage from sinks and floor wastes to pass through a basket/bucket trap/arrestor.
Fish Shop Cooking on site	Suspended Solids (eg scales)	All drainage from sinks and floor wastes to pass through a basket/bucket trap/arrestor. Grease trap 1000l minimum capacity. **Grease trap size will be related to size of operation.**[1]
Fruit and Vegetable market (retail)	Suspended Solids	Basket/bucket trap/arrestor if floor wastes in food preparation area.
Function Centre	BOD, Suspended Solids, Grease	See Restaurants
Ice Cream Parlour (no other food preparation)	Grease	No pre-treatment
Hotel (with counter lunches or restaurant)	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Ice Cream Parlour (with hot food take away)	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Motel Kitchen/Restaurant	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Nursing Home Kitchen	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Pizza Cooking Takeaway/Home Delivery No seats – (bakehouse)	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Potato Peeling (within commercial food preparation area)	BOD, Suspended Solids	Peeling machine to have built in screen in place. Wastewater to pass through a basket/bucket trap/arrestor and the grease trap servicing the kitchen area.
Poultry Abattoir		Trade Waste Consultant Recommended
Restaurants	BOD Suspended Solids Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Sandwich Bar/Salad Bar/Coffee Lounge No cooking		See Coffee Shop
Sandwich Bar/Salad Bar/Coffee Lounge with hot food cooking/eat in or take-away		See Coffee Shop (hot food cooked and served)
Sea Foods (wholesale) (no hot food cooking)	Suspended Solids	Oyster shucking – general purpose pit, 1000l minimum capacity. Basket/bucket trap/arrestor for fish filleting.
School Home Science Laboratory	 BOD Suspended Solids Grease Chemicals	 Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1] See Laboratory (School)
School Canteen No Cooking		Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas.
School Canteen Cooking	BOD Suspended Solids Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Takeaway Food Outlets (Fish & Chips, Hot Chicken)	BOD Suspended Solids Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Takeaway Food No hot food	BOD Suspended Solids Grease	Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. Written declaration required that no hot food is/will be prepared at the premises.
Vegetable Cleaning Vegetable Peeling	BOD Suspended Solids	Basket/bucket trap/arrestor, solids settlement pit (wholesale premises), curved screen, proprietary settler, pH adjustment, flow measurement, wastewater sampling facility. Trade Waste Consultant Recommended
MANUFACTURING		
Adhesives/Latex Manufacture		Trade Waste Consultant Recommended
Boiler Blowdown	Total Dissolved Solids, Metals, High Temperature	Cooling pit/tank to reduce wastewater temperature to less than 38°C. If volume of the cooling pit/tank is less than three times the maximum blowdown volume, cooling calculations are to be provided by the applicant/consultant.
Chemical Factory		Trade Waste Consultant Recommended
Cooling Tower Bleed Off No treatment chemicals containing chromium to be used		Beneficial re-use should be considered. No pre-treatment. Discharge rate to be limited to suit sewer capacity.
Oil Refinery		Trade Waste Consultant Recommended
Open Areas Contaminated Area		Trade Waste Consultant Recommended
Smallgoods Manufacture		Trade Waste Consultant Recommended
Stone Working	Fine Solids	Solids settlement pit/tank.
MEDICAL, OPTICAL AND VETERINARY		
Dental Surgery dental chairs, Plaster casts X-rays	Suspended Solids, Amalgam	Amalgam separator built into cuspidor by manufacturer. Plaster Arrestor See Photographic processing & developing

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Dental Technician Plaster casts X-rays	Suspended Solids	 Plaster Arrestor See Photographic processing & developing
Doctor's Surgery Plaster casts X-rays		 Plaster Arrestor See Photographic processing & developing
Medical Centre Plaster cast area Dental work X-ray	Suspended Solids	 Plaster Arrestor See Dental Surgery See Photographic processing & developing
Optical Factory (grinding of glass and plastic)	Suspended Solids	Minimum size 1000l general purpose pit/tank (solids settlement pit/tank). Cleaning frequency to be determined to ensure that sludge does not occupy more than a third of pit depth or that thickness of scum does not exceed 80mm.
Optical Services (Retail)	Suspended Solids	No pre-treatment
Kennels	Suspended Solids	Screens installed at open drains for gross solids removal. Minimum size 1000l general purpose pit/tank (solids settlement pit/tank).
Veterinary Clinics Veterinary X-ray	Suspended Solids	Basket/bucket trap/arrestor. See Photographic processing & developing
POOLS		
Municipal Pool	Suspended Solids, Chlorine	No pre-treatment If a kiosk is on the site, see Take Away Food.
Swimming Pool		See Municipal Pool
PROFESSIONAL SERVICES		
Carpet Cleaning – Industrial		Trade Waste Consultant Recommended
Dry Cleaning		No application required unless boiler blowdown and/or washing machines on site. Any floor drain must be protected by bunding to prevent any dry cleaning fluid entering the sewer.

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
Equipment Hire Company	Kerosene, Suspended Solids, Oil, Grease	Gross solids settlement, hydrocyclone or triple interceptor (TI) sized according to the influent flow rate. TI minimum 1kl/hour. Consultants/Equipment Suppliers must provide their sizing calculations and a recommended maintenance schedule for the customer to present to Council.
Funeral Parlour with food cooked and served on site	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Funeral Parlour No hot food prepared or served		No pre-treatment. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas.
Garbage Can Cleaning Hotels/restaurants/units	BOD, Suspended Solids, Grease	Fixed screen over floor waste. Wastewater to pass via grease trap (if installed)
Glass Cutting and Grinding (Including windscreens)	Suspended Solids	Re-use of wastewater should be considered. A solid settlement pit/tank, maximum of 2 hours retention at maximum flow rate. Cleaning of pit/tank to be carried out before thickness of settled material exceeds 200mm.
Hairdressing Salon	Minor	No pre-treatment. Avoid discharge though grease trap.
Laboratory (School)	Chemicals	1000l balancing tank/pit.
Laboratory (other) (including Hospital, University)	Chemicals	To be assessed, after details of operation (including reagents used) are supplied.
Laundry (coin operated) (eg Laundrette, Laundromat)	Suspended Solids (lint), High temperature	Lint screens 1mm mesh (washing machine internal screens acceptable). Cooling pit if temperature exceeds 38°C.
Laundry (Commercial/Industrial)		Trade Waste Consultant Recommended
Laundry (Self-contained) (Boarding House/Hostel/Motel/Hotel)	Suspended Solids (lint), High temperature	Lint screens 1mm mesh (washing machine internal screens acceptable). Cooling pit if temperature exceeds 38°C.
Nightclub	BOD, Suspended Solids, Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]

Process	Threats to Sewerage Infrastructure	Minimum Pre-Treatment Requirements
SHOPPING CENTRES		
Shopping Centre (including food preparation)	BOD Suspended Solids Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]
Supermarket	BOD Suspended Solids Grease	Grease trap 1000l minimum capacity. Basket/bucket trap/arrestor if floor wastes in food preparation and handling areas. **Grease trap size will be related to size of operation.**[1]

[1]All non-residential premises engaged in the cooking and preparation of foodstuffs, are required to install and maintain an adequately sized grease trap. A minimum size of the greater of

- 1000L
- minimum 1 hour retention time at maximum flow.

Where possible it would be preferred for total grease trap capacity requirements to be met by at least two grease traps. A guide to the sizing of a grease trap follows:

Canteens, Cafeterias, Kitchens, Restaurants, etc	**Grease Trap Capacity**
Discharge up to 1,100 l/day, typically up to 69 seats	1000 Litres
Discharge up to 3,200 l/day, typically 70-199 seats	1500 Litres
Discharge up to 6,400 l/day, typically 200-399 seats	2000 Litres
Discharge up to 9,600 l/day, typically 400-599 seats	3000 Litres
Discharge up to 12,800 l/day, typically 600-799 seats	4000 Litres
Discharge up to 16,000 l/day, typically 800-1000 seats	5000 Litres

Appendix 3

Industry Discharge Factors

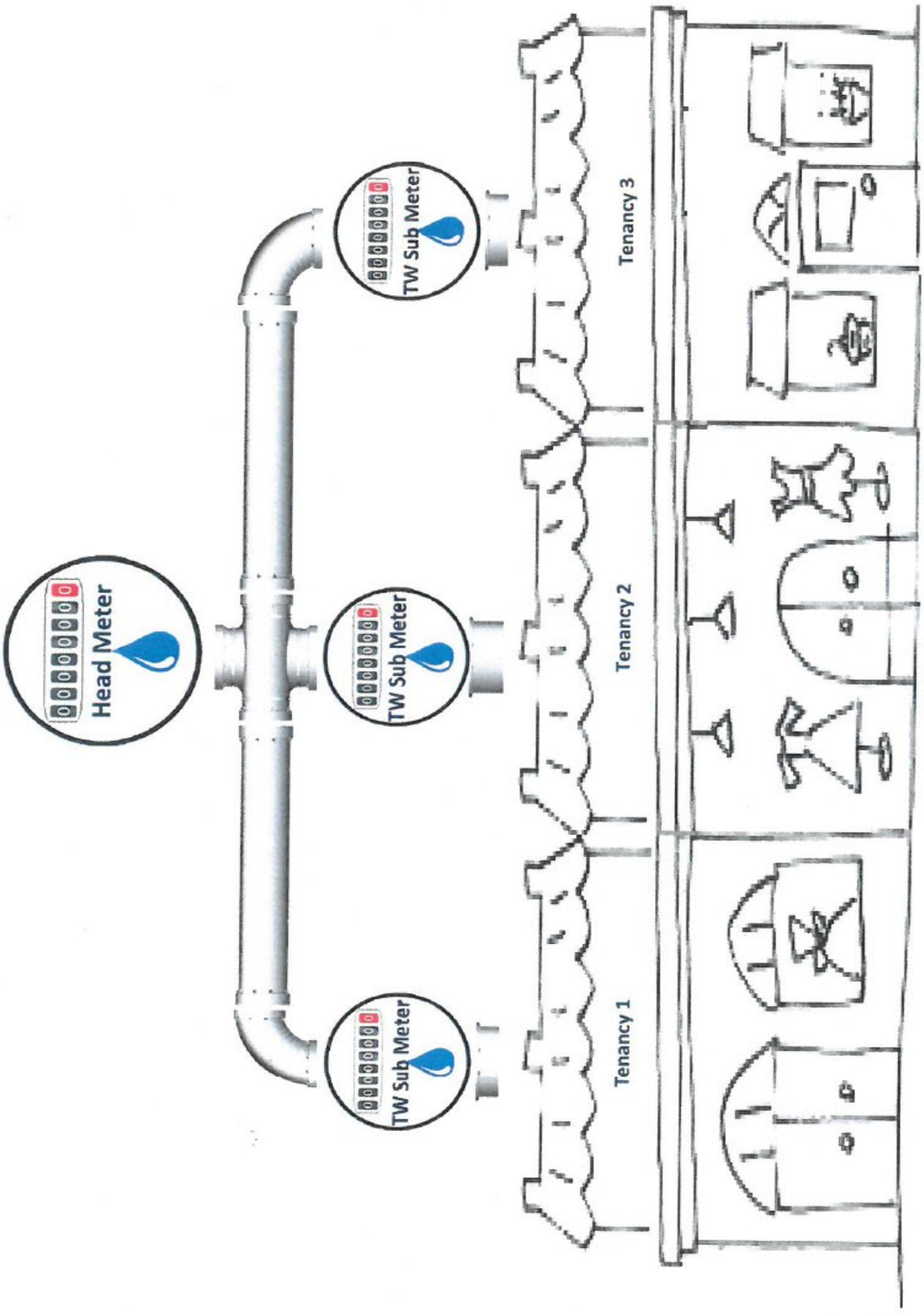
(sourced from Liquid Trade Waste Regulation Guidelines April 2009 NSW Government Department of Water & Energy)

Code	Description	Discharge Factor
	ACCOMODATION	
BB	Bed & Breakfast/Guesthouse (maximum 1 person)	0%
CP1	Caravan Park (with kitchen and/or laundry)	25%
CP2	Caravan Park (no kitchen and/or laundry)	0%
HOS	Hostel	20%
HOT	Hotel	25%
MOT1	Motel - with hot food	20%
MOT2	Motel - no hot food	0%
	ARTS, CRAFTS & PRINTING	
PHO	Photo-Processing	85%
PRI	Printer	85%
	AUTOMOTIVE	
CD	Car Detailing	90%
CW1	Car/Vehicle Wash – hand wash only	70%
CW2	Car/Vehicle Wash – Robo, Carlovers, Gerni type and auto etc	90%
MW	Mechanical Workshop	70%
PBSP	Panel Beater/Spray Painter	70%
RR	Radiator Repair	85%
SS1	Service Station – no car wash	70%
SS2	Service Station – with car wash	85%
WR	Wreckers	85%
	EDUCATION	
CHILD	Childcare Centre	0%
SCHB	School – Boarding House	20%
SCHP	School – Primary	10%
SCHS	School – Secondary/High	25%
UNI	Technical College or University	25%
	MANUFACTURING	
CFT	Craft/Stonemason	80%
CM	Coal Mine	25%
JCB	Joinery/Cabinet Making	10%
	SPORTING FACILITIES	
CLUB2	Club – Sports (bowling, racing, golf)	45%
OVAL	Sporting Ovals with Amenities Blocks	20%
SP	Swimming Pools – commercial	0%

Code	Description	Discharge Factor
	FOOD SERVICES	
BAKC	Bakery – commercial only	25%
BAKR	Bakery – residence only	18%
BUTC	Butcher – commercial only	90%
BUTR	Butcher – residence attached	65%
CAKE	Cakes/Patisserie/Hot Bread	50%
CLUB1	Club – Direct Service to the club (e.g. RSL)	30%
CS1	Chicken/Poultry Shop (retail fresh/no cooking)	90%
CS2	Chicken/ Poultry Shop – cooking	80%
DELI1	Delicatessen – with hot food	50%
DELI2	Delicatessen – no hot food	90%
FAST1	Fast Food Outlets (McDonalds, Burger King, Pizza Hut)	62%
FAST2	Fast Food Outlets (KFC, Red Rooster)	80%
HALL	Community Hall – minimal food only	0%
REST	Restaurant (Including café, canteen, bistro etc)	50%
SF	Seafood (co-ops & fresh fish outlets)	90%
SM	Supermarket	70%
TAF	Take Away Food	50%
	MEDICAL, OPTICAL & VETERINARY	
DENC	Dental Surgery – commercial only	80%
DENR	Dental Surgery – residence attached	60%
DR	Doctor Surgery/Medical Centre	25%
HOSP	Hospital	60%
NH	Nursing Home	50%
OPT	Optical Service	0%
VKA	Veterinary/Kennels/Animal Wash	0%
	OTHER PROFESSIONAL SERVICES	
CC	Correction Centre with Laundry	15%
GCN	Garden Centre/Nursery	5%
HAIR	Hairdresser/Salon	0%
LAU	Laundry	92%
MAR	Marina	70%
OFF	Office Building	0%
SS	Self-Storage	0%
WT	Waste Transporters	0%

Appendix 4

Trade Waste Sub-Meters



Appendix 5
Guideline for Estimating Peak Hourly Flow

Fixture/Fitting Type	Peak Hourly Flow Allowance (litres/hour)
Bain marie – water heated	Use maximum capacity of the apparatus x 3
Bin wash	Install in-floor self-closing dry bucket arrestor trap. Installation of a grease arrestor is not required.
Floor waste/bucket trap/grated strip drain	50l/hr for every 50m^2 of floor area, or part thereof. Add allowance for any listed connected apparatus.
Sealed floor waste gully	0l/hr Add allowance for any listed connected apparatus.
Cleaners sink	30l/hr
Dishwasher – tunnel feed*	Use manufacturer's peak flow rate per hour x 3
Dishwasher – large (>1 outlet)*	Use manufacturer's peak flow rate per hour x 3
Dishwasher – medium (upright)*	300l/hr
Dishwasher – small (under bench)*	150l/hr
Glass washer – tunnel feed	Use manufacturer's peak flow rate per hour x 3
Glass washing machine	150l/hr
Grease canopy (water cleaned)	50l/hr
Hand basin	30l/hr
Ice cream machine soft serve	60l/hr
Laboratory sink (commercial or research lab)	50l/hr
Laboratory sink (educational facility)	22l/hr
Noodle cooker	100l/hr
Potato peeler (large commercial application)	Use manufacturer's peak flow rate per hour x 3
Potato peeler (small kitchen application)	100l/hr
Rotisserie rack	100l/hr
Steamer roast oven/combi oven	1000l + 40l/hour, per rack. 3000l grease arrestor minimum size for high use combi ovens (i.e. supermarkets, fast food chains).
Electric or gas/steamer cooker/kettle	200l/hr
Sink – utility/pot per outlet connected seperately to drain (depth greater than 300mm)	300l/hr
Sink – single bowl (depth up to and including 300mm)	150l/hr

Sink – double bowl (depth up to and including 300mm fixture pair connection)	300l/hr
Trough up to 4 taps	40l/hr
Trough greater than 4 taps	Refer to Council's Trade Waste Officer for advice
Tundish – condensate (refrigerator/freezer condensate)	3l/hr
Tundish – other (except refrigerator condensate)	10l/hr Add allowance for any listed connected apparatus
Wok burner – dry	30l/hr per water arm
Wok burner – wet	Use manufacturer's peak flow rate per hour x 3

***Note: where practical, dishwashers should be plumbed around the grease arrestor.**