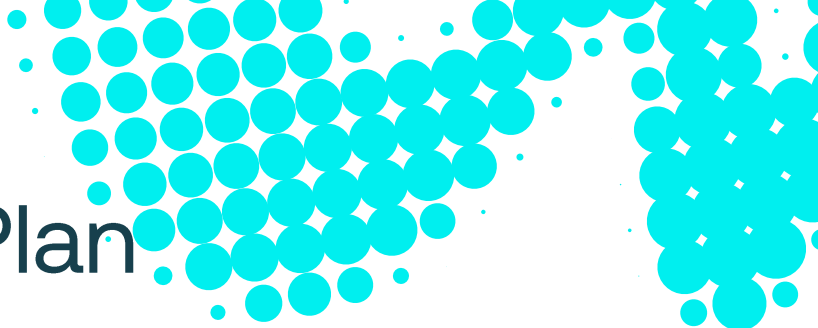


# Trade Waste Management Plan

Version 2.0

01/07/2025

# Trade Waste Management Plan



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## Scope

This Trade Waste Management Plan (**this Plan**) has been prepared to support the GMB Water Trade Waste Policy (**TWP**) and provide the necessary information to existing and future businesses on trade waste management, compliance requirements and fees and charges.

Please refer to GMB Water's TWP for additional information.

## Purpose

To ensure the safe, effective, and compliant management of trade waste discharged into GMB Waters wastewater infrastructure by:

- safeguarding public and employee safety,
- ensuring compliance with the principles of environmental sustainability, and
- ensuring compliance with GMB Water's legal obligations and responsibilities.

## Definitions

**Additional load** means a waste discharge that exceeds the Local Acceptance Criteria specified in the section 56 authorisation issued for particular premises.

**ANZECC** means the Australian and New Zealand Environmental and Conservation Council.

**Approval/Approved** means any written approval by GMB Water.

**Arrestor** means an apparatus or structure that is fitted to a trade waste receiving system to intercept sand, silt, grease, sludge, oil and other materials that might be present in trade waste.

**AS/NZS3500** means the Australia and New Zealand Standard – Plumbing and Drainage **BOD (biological oxygen demand)** means the measurement of dissolved oxygen used by microorganisms in the biochemical oxidation of organic matter over a five day period, as determined by a scientific test.

**COD (chemical oxygen demand)** means the amount of oxygen that is required to chemically oxidize the organic materials in wastewater, as determined by a scientific test.

**Domestic wastewater** means human faecal and urine wastes, liquid waste from sinks, basins, water closet, and baths and similar other fixtures found in residences, commercial buildings, industrial establishments, and institutions.

**Effluent** means the liquid discharged from a wastewater treatment system.

**GMB Water** means the GMB Water, the wholly owned subsidiary of the Mount Barker District Council, or any person authorised by GMB Water to act on behalf of GMB Water.

**Grease arrestor** means an apparatus or device that is used to intercept foods, fats, oil, grease, and food solids in wastewater before they enter the septic tank and/or wastewater infrastructure.

**Greywater** means the domestic wastewater from baths, showers, basins, laundries, and kitchen sinks/dishwashers specifically excluding water closet and urinal wastes.

**Inspection chamber** means a chamber or access in drainage systems that allows for the inspection, testing and clearance of obstructions in these drainage systems.

**Local acceptance criteria** means the set limits for acceptable physical and chemical characteristics of trade waste disposed into the wastewater infrastructure. These limits are based on criteria developed by SA Water, ANZECC and SA Health guidelines.

**NATA** means the National Association of Testing Authorities

**Premises** means any land from which trade waste is discharged into the wastewater infrastructure.

**Prohibited substances** means substances (such as fibrous material, large solid particles, materials likely to polymerise) that could block or otherwise be detrimental to the operation of the wastewater system and wastewater infrastructure, including

- Substances (such as volatile solvents) that could generate hazardous gases or vapours in the wastewater system/wastewater infrastructure
- Chlorinated hydrocarbons
- Discrete oil or other materials that are immiscible with water
- Any other substance or matter not permitted to be discharged to the wastewater system by the relevant authority and GMB Water

**Pre-treatment** means the removal of pollutants from wastewater so as to make it suitable for discharge to a wastewater system and/or the wastewater infrastructure.

**Recycled water** means water which has been derived from a wastewater treatment plant and treated to a standard that is suitable for its intended use.

**Section 56 authorisation** is an authorisation pursuant to section 56 of the *Water Industry Act 2012* issued by GMB Water in its capacity as a water industry entity under this Act, which authorises, on a conditional basis, the discharge of trade waste into the wastewater infrastructure.

**Stormwater drainage** means any pipe, drain, structure, outfall and chamber or any other structure that is used to receive, store, transport and treat stormwater.

**Sullage** means wastewater from sinks, showers, and baths, but not wastewater from toilets.

**Suspended solids** means small solid particles that are found in suspension in the liquid component of wastes.

**Trade waste** means any liquid or solid waste conveyed as wastewater into the wastewater infrastructure from any non-residential premises, other than domestic wastewater generated from relevant sanitary fixtures.

**Trade waste service agreement** means an agreement between a trade waste generator and GMB Water in relation to the conditions of authorisation for a business to discharge trade waste into the wastewater infrastructure. This agreement is issued in the form of a section 56 authorisation and sets out the trade waste generators responsibilities.

**Trade waste approval** means an approval issued by GMB Water in the form of a section 56 authorisation for a non-residential customer to discharge trade waste into the wastewater infrastructure.

**Trade waste discharge application procedure** means a procedure documented in this Plan by which a non-domestic wastewater customer can apply for a trade waste approval to discharge trade waste from its premises into GMB Water's wastewater infrastructure.

**Trade waste framework** means the policies, procedures and management plans that GMB Water implements for the safe and reliable management of trade waste discharge to its wastewater infrastructure as amended and updated from time to time.

**Trade waste generator** means any individual, owner, entity, body or company who is/are involved in any activity that generates or has the potential to generate trade waste.

**Wastewater** means materials that are transported through the wastewater infrastructure, including domestic wastewater, effluent and trade waste.

**Wastewater infrastructure** means any GMB Water infrastructure that is, or is to be, used for: the collection or storage of sewage and includes the connection point; or

- the conveyance or reticulation of sewage; or
- the treatment of sewage, including any outfall pipe or other work that stores or conveys water leaving infrastructure used for the treatment of sewage.

It includes components such as vents, pumps, sewers, access chambers, and outfalls. (Note that the collection network does not provide treatment of wastewater).

**Wastewater system** means an on-site wastewater system used on a premise for the on-site collection and management of wastewater generated at the premises and may or may not include a septic tank.

**Wastewater works** means – as defined by the South Australian Public Health (Wastewater) Regulations 2013.

## INTRODUCTION

### Trade waste policy and management plan

The GMB Water Trade Waste Management Plan (TWP) sets out our commitment to providing an effective trade waste service that supports our non-residential customers and communities and ensures we do not place unacceptable risks on people, assets and/or the environment.

This Plan details GMB Water's processes and procedures in relation to the acceptance of trade waste into its wastewater infrastructure. These include the trade waste discharge application procedures, local acceptance criteria (**LAC**), and requirements for the installation of pre-treatment equipment where appropriate, and recommendations on cleaner production processes.

Liquid wastes are produced by a variety of domestic and non-domestic (industrial/commercial) activities. The *Environmental Protection Act 1993* (**EP Act**) and Environment Protection (Water Quality) Policy 2015 provide a general prohibition against the pollution of the environment by the discharge of such wastes, except where the person or agency holds an authorisation that permits such discharges.

The *Water Industry Act 2012* (**WI Act**) and associated Water Industry Regulations 2012 prohibit the unauthorised discharge of wastes, other than domestic wastewater, into the wastewater infrastructure. In addition, where GMB Water grants a wastewater works approval under the South Australian Public Health (Wastewater) Regulations 2013 (**Wastewater Regulations**), GMB Water may do so subject to conditions within the scope of regulation 25 of these Regulations.

Pursuant to regulation 25 of the Wastewater Regulations, where GMB Water is the Relevant Authority, it can impose conditions on a wastewater works approval.

A wastewater works approval can include a condition that specified material (i.e. trade waste) must not be discharged into the wastewater infrastructure other than in accordance with an authorisation issued pursuant with section 56 of the WI Act.

Taking the above into account, the options for trade waste generators to lawfully dispose of trade waste are:

1. Collect and arrange for trade waste to be removed by a licensed liquid waste carting contractor and disposed of to an approved treatment facility,
2. Seek trade waste approval from GMB Water to discharge waste into the wastewater infrastructure; or
3. Treat the trade waste on-site before discharging the effluent into the environment. This may require the trade waste generator to obtain an authorisation/approval under the EP Act.

GMB Water provides and maintains wastewater infrastructure designed for the collection, treatment and disposal/reuse of domestic wastewater.

GMB Water generates income to recover the cost of providing its wastewater service through applying an annual wastewater service charge. This charge is applied pursuant to section 155 of the *Local Government Act 1999* (**LG Act**), and is applied to each property to which the wastewater service is provided or made available (whether or not it is used).

GMB Water's wastewater infrastructure, subject to approval from GMB Water, may also be used for the management of trade waste. As trade waste imposes an additional load and associated operational



requirements on the wastewater infrastructure, trade waste charges are payable pursuant to section 188(1)(b) of the LG Act. These trade waste charges are applied in addition to the annual wastewater service charge that might be applied to the premises.

### Domestic wastewater quality and reuse

Domestic wastewater consisting mostly of water and very low concentrations of dissolved and suspended organic and inorganic matter is treated to reduce the concentration of suspended solids and nutrients after which it can be disposed of in accordance with existing EPA license requirements.

The treated wastewater can be discharged into the environment or potentially used in GMB Water recycled water network.

GMB Water operates a recycled water network with the aim of achieving 100% re-use of treated wastewater and bio solids. As such, GMB Water needs to maintain acceptable treatment requirements to ensure that the desirable recycled water quality is achieved.

### Trade waste water quality and reuse

The acceptance of non-domestic wastewater such as trade waste can potentially disrupt the treatment processes associated with producing recycled water leading to increased operational costs and compromising the quality of the recycled water being produced.

Trade waste may contain substances in concentrations higher than those typically found in domestic wastewater and would be considered as a prohibited discharge, including:

- organic matter,
- foods, fats, oil and grease (**FFOG**),
- heavy metals,
- organic solvents, and
- chlorinated organic substance.

The wastewater treatment plants (including treatment lagoons) (**WWTPs**) associated with the GMB Water wastewater infrastructure are designed to treat typical domestic wastewater. These prohibited discharges may:

present serious risk to the health and safety of GMB Water workers,

- result in damage to the wastewater infrastructure,
- inhibit or reduce the efficiency of biological processes occurring at GMB Water WWTPs,
- accumulate in bio solids, making it unfit for reuse, and/or
- impact the quality of recycled water produced at GMB Water WWTPs, leading to:
  - reducing its suitability for beneficial reuse,
  - increase risk to the community, and
  - increase risk of harm to the receiving environment.

The discharge of wastewater into the wastewater infrastructure containing compounds listed as prohibited discharges in Appendix D is prohibited without lawful authorisation.

GMB Water may consider the acceptance of trade waste containing prohibited discharges into its wastewater infrastructure provided there is suitable on site pre-treatment that will result in a trade waste discharge that satisfies the LAC.

GMB Water may consider accepting substances that exceed the LAC based on the influent quality demands of the receiving WWTP. This will be determined on a case by case basis..

Where the LAC cannot practically be achieved then GMB Water may consider acceptance of this trade waste subject to specific conditions of authorisation and an appropriate cost recovery charge structure.

### Objectives

Through the implementation of this Plan, GMB Water aims to mitigate the risks associated with the collection, treatment and disposal/reuse of non-domestic wastewater discharges to its wastewater infrastructure.

The risks identified with the management of non-domestic wastewater are based on the high-level objectives provided in the Water Services Association of Australia (**WSAA**) and the Australian Sewerage Quality Management Guidelines 2012, including ensuring:

#### ***Safety of employees of GMB Water***

Personnel responsible for working on the wastewater infrastructure face many safety hazards such as those associated with the presence of highly volatile substances, which may be flammable or toxic.

#### ***Protection of assets (pipes, plants and equipment)***

The higher the strength of trade waste compared to domestic wastewater, the higher the likelihood of damage to the wastewater infrastructure.

High strength trade waste can have a corrosive effect on the wastewater infrastructure leading to the degradation of these critical assets.

FFOG and other solids can cause blockages in the wastewater infrastructure resulting in an increased risk to public health, the environment and GMB Water's operational expenses.

#### ***Protection of treatment processes***

GMB Water WWTPs are designed to treat wastewater of consistent quality and volume. Significant shock loads, such as those that they may arise from the unauthorised discharge of trade waste to the wastewater infrastructure, can have a significant impact on treatment performance.

Impacts to the biological treatment process, which is essential to the production of compliant treated wastewater, can take a significant period of time to recover leading to an increased risk of not achieving regulatory compliance and the efficient recycling of wastewater.

Recycled wastewater not meeting regulatory compliance may be unfit for its approved use and may require additional treatment and/or carting to an alternative WWTP. The financial cost associated with this additional treatment and/or carting may be recovered by the trade waste generator responsible for the unauthorised discharge,

#### ***Facilitation of regulatory and licence compliance***

GMB Water's regulatory approvals, license conditions and general environmental duty require that its WWTPs produce treated wastewater achieving strict water quality standards. As such, GMB Water is

required to take all reasonable and practicable measures to prevent the exceedance of these strict water quality targets.

Additionally, GMB Water has an obligation to ensure its WWTPs carry out additional treatment processes to remove/reduce harmful substances found in trade waste. These harmful substances are not typically removed by the standard treatment process and may be passed into the receiving aquatic environment.

It is critical that trade waste is treated at the source, to remove/reduce harmful substances to an acceptable level before they enter the wastewater infrastructure.

### ***Facilitation of recycling***

GMB Water's WWTPs treat wastewater to a quality that makes it suitable for reuse. The type of use of the treated wastewater (**recycled water**) is dependent on the final quality of the recycled water.

Recycled water is provided to various customers for various uses, including:

- Irrigation,
- Dust suppression,
- Toilet flushing, and
- Car washing.

The discharge of unauthorised trade waste to the wastewater infrastructure may impact GMB Water's ability to produce recycled water that is safe for its intended use leading to risks to the end-user or additional costs to GMB Water to pay for an alternative disposal path.

### ***The preservation of public health and the environment.***

By ensuring all of the above, GMB Water is able to ensure it is compliant with its public and environmental health protection obligations.

## Process

GMB Water aims to achieve the objectives outlined above through the administration of its TWP and this Plan which are transparent, equitable, accountable, of best practice, and responsive to the changing needs of the community.

## Policy Instruments

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

- LAC (setting up acceptable concentration limits for trade waste),
- Conditions applied to trade waste approvals,
- 'Full cost recovery' pricing, and
- Trade waste improvement programs (developed by the authorised trade waste generator)

## Responsibilities

The following table outlines the responsibilities of GMB Water and its staff to develop and implement the trade waste framework.

Table 1 – GMB Water staff responsibilities

<b>GMB Water</b>	Adopt a policy that clarifies the responsibilities of GMB Water and ensures an appropriate budget allocation is provided for the operation of the trade waste framework.
<b>Chief Executive Officer / Managing Director</b>	The owner of the policies and procedures in relation to trade waste
<b>Manager Operations</b>	Implement and monitor the policies and procedures in relation to trade waste
<b>Trade Waste Team</b>	<ul style="list-style-type: none"> <li>• Communicate the trade waste framework to stakeholders</li> <li>• Receive and assess applications and issue section 56 authorisations under and the WI Act</li> <li>• Maintaining an up-to-date register of trade waste customers</li> <li>• Identify new or existing non-residential customers that have the potential to generate trade waste as result of changes in their operational processes</li> <li>• Oversee trade waste discharges to the wastewater infrastructure and ensure compliance with the associated trade waste approval and this Plan</li> <li>• Carry out routine trade waste inspections/audits</li> <li>• Provide trade waste advice to customers and the community</li> <li>• Investigate and resolve complaints in relation to trade waste</li> <li>• Calculate trade waste charges and issue associated invoices as required</li> </ul>



## TRADE WASTE CONTROL AND APPLICATION PROCEDURE

Pursuant to section 56 of the WI Act, a person must not, without proper authority, discharge into any wastewater infrastructure any solid, liquid or gaseous material, or any other item or thing that is likely to damage the infrastructure.

It is an offence to discharge trade waste into GMB Water's wastewater infrastructure without formal approval in the form of a section 56 authorisation and, where appropriate (as determined by GMB Water, and in accordance with the principles of this Plan), supported by a Trade Waste Service Agreement.

Any trade waste generator that generates trade waste and discharges (or intends to discharge) this trade waste into GMB Water's wastewater infrastructure must apply for, and obtain, a trade waste approval. Trade waste can only be discharged into the wastewater infrastructure after GMB Water has granted the trade waste generator a trade waste approval to do this.

### Applicable regulatory instruments, guidelines and standards

- Water Industry Act 2012
- Water Industry Regulations 2012
- Environmental Protection Act 1993
- Local Government Act 1999
- South Australian Public Health Act 2011
- South Australian Public Health (Wastewater) Regulations 2013
- National Construction Code , Volume 3 (including AS/NZS 3500)
- On-site Wastewater Systems Code published by SA Health
- Australian Sewerage Quality Management Guidelines 2022 (WSA 300)
- National Guideline for Managing Food Fats, Oils and Grease (FFOG) from Food Premises (WSAA 2018)
- Australian Guidelines for Water Recycling: Managing Health and Environmental Risks 2006 (AGWR)

### Trade waste application procedure

Customers operating (or proposing to operate) a commercial activity (**the applicant**) on a premise that is connected to GMB Water's wastewater infrastructure must complete and lodge a trade waste application form, unless:

- the proposed commercial activity is exempt (see 'exempt customers' listed in Appendix E), or
- as otherwise notified by GMB Water.

An application for trade waste approval must include:

- A completed application form
- Supporting documentation as specified in the application form
- Payment of the relevant application fee

The application form can be found:

- GMB Water website - <https://www.mountbarker.sa.gov.au/infrastructure/water/tradewaste> , or,
- hard copy on request from the Trade Waste Team

A trade waste application must be lodged in respect of any premises where trade waste is generated or likely to be generated and discharged to the wastewater infrastructure.

The trade waste application form must be signed by the trade waste generator and the owner of the premises (if different to trade waste generator).

Where a premise is connected to (or intending to connect to) GMB Water wastewater infrastructure the following will require an application to discharge trade waste to be submitted to GMB Water:

- A development application for a new premises or extensions intended for industrial and/or commercial usage,
- Change in tenancy,
- Change of ownership,
- Shop fit-outs,
- An application to convert to strata title,
- Where trade waste is being generated and no trade waste approval has been issued,
- Where a change in process occurs, or
- As determined by GMB Water.

A trade waste approval is issued to the trade waste generator making the application – with a copy provided to the land owner (if different to business).

Trade waste approvals are site specific – businesses that operate at more than one location are required to apply for a separate trade waste approval for each site.

The trade waste approval will be issued to the trade waste generator associated with the individual tenancy.

Assessment of trade waste applications will be carried out in accordance with the process provided in figure 1.

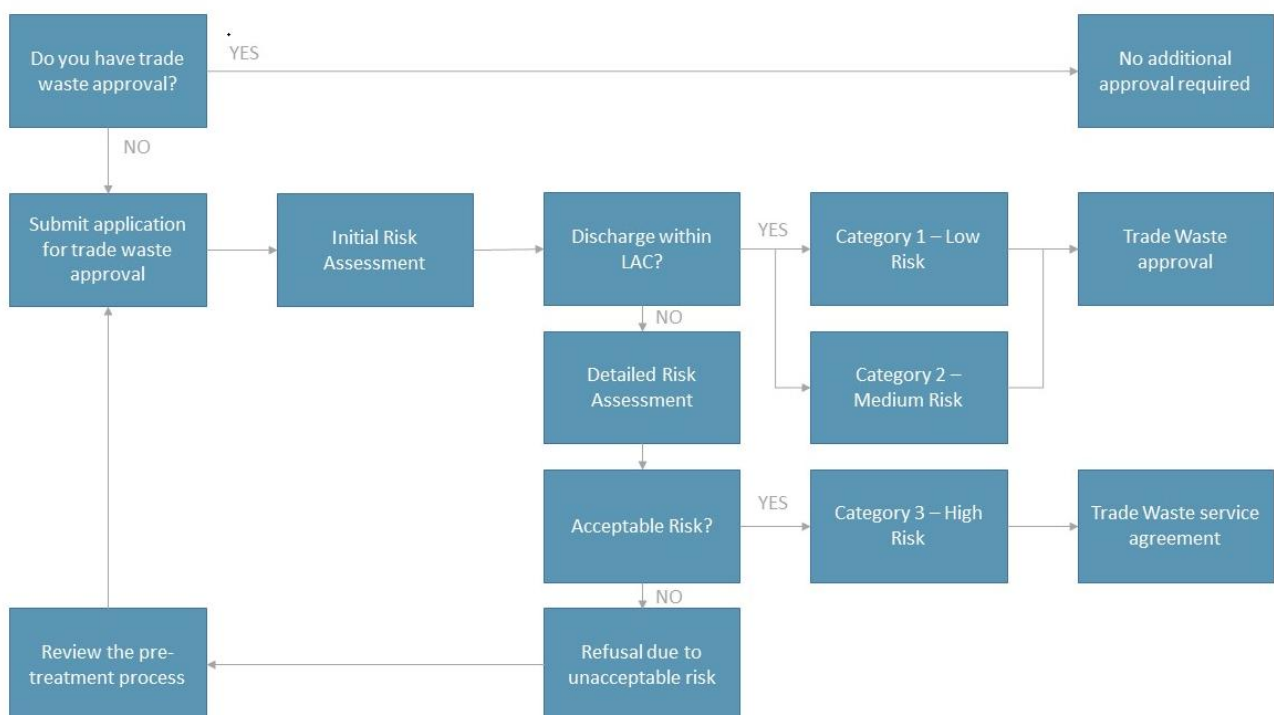


Figure 1 - Standard process flow chart for the trade waste approval process for existing and new trade waste customers

Prior to submitting an application, customers are encouraged to contact GMB Water's trade waste team to discuss the application process, information requirements, and for general assistance with completing the application form.

Further information on trade waste application procedures, application forms, and advice in relation to trade waste issues can be accessed by the following:

Website	<a href="https://www.mountbarker.sa.gov.au/water/trade-waste">https://www.mountbarker.sa.gov.au/water/trade-waste</a>
Email	<a href="mailto:customerservice@gmbwater.au">customerservice@gmbwater.au</a>
Phone	08 8188 9300
Write	PO Box 77, Mount Barker SA 5251

### ***Multiple tenant sites***

Sites with multiple sub-lease holders (i.e. large shopping centres) that discharge trade waste to the wastewater infrastructure are required to apply for a trade waste approval for each individual tenancy that generates trade waste.

It is the tenant or lease holder's responsibility to apply for a trade waste approval for their own trade waste generating activities.

The major lease holder/owner of the site will also be required to apply for a trade waste approval for the site and will be responsible for all trade waste activities on this site.

### **Response to the application**

GMB Water will endeavour to respond to all applications for a trade waste approval within 10 business days of receiving the application and payment of the relevant application fee.

In response to an application for trade waste approval GMB Water will provide:

- An outcome of the application (i.e authorised, authorised with amendments, or rejected); or
- Notification of the requirement for an extended assessment period; or
- A request for additional information to enable a full assessment.

Where GMB Water rejects an application detailed justification will be provided.

### **Evaluation of the application**

Once GMB Water has received the application form, it will consider the risks associated with accepting the type of trade waste discharge into the wastewater infrastructure being proposed.

This evaluation will consider:

The possible impact on the health and wellbeing of the workers in or around the wastewater infrastructure;

- The operational impact on the wastewater infrastructure;
- Any potential impact on the wastewater treatment plant process;
- Any possible detrimental environmental impacts;

- Any other risks relevant to the type of trade waste discharge, and
- Alignment with the TWP and this Management Plan

Trade waste may be accepted into the wastewater infrastructure if GMB Water is satisfied that the relevant risks are appropriately managed and it complies with the terms and conditions as specified in the trade waste approval.

An authorised officer will conduct a site visit prior to issuing trade waste approval.

GMB Water may provide general advice in relation to the management of trade waste that is not suitable for discharge to the wastewater infrastructure; however, advice should be sought from licensed liquid waste carting contactors and/or a duly qualified/experienced wastewater consultant.

### Risk assessment and classification

An initial risk assessment will be undertaken to determine the level of risk the trade waste poses to GMB Water's wastewater infrastructure and classify the trade waste accordingly.

A qualitative risk assessment and classification will be carried out by GMB Water with the consideration of the following aspects of your business and trade waste discharge:

- The location of the customer relative to the relevant WWTP
- The type of process used to produce the trade waste
- The quality of the trade waste stream, including concentrations of discharges and any variation of this concentration (e.g. seasonally, process changes, production cycles or disruption)
- The volume of the trade waste produced - including timing and frequency of discharge
- The level of pre-treatment provided
- The performance history of the customer (compliance)
- Any risk to the health and safety of GMB Water's personnel
- Any risk to GMB Water's wastewater infrastructure
- Any risk to recycled water or the quality of biosolids from the wastewater infrastructure
- Any risk to the environment and the community

The trade waste approval issued by GMB Water may include conditions requiring the trade waste customer with trade waste discharge exceeding the LAC to carry out the following:

- Conduct risk assessments to identify causes of the observed non-compliances of the trade waste discharges
- Inform and discuss the findings of the customer's risk assessment with GMB Water's trade waste team
- Identify, develop and implement further measures to mitigate the risk to the wastewater infrastructure from trade waste discharge.

All trade waste customers are assigned a risk classification based on the risk assessment carried out by GMB Water's trade waste team.

This risk classification framework is used by GMB Water to determine the following:

- the relevant application fee;
- the terms and conditions of the trade waste approval reflective of the type, quality and volume of trade waste discharge and the associated complexity to manage the trade waste;



- the annual license fee to discharge trade waste that might apply;
- any annual trade waste fee reflective of the level of complexity, and GMB Water resources required, to ensure compliance through trade waste discharge monitoring (sampling and analysis) and routine inspections; and
- The appropriate frequency of trade waste monitoring (sampling and analysis) that might be required by the trade waste customer.

### Discharge categories

The details of the three trade waste categories based on GMB Water's risk assessment and classifications are as follows:

Table 2 - Trade waste discharge risk categories

Trade waste risk category	Risk Classification	Inspection Frequency (months)
Category 1	Low	12-24
Category 2	Medium	6-12
Category 3	High	3-6

#### *Typical profile of trade waste discharge categories*

##### **Category 1 - Low Risk**

Customers requiring a section 56 authorisation:

- Pre-treatment may be required,
- Contains contaminants compliant with the LAC,
- Small volume, and
- Typically commercial customers.

##### **Category 2 - Medium Risk**

Customers requiring a section 56 authorisation:

- On-site pre-treatment may be required,
- Contains contaminants not compliant with the LAC,
- Medium to high volume, and
- Typically commercial customers

##### **Category 3 - High Risk**

Customers requiring a section 56 authorisation in the form of a Trade Waste Services Agreement:

- On-site pre-treatment required,
- Contains contaminants not compliant with the LAC,
- May contain substances listed in the mandatory LAC
- Any volume, and
- Typically industrial customers

Note: Category 4 trade waste may be introduced in future versions of this Plan depending on the nature of future potential customers.

Table 3 – Trade waste risk categories based on the volume and strength of wastes

Parameter	GMB Water Local Acceptance Criteria (LAC)	Category 1 <sup>1</sup> Low Strength/ Low Volume	Category 2 <sup>1</sup> Low Strength/ High Volume	Category 3 <sup>1</sup> High Strength/Any Volume
pH	6–10	6–10	6–10	6–8
Temperature (°C)	<38°C	<38°C	<38°C	<38°C
Total Biochemical Oxygen Demand (BOD <sub>5</sub> ) (mg/L)	<600mg/l	< 600	< 600	≥600
Total Chemical Oxygen Demand (COD) (mg/L)	<600mg/l	< 1200	< 1200	≥ 1200
Total Suspended Solids (mg/L)	<400mg/l	< 400	< 400	≥400
Total Kjeldahl Nitrogen (TKN) (mg/L)	<120mg/l	< 150	< 150	≥ 150
Total Phosphorus (mg/L)	<30mg/l	< 40	< 40	≥40
FOG	<100mg/l			
Volume (kL/annum)		>200	> 500	Any
Trade waste approval	Section 56 Authorisation	Section 56 Authorisation	Section 56 Authorisation	Section 56 Authorisation/Trade Waste Service Agreement
Discharge flow monitoring required	As applicable	N/A	As applicable	Applicable
Fees and charges	Annual Wastewater Service Fee, – Annual Trade Waste Licence Fee, – Flow and load based charge	– Annual Wastewater Service Fee, – Annual Trade Waste Licence Fee, – Flow and load based charge	– Annual Wastewater Service Fee, – Annual Licence Fee, – Flow and load based charge, – Water Quality Analysis fee	– Annual Wastewater Service Fee, – Annual Licence Fee, – Flow and load based charge, – Water Quality Analysis fee

These are averages of measurements taken at different times based on the timing and frequency of trade waste discharges for each trade waste category.

### Approvals to discharge trade waste

Once the trade waste application has been assessed and determined acceptable to discharge to the wastewater infrastructure GMB Water will issue the relevant approval documents based on the risk category.

All approved customers will be issued section 56 authorisations to discharge trade waste into the wastewater infrastructure in the form of a:

- Trade Waste Approval for all customers, and
- Trade Waste Service Agreement for category 3 customers.

#### ***Trade waste approval***

The Trade Waste Approval is issued pursuant to section 56 of the WI Act by GMB Water in its capacity as a water industry entity.

This authorisation allows the discharge of trade waste from the premise into the wastewater infrastructure and will have conditions that are relevant to the:

- Type of trade waste,
- Volume of trade waste,
- Location of discharge within the wastewater infrastructure, and
- The receiving WWTP.

The Trade Waste Approval shall contain conditions in relation to the following (where relevant):

- on-site pre-treatment obligations,
- volume, mass emission rates and concentration limits for relevant restricted substances,
- a requirement for the authorised trade waste generator to notify GMB Water's prior to carrying out any modification to processes or operations through which trade waste may be produced,
- a requirement to maintain all records related to trade waste discharge and servicing of pre-treatment equipment for a minimum period of two years,
- requirements to install and maintain pre-treatment equipment, pH control, flow monitoring, and sampling facilities,
- limits on rate and time of discharge or requirements for flow buffering or equalisation,
- requirements to carry out water quality monitoring and provide results to GMB Water,
- a requirement to comply with the terms of any Trade Waste Service Agreement entered into in respect of the premises, and
- any other obligations relevant to the type of trade waste produced.

#### ***Trade Waste Service Agreement***

In addition to the Trade Waste Approval Category 3 trade waste generators will be required to enter into a Trade Waste Service Agreement with GMB Water.

This agreement shall contain the following conditions (where relevant) and will be enforceable as a binding contract:

- Conditions including an obligation to comply with the general conditions of the Trade Waste Approval,
- Specific terms and conditions related to the trade waste service, including (but not limited to):
  - Fees and charges,
  - Termination rights
  - On-line monitoring , and

- Expiation conditions

### **Trade Waste Approval and Trade Waste Service Agreement duration and renewal**

GMB Water's Trade Waste Approval, Trade Waste Service Agreement, and the general operation of its wastewater infrastructure are supported by the WI Act and associated regulations, in addition to the Wastewater Regulations. Under this regulatory framework:

- trade waste applications are assessed and authorisations issued, and/or renewed, at the discretion of GMB Water,
- authorisation to discharge trade waste to the wastewater infrastructure may be issued for a specified duration based on the discharge risk profile (as determined by GMB Water). An expiry date will be nominated on the authorisation documentation<sup>12</sup>, and
- the granting of an authorisation does not entitle an authorised trade waste generator to a renewal of the authorisation, and
- additional conditions may be imposed on any renewed authorisation.

#### **NOTES:**

1. where an authorisation has an expiry date GMB Water will provide three months' notice to the authorised trade waste generator and may conduct an inspection of the premises and review of the Trade Waste Approval and/or Trade Waste Service Agreement.
2. an authorisation for commercial food business that presents a well-characterised discharge and has consistent conditions to control any relevant risks will generally not have an expiry date.

### **Variations to existing approval**

Trade waste generators that have been authorised to discharge trade waste to the wastewater infrastructure must notify GMB Water of any change to the details provided at the time of application for Trade Waste Approval, including any change to:

- contact details,
- the nature of the trade or business on the nominated premises,
- any significant changes to the volume, flow rate or composition of trade waste,
- any alteration or addition to the trade waste generating processes, and
- any misrepresentation, errors or omissions on their application for Trade Waste Approval.

Variations to Trade Waste Approvals can be requested by contacting the Trade Waste Team on 08 8188 9300 or email to: [customerservice@gmbwater.au](mailto:customerservice@gmbwater.au).

For significant changes to manufacturing and industrial Trade Waste Approvals, GMB Water recommends the authorised trade waste generator seeks advice from GMB Water to determine any potential implications that should be considered, including but not limited to):

- Wastewater infrastructure augmentation requirements,
- Wastewater infrastructure capacity,
- Changes to fees and charges, and
- Pre-treatment requirements.

GMB Water retains the right under section 56(7) of the WI Act to vary any section 56 authorisation as required.



### Suspension or cancellation of trade waste approval

GMB Water may suspend or cancel a Trade Waste Approval under the following circumstances:

- The trade waste generator has contravened a condition of the approval,
- The trade waste generator has contravened a provision of the WI Act,
- The trade waste generator has contravened the TWP and/or this Plan,
- The terms of the approval are no longer appropriate as the trade waste generating activities have changed significantly since the approval was granted and notification in accordance with section 2.9.1 has not been provided, and/or
- Urgent action is necessary in the interests of the public health and safety, the environmental, to prevent damage to the wastewater infrastructure, or to ensure GMB Water's regulatory compliance.

GMB Water retains the right under section 56(7) of the WI Act to revoke any section 56 authorisation as required.

### Cancellation or transfer trade waste approval by trade waste generator

If trade waste generating activities from the premises were to permanently cease, then the trade waste generator can terminate the Trade Waste Approval.

The trade waste generator must issue the notice of termination in writing and provide the following information:

- Proposed termination date, and
- Contact details for any outstanding fees and charges

Written notice of termination may be provided to [customerservice@gmbwater.au](mailto:customerservice@gmbwater.au)

Trade waste fees and charges will continue to apply until GMB Water is provided with written notice of termination from the authorised trade waste generator.

Trade waste fees and charges are non-refundable.

At the written request of the authorised trade waste generator or new owner/operator of the premises GMB Water may transfer a Trade Waste Approval to the new owner/operator (fees may apply).

## Enforcement

GMB Water is a licensed water industry entity with enforcement powers under the WI Act in relation to trade waste discharges to its wastewater infrastructure.

The enforcement powers provide GMB Water with the regulatory authority to address trade waste discharges to its wastewater infrastructure that might occur in contravention to a Trade Waste Approval and/or where a discharge occurs without appropriate authorisation.

In addition to its powers under the WI Act, as the local public health authority for its area GMB Water's functions include responding to any risk to public health on a premise in connection with unauthorised trade waste discharge to its wastewater infrastructure. These enforcement powers are provided pursuant to the SAPH Act.

### ***The Water Industry Act and Regulations***

The relevant sections of the WI Act and associated regulations relating to compliance and enforcement are:

#### Section 56 of the WI Act

##### Section 56(1)

- A person must not, without proper authority, discharge into the wastewater infrastructure any solid, liquid or gaseous material or any other item or thing that is likely to damage the wastewater infrastructure.

Maximum penalty: \$25,000

The wastewater infrastructure has been designed to manage domestic wastewater – any trade waste discharges have the potential to cause damage.

##### Section 56(3)(a)

- GMB Water may, on application by any person, authorise the person to discharge trade waste referred to in the authorisation in the wastewater infrastructure.

##### Section 56(3)(b)

- GMB Water may, in relation to a contract of the provision of a sewerage service, authorise a person to discharge trade waste referred to in the contract into the wastewater infrastructure.

##### Section 56(4)

- Failure to comply with an authorisation under this section, or the discharge of unauthorised trade waste into the wastewater infrastructure is an offence.

Maximum penalty: \$25,000

Expiation fee: \$750

##### Section 56(7)

- GMB Water may vary or revoke an authorisation issued under this section at any time.

##### Section 56(9)

- The reasonable costs and expenses incurred by GMB Water in addressing any damage or loss caused as a result of, or in remedying circumstance caused by, a contravention of this section, may be recovered by GMB Water as a debt from the person in contravention of this section.

#### Section 58 of the WI Act

##### Section 58(1)

- If GMB Water has grounds to believe that material is being discharged to the wastewater infrastructure in contravention of the WI Regulations has the power to disconnect drains or restrict wastewater services to premise.

#### Section 62 of the WI Act

##### Section 62(1)

- GMB Water may, at any reasonable time, enter and remain on land to which wastewater service is provided for the purposes prescribed under section 62(1) of the WI Act to:
  - inspect infrastructure and equipment,

- read, or check the accuracy of, a meter for measuring the supply of water,
- repair or replace infrastructure and equipment,
- take samples of water or any material, or
- exercise its power prescribed under the regulations.

### ***The South Australian Public Health Act and the Wastewater Regulations***

The relevant sections of the SAPH Act and the Wastewater Regulations relating to compliance and enforcement are:

#### Section 92

##### Section 92(1)

- GMB Water may issue a notice to the owner/operator of a wastewater system to secure compliance with a requirement imposed under the SAPH Act or Wastewater Regulations or as may be necessary to avert, eliminate or minimise a perceived risk to public health.

##### Section 92(10)

- A person to whom a notice is issued must not, without reasonable excuse, fail to comply with the notice.  
Maximum penalty: \$25,000  
Expiation: \$750

#### Regulation 12

##### Regulation 12(1)

- The operator of a wastewater system must ensure that the system is operated, maintained and serviced in accordance with any conditions of a wastewater works approval and the prescribed codes to the extent they are applicable.
- Failure to comply with this regulation is an offence.  
Maximum penalty: \$5,000  
Expiation: \$315

#### Regulation 13

##### Regulation 13(1)

- The operator of a wastewater system must ensure that wastewater from the system is not disposed of to land or otherwise unless authorised by conditions of a wastewater works approval and the disposed of in accordance with those conditions and the prescribed code to with extent they are applicable.
- Failure to comply with this regulation is an offence.  
Maximum penalty: \$5,000  
Expiation: \$315

#### Regulation 25

##### Regulation 25(1) and 25(2)

- GMB Water may approve a wastewater works application subject to conditions it determines appropriate and that fall within the scope of this regulation.
- GMB Water may, on its own initiative, by written notice to the operator of a wastewater system to which a wastewater approval applies, vary or revoke a condition.

### Regulation 28

#### Regulation 28(1)

- GMB Water may, in connection with the administration or enforcement of the Wastewater Regulations, enter premises and inspect, examine or test a wastewater system for the purposes of determining whether the system is operating as required under the Wastewater Regulations.  
It is an offence for a person to hinder or obstruct GMB Water in the exercise of a power under this regulation.  
Maximum penalty: \$5000

### Regulation 29

#### Regulation 29(1)

- If GMB Water suspects on reasonable grounds that a wastewater system is adversely affecting or threatening public or environmental health, GMB Water may give the operator of the system a written notice requiring the operator to obtain and provide a written report from an independent wastewater engineer within a specified period addressing specific matters.

#### Regulation 29(2)

- A person must comply with notice issued under this regulation.  
Maximum penalty: \$5000

#### Regulation 29(3)

- If the requirements of a notice issued under this regulation are not complied with, GMB Water may obtain the required report. A person authorised to do so by GMB Water may enter the premises at any reasonable time for the purposes of the report. Any costs and expenses reasonably incurred in doing so can be recovered from the person who failed to comply with the notice, as a debt.

### **2.12.3 Enforcement actions**

GMB Water will monitor compliance by authorised trade waste generators through inspections of premises and associated equipment. These inspections may also include carrying out sampling and testing of trade waste discharges to assess against conditions of authorisation.

Trade waste generators deemed to be non-compliant with their relevant conditions of authorisation may be managed by way of enforcement action.

Enforcement action for non-compliance may include:

- Informal action by way of working with the authorised trade waste generator to rectify the issued through a negotiated and cooperative approach. Records of all relevant communication will be maintained by GMB Water.
- Written notice which may require necessary works or action be taken, and a reasonable time frame allocated to complete the works. Failure to comply with a written notice may lead to GMB Water issuing an expiation or statutory notice. Further non-compliance may lead to GMB Water commencing prosecution proceedings.
- The issue of a statutory notice or order under section 92 of the SAPH Act to secure compliance with a requirement of the Wastewater Regulations. If the requirements of a statutory notice or order are not complied with, then GMB Water may exercise its powers to take action in default and recover the associated costs from the person who failed to comply.
- The issue of an expiation fee for any expiable offence arising from the non-compliance.

- This may include an expiation notice for:
  - a breach of prescribed expiable condition attaching to a wastewater works approval under the Wastewater Regulations;
  - a failure to comply with the requirements of a notice issued under section 92 of the SAPH Act; or
  - for an offence under WI Act, including for a breach of a condition of a section 56 authorisation.
- Where an unauthorised trade waste discharge results in damage to the wastewater infrastructure, GMB Water may recover reasonable costs and expenses incurred in addressing the damage or loss caused as a debt from the person responsible for the damage. Cost recovery action may be taken where trade waste over and above the LAC is discharged into the wastewater infrastructure, and may be taken in addition to other enforcement action (i.e. issue of expiation).
  - The amount payable is calculated on the extent to which the quality of the discharge exceeds the LAC and/or agreed standards and is based on the cost to GMB Water of treating the discharge.
  - The amounts payable for treatment of wastewater exceeding the LAC are referred to in GMB Water schedule of fees and charges.
- GMB Water may disconnect a sewerage service to a premise where an unauthorised trade waste discharge prevents or causes a high risk incident to the wastewater infrastructure.
- Prosecuting an offence – a prosecution will only be pursued where there is a likely prospect of securing a conviction in respect of the offence and where such action is in the public interest. Ordinarily a prosecution will occur as a last resort if alternative enforcement options have not achieved the desired outcome or, if the breach is so serious that it warrants such action being taken. By way of example the following circumstances may warrant a prosecution:
  - where there has been a blatant and deliberate breach of the law that has placed public health or public safety at risk or has caused a person to suffer significant loss or damage;
  - the alleged breach is too serious to be dealt with by means of an expiation; or
  - where the alleged offender has an established and recorded history of committing the same of similar offences.

GMB Water takes the following considerations into account (where relevant) when determining which enforcement option is appropriate to address any breach of trade waste requirements:

the seriousness of the breach and whether it gives rise to an offence at law;

- the degree of wilfulness involved on the person responsible for the breach;
- past history of non-compliance and whether the breach is a once-off;
- the consequence of non-compliance;
- the likely effectiveness of the proposed enforcement option;
- the need for general and specific deterrence to avoid further breaches;
- the effect of the breach upon the community;
- the need to ensure a consistent approach to enforcing similar breaches;
- the cost of compliance; and
- any other relevant considerations.



## WASTEWATER ACCEPTANCE REQUIREMENTS

### Local acceptance criteria (LAC)

Any waste discharged to GMB Water's wastewater infrastructure must comply with the trade waste LAC (see Appendix B) unless otherwise specified in a Trade Waste Approval or Trade Waste Services Agreement.

The LAC limits are subject to periodic review.

Unless specified in the Trade Waste Approval, the LAC criteria are absolute maximum acceptable parameters.

GMB Water requires that authorised trade waste generators implement waste minimisation practices and install best practice pre-treatment processes to reduce both the volume and contaminant load of wastewater discharged to the wastewater infrastructure.

The dilution of trade waste with water to achieve compliance with the LAC is prohibited.

GMB Water has obligations to avoid wastewater overflows and consequently may impose limits on the rate and timing of trade waste discharges. This will be determined on a case by case basis based on operational risks associated with the wastewater infrastructure and incorporated into the conditions of the trade waste approval.

### Over-the-limit discharges and supplementary monitoring

GMB Water may authorise discharges exceeding the LAC ('over-the-limit' discharges) for a specific period of time, at its discretion or as part of a Trade Waste Service Agreement. These discharges will attract additional charges as described in the schedule of fees and charges.

When an authorised trade waste generator regularly exceeds the LAC despite carrying out approved pre-treatment activity, GMB Water may engage an independent NATA accredited agency to undertake a trade waste monitoring program.

The frequency and the duration of this monitoring program will be determined by GMB Water and otherwise be implemented in accordance with the Trade Waste Service Agreement. GMB Water will seek to recover the costs of such program in accordance with the Trade Waste Service Agreement.

GMB Water may require the authorised trade waste generator to enter in an approved trade waste improvement program pursuant to the Trade Waste Improvement Programs section of this Plan.

### Trade waste improvement programs

GMB Water may accept limited trade waste discharges exceeding the LAC where the trade waste generator develops and implements an approved trade waste improvement program.

The trade waste generator must submit an application in writing for an authorisation to discharge trade waste exceeding the LAC. The application must include a detailed trade waste improvement plan that includes:

- up to date data on the quality and quantity of the trade waste discharge and how this might fluctuate with production cycles (where relevant),

greater water recovery for the future

- implement a trade waste monitoring system to record quality and quantity (where practicable)
- Assess monitoring results against LAC and use data to inform on-site improvement measures
- Improve trade waste discharge parameters to ensure compliance with the LAC within an agreed period of time using:
  - on-site pre-treatment,
  - waste minimisation,
  - water conservation, and/or
  - recycling activities.
- A reporting mechanism to provide milestone updates to GMB Water

An interim trade waste approval will be issued and will have an expiry date consistent with the agreed terms of the trade waste improvement program (**Interim Trade Waste Approval**).

Where the trade waste generator was unable to achieve compliance with the LAC after completing the trade waste improvement program within the agreed period of time GMB Water may:

- revoke the trade waste approval, or
- grant an extension of time and issue an updated Interim Trade Waste Approval<sup>1,2</sup>

### NOTES

1. An extension of time to achieve compliance with the LAC may be issued if a reviewed/updated trade waste improvement program is submitted within 28 days of the Interim Trade Waste Approval expiring and is approved by GMB Water.
2. The conditions of the updated Interim Trade Waste Approval may be varied as required.

## TRADE WASTE CHARGES AND FEES

Trade waste fees and charges will be determined each year as part of the annual business planning process.

In accordance with our financial regulatory obligations the fees and charge assigned to GMB Water trade waste services will be reflective of the actual cost of providing the service (i.e. full cost recovery pricing).

Fee and charges for trade waste are listed in GMB Water's schedule of fees and charges - available on our website [gmbwater.au](http://gmbwater.au)

### Trade waste vs wastewater charges

Trade waste fees and charges are applied in addition to the annual wastewater services charge that apply to the premises.

The annual wastewater service charge that is applied to the land is for the relevant cost recovery associated with collection, treatment and disposal of domestic wastewater generated on the land.

Wastewater service charges are based on the number of equivalent property units on the premise and/or business and are imposed by way of a service charge declared by GMB Water pursuant to Chapter 10 of the LG Act.

Trade waste charges are for the use of the wastewater infrastructure for the discharge of non-domestic wastewater.

### Schedule of fees and charges

The fees and charges assigned to GMB Water trade waste services are based on the 'user pays' pricing principle and seeks to recover the full cost incurred by GMB Water for the collection, treatment and disposal of the trade waste.

### ***Annual License Fee to Discharge Trade Waste***

An Annual License Fee to Discharge Trade Waste (**Trade Waste Fee**) will be charged to all authorised trade waste generators in accordance with section 188(1) of the LG Act and is based on the trade waste generator categorisation.

This Trade Waste Fee is applied to trade waste generators to ensure GMB Water recovers the cost it incurs to manage the trade waste authorisation including such expenses as administrative cost, inspections, audits, and corporate overheads.

### **Compliance fees**

Compliance fees may be imposed on trade waste generators for failing to install and/or appropriately service on-site trade waste infrastructure as per table 4.

Table 4 – Compliance fees

Compliance Fee	Charge
<b>Audit fee</b>	Included in Trade Waste Fee
<b>Failure to service trade waste pre-treatment device fee (up to 2400 L, every four weeks)</b>	Refer the fees and charges schedule
<b>Failure to service trade waste pre-treatment device fee (2400 L and above, every four weeks)</b>	Refer to the fees and charges schedule
<b>Failure to install/upgrade/repair trade waste pre-treatment device fee (every four weeks)</b>	Refer to the fees and charges schedule <sup>1</sup>

**NOTES**

1. Where works to install/upgrade/repair a trade waste pre-treatment device are requested to be undertaken by GMB Water a service fee may also apply.

**Expiation fees**

Expiation fees may be imposed on trade waste generators for the unauthorised discharge of non-domestic wastewater to the trade waste infrastructure as per table 5.

Table 5 – Expiation fees

Expiation Fee	Charge
<b>Discharge of unauthorised material to the wastewater infrastructure</b>	Refer to fees and charges schedule
<b>Cause, permit or allow any rainwater, stormwater, or surface water to discharge into any wastewater infrastructure</b>	Refer to fees and charges schedule

**Trade waste volume and load based charges**

Volume and load based charges may be imposed on trade waste generators who discharge trade waste exceeding the LAC as per table 6.

Table 6 – Volume and load based charges

Parameter	Range of application	Charge Rate
<b>Volume</b>	Any volume over the agreed discharge flow rate/volume or storm water	Refer to the fees and charges schedule
<b>BOD</b>	Concentrations above 600mg/L	
<b>COD</b>	Concentrations above 600mg/L	
<b>Suspended Solids</b>	Concentrations above 400mg/L	
<b>TKN</b>	Concentrations above 150mg/L	
<b>Total P</b>	Concentrations above 30mg/L	

### **Non-compliance charges**

Trade waste volume and load based charges apply to the maximum concentration and volumes specified in the applicable Trade Waste Approval.

Non-Compliance charges may be imposed on trade waste generators who discharge trade waste exceeding the LAC as per table 7.

The full marginal cost of accepting, treating and disposing of the **non-compliant** portion will be recovered from the authorised trade waste generator.

Table 7 – Non-compliance charges

Parameter	Range of application	Charge Rate
<b>Volume</b>	As specified in trade waste service agreement	Refer to the fees and charges schedule – “Non-Compliant Discharges”
<b>TKN</b>	Concentrations above 120mg/L and or over 360g/day or 131kg/year	
<b>Total P</b>	Concentrations above 30mg/L and over 83g/day or 30kg/year	

### **Methodology of invoicing**

Fees and charges associated with a Trade Waste Approval become effective from the date that it is issued to the authorised trade waste generator.

Invoices for trade waste discharged to the wastewater infrastructure associated with a Trade Waste Services Agreement will be issued quarterly (unless requested otherwise)

The authorised trade waste generator is responsible for the payment of trade waste fees and charges associated with a Trade Waste Service Agreement.

Where the authorised trade waste generator fails to pay an invoice issued by GMB Water the fee and/or charge may recover the debt as rates in arrears attached to the property in accordance with section 144 of the LG Act.



## DISCHARGE QUANTITY AND QUALITY ASSESSMENT

### Determination of discharge quantity and quality of trade waste (unmetered trade waste discharge)

Where a premise does not have an approved trade waste flow meter installed the metered water supply to the premise may be used to determine total water consumption for the charge period. The total water consumption will be used to estimate the trade waste discharged to the wastewater infrastructure.

Where a trade waste discharge estimation is used to determine trade waste discharge an appropriate allowance for domestic water consumption will be applied.

Where a metered water supply is allocated to multiple authorised trade waste generators and/or non-trade waste generating premises, the following information will be used to determine proportionate water consumption:

- the type and number of the trade waste fixtures in each premise,
- the hours of operation,
- any other appropriate information in relation to the operating activities at the site.

This is envisaged to apply only to Categories 1 and 2 authorised trade waste generators.

The quality of trade waste discharges shall be determined during the inspection/audit of the business for compliance purposes.

The cost shall be covered by the annual Trade Waste Fee associated with Trade Waste Approval, except where additional inspections and/or trade waste monitoring is required due to suspected or actual non-compliance.

Where additional inspections and/or trade waste monitoring identifies a non-compliance then the charges associated with the additional inspections and/or trade waste monitoring are payable by the authorised trade waste generator.

### Determination of discharge quantity and quality of trade waste (metered trade waste discharge)

Category 3 authorised trade wastes generators are required to have a trade waste flow meter as a condition of their Trade Waste Service Agreement.

An approved calibrated flow meter shall be installed on the dedicated trade waste discharge line and used to determine the volume of trade waste discharged to the wastewater infrastructure.

Where it is impractical to install a dedicated trade waste discharge line an allowance for domestic discharge will be applied and the trade waste volume estimated accordingly.

Trade waste discharges with volume and load above the LAC may incur additional charges as described in the schedule of fees and charges.

Trade waste service agreements are not transferable and include relevant conditions, including:

- flow meter specifications and maintenance obligations (including calibration requirements),
- Details of sampling regime and self-monitoring program, including

greater water recovery for the future

- sampling point, frequency of sampling, type of samples and sample collection method
- details of sample analyses (method and data analyses)
- details of the NATA-accredited laboratory in which analysis was carried out
- Requirement to keep records on site (including data records and equipment calibration certificates) and made available to GMB Water on request
- Ability to provide samples (contaminant content) prior to discharge to wastewater infrastructure to GMB Water on request
- Details of alternative methods for trade waste estimation in case of data loss due to failure of sampling program or flow meter
- Cleaning and pre-treatment equipment maintenance and disposal of waste records to be kept onsite and available to GMB Water on request.
- Obligation to notify GMB Water should there be any variation in operation or treatment processes that might affect trade waste discharge quantity or quality.
- Requirement to provide continuous flow measurement signal via telemetry from an approved flow meter to GMB Water.

The authorised trade waste generator is responsible for all costs associated with complying with Trade Waste Service Agreement conditions.

## INSPECTION AND MONITORING

### Inspection of premises and businesses

GMB Water shall routinely inspect all premises on a regular basis for the purpose of monitoring and auditing the conditions of discharge against conditions of authorisation. These inspections/audits may be adhoc and made without warning.

The frequency of inspection and audits depends on the category of trade waste, public and environmental health risk, and compliance history.

The renewal of a Trade Waste Approval that operates for a specified period of time is subject to GMB Water being satisfied that all conditions attached to the authorisation have been complied with.

### ***On-site wastewater system investigations***

GMB Water may carry out investigations of a premises on-site wastewater system to check whether specific trade waste streams or processes are properly connected to the trade waste pre-treatment system. Various methods of investigative techniques may be adopted by GMB Water which will be determined on a case by case basis.

Investigations of on-site wastewater system may include:

- Dye test – adding a fluorescent dye to the waste stream and subsequently examining the pre-treatment device for evidence of the fluorescent dye,
- Drain camera – internal closed circuit television camera inspections of premises gravity drainage system to identify where and how drains are connected, and
- Smoke testing – blowing non-toxic smoke into the premises wastewater system drains to determine where fixtures are connected (including illegal stormwater connections).

### ***Inspection chambers and/or gauging facility***

Category 3 trade waste generators must discharge trade waste into the wastewater infrastructure through a suitable inspection chamber and/or gauging facility. The inspection chamber and/or gauging facility should be accessible to GMB Water's at any time and should be located on the trade waste discharge line.

The inspection chamber and/or gauging facility is to allow for installation, maintenance or repair of any trade waste monitoring equipment.

A standard water supply outlet equipped with a back-flow prevention device, and a 240-volt power outlet, must be installed within 10 metres of a grease arrestor in accordance with the Australian Standards (AS3500 Part 1 and AS2845.3) and at all gauging facility sites.

The trade waste discharge line should be separate from the domestic waste discharge line for all new installations or significant alterations for existing premises (where practical and in compliance with all relevant standards).

Where a commercial or industrial authorised trade waste generator does not discharge trade waste directly to the wastewater infrastructure, an appropriate trade waste discharge monitoring device should be installed. This should be achieved through the installation of an inspection access on the sanitary drain, in an accessible location, and should allow for sampling/monitoring of trade waste prior to its

discharge to the wastewater infrastructure. The inspection access point for installed pre-treatment devices such as arrestors for premises discharging Category 1 waste should be located externally to the building and at finished ground level.

### Trade Waste Arrestors

Trade waste arrestors are installed to pre-treat trade wastes before being discharged into the wastewater infrastructure. They are used for different trade waste pre-treatment applications of wastes such as those containing FFOG, silt and acidic compounds.

These trade waste arrestors must conform to an approved design and capacity and must be maintained and cleaned regularly within a specified period.

The servicing (pumping) of trade waste arrestors must be carried out by an EPA licensed liquid waste carting contractor and discharged to an appropriately licensed facility.

A standard water supply outlet (tap) equipped with a back-flow prevention device must be installed in accordance with the requirements of AS/NZS3500 to provide water supply to clean internal walls of the trade waste arrestor.

Further information on the sizing and installation of grease arrestors is available in Appendix A.

Additional information on the sizing and installation of grease arrestors and other types of trade waste arrestors can also be obtained from the following sources:

- Private hydraulic consultants
- The Standard Plumbing and Drainage Regulation 2003 sections 39 and 40
- Pre-treatment guidelines for trade waste discharges
- GMB Water
- SA Water Trade Waste Guidelines

Where more than one trade waste generator shares the use of a trade waste arrestor the following information should be provided as part of the trade waste application process:

- The contact name and number of the business sharing the use of the trade waste arrestor,
- Agreements between the businesses for servicing and charging purposes,
- The size, make and model of the trade waste arrestor, and
- Details on how the trade waste discharge of each business can be estimated or measured.

Each application for the installation of a trade waste arrestor will be assessed based on:

- The type and volume of the waste requiring pre-treatment
- The proposed treatment method,
- Potential effluent quality, and
- Premise location.

An additional charge may be applied when a pre-treatment device is required for pre-treatment of trade waste but one is impracticable to be installed due to specific site or building constraints/limitations.

Domestic wastewater, rainwater and stormwater are not permitted to be discharged through the trade waste arrestor.

The trade waste arrestor shall be a discrete device dedicated to the pre-treatment of the relevant (i.e. grease arrestor for the pre-treatment of fats, oil and grease).

The minimum capacity of an individual trade waste arrestor is 1000 litres up to a maximum capacity of 5000 litres. Request for any size or capacity above 5000 litres shall be reviewed on a case-by-case basis.

The use of solvents, bacterial cultures, enzymes, odour control agents or pesticides on trade waste arrestors is prohibited unless approved by GMB Water.

### Oil separator

Oil separators are used for pre-treatment of oily wastewater before discharge into the wastewater infrastructure.

Authorised trade waste generators should use approved appropriately sized oil separator for the treatment of oily wastewater.

The different acceptable methods for oil separation include gravity feed oil separator, chemical precipitation, diffused air floatation (**DAF**), membrane technology, hydrocyclones, separation technology (vertical plate and coalescing plate separators), and triple stage interceptors amongst other methods.

The oil separators require special maintenance schedules and procedures, which should be carried out by a licensed liquid waste carting contractor. Maintenance information must be included in the trade waste application. Where appropriate, and in accordance with the manufacturer's recommendation, quick break detergents should be used in the cleaning of plate separation units.

### Silt arrestors

These arrestors are used to separate fine sand from trade waste and can have a capacity of up to 5000L.

Silt arrestors collect and trap solids and silts in trade waste and may be fitted with a grate and a removable basket.

Silt traps require the installation of a fixed secondary strainer with 2 mm diameter holes and may have internal baffles, which slow down the flow of incoming wastewater allowing for gravitational separation of sand and other debris.

Example application:

- Wash down bays
- Loading docks
- Commercial vehicle washing facilities
- Commercial kitchen/laundry floor silt traps



### Acid neutralisation tank

Trade waste with pH values below the acceptable range (i.e. <6) should be pre-treated prior to discharge into the wastewater infrastructure.

Correction of pH is performed in a neutralisation tank, which allows for the discharge of the trade waste once the pH is within the acceptable range. The neutralisation tank must be lined with or constructed of corrosion resistant impervious materials and contain replaceable marble chips (that are suitable for pH correction).

Example application:

- Art or craft workshops
- Battery storage areas
- Cheese manufacturing
- Dairy
- Industries generating acidic wastewater
- Photographic laboratories
- Educational institution laboratories

### Cooling tank

Trade waste discharged to the wastewater infrastructure must be below 38°C.

A cooling tank is required for the cooling of any high temperature trade waste.

Example application:

- Commercial laundries
- Laundromats
- Aged care facilities
- Hospitals
- Nursing homes
- Hotels

### Dissolved air flotation (DAF)

Trade waste can contain significantly high amounts of solids, fats, oil and grease, which must be reduced to meet the LAC. These materials may require the use of a DAF unit - which uses high-pressure diffused air to separate these contaminants from the trade waste.

Example application:

- Smallgoods production
- Meat and poultry industry
- Edible oils and grains
- Fish processing
- Potato and chip processing/production
- Bakeries
- Fruit and vegetables processing

### **Dry basket arrestor**

Solids in trade waste can be removed with the installation and use of dry basket arrestors.

Dry basket arrestors require the installation of a fixed secondary strainer with 2 mm diameter holes.

These are pits or tanks fitted with fixed screen or removable baskets designed to trap some solid components of trade waste. Examples of dry basket arrestors include lint traps and bucket traps.

### **Additives, enzymes / micro-organisms**

#### ***Additives, enzymes and bacterial cultures***

The use of any additive including enzymes, bacterial cultures, and any other biological and non-biological agents for trade waste pre-treatment must be approved by GMB Water.

Approval is based on the applicant demonstrating that the product does not have an adverse impact on the wastewater infrastructure and receiving environment.

The product should not adversely affect the functions of any installed pre-treatment device.

#### ***Genetically modified organisms***

The Australian *Gene Technology Act 2000* regulates the use of genetically modified organisms (**GMOs**). The Office of the Genetic Technology Regulator (**OGTR**), Canberra, regulate matters relating to GMO, including the discharge of wastes containing GMOs.

GMB Water approval to discharge trade waste containing GMOs to the wastewater infrastructure can only occur after OGTR approval has been issued and provided to GMB Water.

Facilities using GMOs either as part of their manufacturing process or for waste pre-treatment should ensure that no live GMOs are present in the trade waste being discharged into the wastewater infrastructure.

#### ***Food waste disposal***

GMB Water does not authorise the discharge of trade waste from food waste disposal units.

## TRADE WASTES FROM OTHER SOURCES

### Toxic/hazardous substances

GMB Water will not accept discharges containing toxic/hazardous substances into the wastewater infrastructure.

These contaminants should be disposed according to the SA EPA guidelines and regulations.

### Wastes from commercial swimming pools or ornamental ponds

The backwash water from commercial and public swimming pools and ornamental ponds is considered as trade waste.

This wastewater must not be discharged to the stormwater system.

GMB Water is responsible for giving approval for the discharge of this kind of trade waste into the wastewater infrastructure.

### Medical, clinical, veterinary and infectious wastes

The EP Act and its related regulations prescribe how clinical and other related forms of wastes can be safely managed.

The National Guidelines for Waste Management in the Health Industry 1999, National Health and Medical Research Council (**NHMRC**) prescribe the guidelines that allow for the discharge of clinical wastes into the wastewater infrastructure. This wastewater include liquid wastes such as faecal materials and body fluids from convalescent /nursing homes, clinics, hospitals, office/surgery of medical and veterinary facilities/laboratories.

The following solids that are generated in these types of facilities are examples of material/substance/items must not be discharged to the wastewater infrastructure:

- Plasters,
- Bandages,
- Dressings,
- Swabs,
- Hypodermic needles and syringes,
- Instruments,
- Utensils,
- Disposable paper and plastic items, and
- Animal and human tissue.

Laboratory wastes such as aqueous pathological wastes, which can be infectious and hazardous, should be stored and disposed of based on relevant guidelines from NHMRC and other relevant authorities and not into the wastewater infrastructure without trade waste approval.

Such wastes must be pre-treated to render them non-hazardous and non-infectious and approved by GMB Water prior to discharge into the wastewater infrastructure.

Dental waste containing mercury cannot be discharged into the wastewater infrastructure without GMB Water authorisation due to the presence of this heavy metal. Similarly, waste from film processing laboratories cannot be discharged into the wastewater infrastructure without GMB Water authorisation.

Authorisation for dental waste discharge to the wastewater infrastructure will not be required when such wastes are discharged through a amalgam separator.

### Leachate and wastewater from landfill and disposal facility wastewater

Landfill sites and waste treatment/disposal facilities will generate wastewater. This wastewater would be considered as trade waste for the purposes of this document.

The discharge of this wastewater to the wastewater infrastructure requires authorisation from GMB Water.

GMB Water will not accept any leachate from a landfill and disposal facility wastewater into GMB Water wastewater infrastructure. As such, an authorisation for this type of discharge to the wastewater infrastructure would not be authorised.

All contaminants should be disposed according to the SA EPA guidelines and regulations.

### Discharges from open areas

Stormwater and rainwater from open, uncovered, areas are not permitted to enter the wastewater infrastructure without a trade waste approval. These include wastewater from wash bays (bays must be roofed and bunded) and contaminated areas. Wastewater from these areas may cause operational problems for the wastewater infrastructure if received in untreated forms.

GMB Water applies the requirements of SA Water's Trade Waste Guideline for Vehicle Washing for the discharge of trade waste from vehicle washing business, including (but not limited to):

- mechanics,
- crash repairs,
- detailers, and
- car washes.

## 7.6 Liquid waste discharges from vehicles, vessels and aircraft

Toilet waste from buses, aircraft or recreational vehicles may be discharged into the wastewater infrastructure at approved locations such as terminals, bus or transport depots, and caravan parks.

A Trade Waste Approval is required for this.

GMB Water shall approved the discharge volume on a case-by-case basis

### Removal of regulated, tank and arrestor wastes

Only liquid waste carting contractors, licensed pursuant to the EP Act, are permitted to remove and dispose regulated waste.

A licensed liquid waste carting contractor is required for the removal and disposal of septic tank sludge, portable toilet waste and effluent holding tank contents.

Waste from any licensed liquid waste carting contractors' transport vehicle can be discharged into the wastewater infrastructure only when a trade waste approval has been granted. Trade waste charges would apply for such disposals.

Waste removed from trade waste arrestors and any other device cannot be discharged into the wastewater infrastructure. The EP Act and associated regulations provide guidance on the disposal of these kinds of waste. The licensed liquid waste carting contractor should keep records of waste collected and disposed.

### Vehicle washing Stations

Trade waste discharges from vehicle washing businesses may cause damage to the wastewater infrastructure. Businesses that carry out these types of activities include, but are not limited to: Mechanics.

- Crash repairers,
- Car detailers
- Bus depots, and
- Car washes.

Trade waste approval for these types of business activities is required.

Trade waste generators that carry out vehicles washing are required to install the appropriate on-site pre-treatment devices to ensure the trade waste entering into GMB Water wastewater infrastructure complies with the LAC.



## DISCRETIONARY POWER

Despite the provisions of this Plan, GMB Water reserves the right to accept or reject the discharge of any trade wastes to its wastewater infrastructure at its discretion.

GMB Water has an obligation to protect its employees, its infrastructure, the community, and the environment.

In fulfilling its obligations GMB Water retains the right to carry out remedial work on customer land without giving prior notice and may recover certain costs from trade waste customers.

Under section 56 of the WI Act, any unauthorised discharges into wastewater infrastructure is prohibited and penalties may apply.

## RECORDS AND REPORTS

GMB Water will maintain a confidential trade waste database containing information on trade waste generation within the area in which it holds its water retailer license.

The database will be dynamic and contain information on trade waste generators, their location, types of trade waste generated, and volume and content.

The information on trade waste volume and content will be obtained from the authorised trade waste generators application, routine monitoring, online monitoring, and inspections/audits conducted by GMB Water.

## Appendix A – Guideline for sizing of a grease arrestor

GMB Water applies two methods for determining the required grease arrestor size for commercial food businesses connected to its wastewater infrastructure.

Calculations must be made using both methods and the larger determined grease arrestor size is to be used.

Only grease arrestors listed in [SA Water's Approved Basic Trade Waste Pre-treatment Products Guideline](#) can be used.

### Method 1 – Number of meals per day

This method estimates accumulation in the grease arrestor, to minimise the service frequency.

For this method, the average daily number of meals over a seven day period should be used – refer to table below for required grease arrestor size based on average meals per day.

Table A1 – Required grease arrestor size based on average number of meals per day

Meals per day	Required grease arrestor size (L)
Up to 70	1000
71 to 200	1800
201 to 400	2400
401 to 600	5000
Over 200, or multi-tenant food court	Contact the Trade Waste Team. Advanced pre-treatment device may be required.

Source: SA Water

### Method 2 – Peak hourly flow rate and risk rating

This method uses the flow ratings for all fixtures discharging to the grease arrestor and a risk rating approach to provide the minimum grease arrestor size required to ensure that one hour retention time is achieved.

When determining the required grease arrestor size using this method the nearest (equal to or larger) approved grease arrestor must be selected.

#### Step 1 – Determine the hourly flow

Add the hourly flow ratings for all fixtures connected to the grease arrestor – this provides the minimum grease arrestor size required to achieve the required one hour retention time (refer to table below for fixture flow rates).

Table - A2 Fixture flow rates

Fixture	Flow rate (L/h)	Fixture	Flow rate (L/h)
Bain Marie	50	Sink – single bowl	30
Bin wash area	100	Sink – double bowl	60
Combi oven/steam oven	100	Sink – pot, single	100
Dishwasher (domestic)	30	Sink – pot, double	200
Dishwasher (commercial)	60	Sink – cleaners	60
Floor wash-down silt trap/bucket trap	100	Sink – with spray rinse	300
Glasswasher (for one unit)	60	Traditional/wet wok	200 per burner
Glasswasher (per additional unit)	120	Waterless wok	50 per burner
Hand basin	25	Other wet fixtures	Contact Trade Waste Team

Step 2 – Determine the risk category

Determining the risk involves assessing two components:

1. Food based risk

Table A3 – Food based risk category based on typical activities

Category	Low risk	Medium risk	High risk
<b>Food preparation</b>	<ul style="list-style-type: none"> <li>No cooking</li> <li>Raw whole foods</li> <li>Assembling from raw food or food prepared elsewhere</li> <li>Low food waste to sewer</li> </ul>	<ul style="list-style-type: none"> <li>Steaming, boiling, microwaving, grilling lower fat and oil foods</li> <li>Baking</li> <li>Butchery or delicatessen</li> <li>Moderate food waste to sewer</li> </ul>	<ul style="list-style-type: none"> <li>BBQ, frying, deep frying, grilling, roast meat</li> <li>Poultry cookers/combi ovens</li> <li>High food waste to sewer</li> </ul>
<b>Products</b>	<ul style="list-style-type: none"> <li>Fresh Fruit and Vegetables</li> <li>Sandwiches, rolls, sushi</li> <li>Fresh snack food</li> </ul>	<ul style="list-style-type: none"> <li>Fresh meat and smallgoods</li> <li>Low fat or oil food and meals</li> <li>Coffee and associated hot and cold drinks</li> <li>Pizza</li> </ul>	<ul style="list-style-type: none"> <li>High fat or oil food and meals</li> <li>High fat and oil content stocks, bases and sauces</li> <li>Dairy based foods (ice cream, cream, cakes etc)</li> </ul>
<b>Serving</b>	<ul style="list-style-type: none"> <li>Predominantly takeaway</li> </ul>	<ul style="list-style-type: none"> <li>Both eat-in and takeaway in similar proportions</li> </ul>	<ul style="list-style-type: none"> <li>Predominately eat-in</li> </ul>

## 2. Temperature risk

Table A4 – Risk category based on temperature

	Low risk	High risk
<b>Characteristic of temperature risk category</b>	Total volume of hot discharges on site (exceeding 60°C at source) is <50% of the wastewater volume	Total volume of hot discharge on site (exceeding 60°C at source) is ≥50% of the wastewater volume

Effects of temperature risk category on overall risk rating:

The temperature risk rating determined as per table A4 is used to determine the overall risk rating as per table A5.

Table A5 – Overall risk rating

Temperature risk – LOW	Temperature risk - HIGH
<b>Risk category remains the same as the food-based risk as table A3</b>	Risk category increases to next higher category. If food based risk category is high then the overall risk rating must be increased to 'extreme'

### Step 3 – Determine the grease arrestor storage factor

The storage factor is used to determine the additional volume to store the FFOG that accumulates between service events.

The overall risks rating is used to determine the storage factor as per table A6

Table A6 – Storage factor based on risk category

	Low risk	Medium risk	High risk	Extreme risk
<b>Storage factor</b>	1	1.5	2	2.5

### Step 4 – Determine the grease arrestor minimum size

To obtain the minimum grease arrestor size using the 'peak hourly flow rate and risk rating' method multiply the hourly volume (step 1) by the storage factor (step 3).

Minimum grease arrestor sized = minimum hourly volume x storage factor

The nearest sized approved grease arrestor is to be selected.

Source: SA Water (see reference section)



## Appendix B – Minimum pre-treatment requirements

The types of operations, which are required to be authorised as trade waste generators include but are not limited to those listed in table B1. Typically, the listed pre-treatment systems are required to be installed. The trade waste category given is a guide only, and each operation is categorised according to risk.

Table B1 Typical types of operations requiring trade waste authorisation

Industry	Discharge	Minimum pre-treatment
<b>Engineering industries</b>		
<b>Automotive dismantlers</b> <b>Wreckers</b> <b>Mechanical workshop</b> <b>Service stations</b> <b>Refuelling bay</b> <b>Vehicle wash-bay</b> <b>Car detailing</b> <b>Commercial vehicle washing</b> <b>Plant and equipment washing</b>	Grease, oils, petroleum, hydrocarbons, suspended solids, metals, solvents, detergents	*Minimum 1000L pit with dry basket arrestor and minimum 1000L mineral oil arrestor. *Units will be sized according to influent flow.
<b>Panel beater</b> <b>Spray painting</b>	Grease, oils, suspended solids	*Minimum 1000 L pit with dry basket arrestor and minimum 1000L mineral oil arrestor. *Units will be sized according to influent flow. *Discharge from a spray booth area is not permitted. *Paint solvents, thinners are not permitted into the wastewater infrastructure.
<b>Radiator repairs</b>	Suspended solids, pH heavy metals	*Silt arrestor. *Metal removal and pH adjustment may be required before discharge to wastewater infrastructure. *Capture the radiator fluid in a tray or container before removing the radiator from the vehicle. *Radiator fluid may not be discharged to wastewater infrastructure. *Floor must be bunded to prevent spillage draining to wastewater infrastructure.
<b>Major manufacturing industry</b>	Temperature, pH, BOD/COD, grease, suspended solids, nutrients	*Liaise with GMB Water

<b>Food preparation but with no onsite cooking and no greasy waste including:</b>  Coffee shop Ice cream parlour Juice bar	BOD, suspended solids	*No pre-treatment required
<b>Commercial cooking with the generation of greasy waste including:</b> Cooking of meals, baking, cooking of meat or dairy products Doughnut or pizza cooking Fish and chips shops Hostel or commercial accommodation Child-care centres.	BOD/COD, grease, suspended solids	*Dry basket arrestor for floor waste if installed. *Minimum 2400 L grease arrestor.
<b>Butcher</b> <b>Poultry processing with no onsite cooking</b>	BOD/COD, suspended solids, pH, heavy metals, grease, suspended solids	*All drainage from sinks and floor waste to pass through a dry basket arrestor. *Dry basket arrestor for floor waste if installed. *Minimum 1000 L grease arrestor.
<b>Fish and shellfish processing with no onsite cooking</b>	BOD, suspended solids	*All drainage from sinks and floor waste to pass through a dry basket arrestor. *Dry basket arrestor for floor waste if installed.
<b>Major food processing industry</b>	pH, BOD/COD, grease, suspended solids	*Liaise with GMB Water
<b>Dental surgery</b>	Amalgam, suspended solids	*Standard filters required on spittoons.
<b>Doctors' surgery</b> <b>Medical centre</b> <b>Hospital</b>	BOD/COD, suspended solids, chemicals	*Plaster arrestor - see photographic section.
<b>Optical glass manufacturing</b>	Suspended solids	*Silt arrestor.
<b>Funeral parlour</b> <b>Morgue</b> <b>Autopsy table</b>	Suspended solids	*Dry basket arrestor in floor waste. *Screens at the table drainage outlet.
<b>Animal industries</b>		
<b>Animal wash bay</b>	BOD, suspended solids	*Dry basket arrestor.
<b>Animal housing</b>	BOD, suspended solids	*Minimum 1000 L silt arrestor may be required if sediment drains to the wastewater infrastructure.

Textile industries		
Dry cleaning	Dry cleaning, fluids/solvents	*No pre-treatment required. *Dry cleaning fluids must not be discharged to the wastewater infrastructure
Laundry	Lint, high temperatures	*1 mm mesh lint screens internal or external to machines.
Other requirements		
Bin wash	Suspended solids, BOD, grease	*Dry basket arrestor in floor waste.
Crafts		*Assessment required.
Hairdressing		*No pre-treatment required.
Laboratory (school)	Chemicals	*1000 L neutralisation tank.
Laboratory (other)	Chemicals	*Liaise with GMB Water.
Non-digital photographic processing and developing, X-ray processing, or graphic arts	Silver, thiosulphate, sulphite, ammonia	*Settling tank may be required. *Neutralising tank may be required. *Metal recovery unit. *Flammable solvents must not be discharged to wastewater infrastructure.
Printing		
Screen printing		
Swimming pools (municipal and commercial), hydrotherapy installations, ornamental ponds, recreational lakes	High flow rate, corrosion inhibitors, biocides	*Settling tank may be required. *Discharge flow restrictions may apply.
Cooling towers	Biocides, corrosion inhibitors	*No pre-treatment is required.

Source: Redland City Council's Trade Waste Management Plan (GL-1234-001), 2017

## Appendix C – Local acceptance criteria

Parameter	Guidance value	Comments
<b>Temperature</b>	<38°C	Higher Temperatures: <ul style="list-style-type: none"> <li>• Cause increased damage to wastewater infrastructure;</li> <li>• Liquefy &amp; solubilise grease;</li> <li>• Promote the release of gases such as H<sub>2</sub>S and NH<sub>3</sub>; -</li> <li>• Can adversely affect the safety of operations and maintenance personnel;</li> <li>• Accelerate chemical &amp; biological conditions</li> </ul>
<b>pH</b>	6-10	Extremes of pH can <ul style="list-style-type: none"> <li>• Cause corrosion of wastewater infrastructure</li> <li>• Adversely affect biological treatment processes;</li> <li>• Increase the potential for the release of toxic gases such as H<sub>2</sub>S and HCN.</li> </ul>
<b>Total Biological Oxygen Demand (BOD)</b>	200 - 600mg/L or UDML 530g – 1.8Kg/day	Overloads treatment Plants and can increases odours and corrosion in pipes
<b>Total Chemical Oxygen Demand (COD)</b>	<600 mg/L	Same as for BOD <sub>5</sub> .
<b>Total Organic Carbon (TOC)</b>	<1200mg/L	Same as for BOD <sub>5</sub> .
<b>Total Dissolved Solids (TDS )</b>	<1000mg/L	High TDS can: <ul style="list-style-type: none"> <li>• Upset biological treatment process.</li> <li>• Limit reuse potential of treated water.</li> </ul>
<b>Total Suspended Solids (SS)</b>	200 - 400mg/L or UDML 530g – 1.6Kg/day	High SS can: <ul style="list-style-type: none"> <li>• Cause blockages in the system</li> <li>• Overload the treatment process</li> <li>• Create anaerobic conditions under accumulated sludges, aggravating corrosion</li> </ul>
<b>Total Kjeldahl Nitrogen (TKN)</b>	<120 mg/L	Kjeldahl Nitrogen is a measure of certain nitrogen species (and does not include nitrate or nitrite) in the waste stream. High Kjeldahl Nitrogen may significantly contribute to the nutrient loading of the final effluent.
<b>**Total Phosphorous (as P)</b>	10-30 mg/L or UDML 27-83 g/day	High phosphorous may significantly contribute to the nutrient loading of the final effluent.
<b>Gross Solids</b>	< 20MM	Gross solids can cause wastewater infrastructure blockages. The non-faecal gross solids shall have a maximum linear dimension of < 20mm and a quiescent settling velocity of < 3m/hr.
<b>Grease and Oil (Total)</b>	<100 mg/L	Grease and oil can: <ul style="list-style-type: none"> <li>• Cause system blockages</li> <li>• Adversely affect the treatment processes; Impair the aesthetics of the receiving water</li> </ul>

<b>Colour</b>	Not noticeable after 100 dilutions	Colour can affect aesthetic appeal, adversely affect the lagoon treatment process or render the water unsuitable for sale to reclaimed water users. . A higher coloured effluent will impact the UV disinfection process by reducing the transmissivity of the water. This will be determined on a case-by-case basis.
<b>MBAS (Methylene blue active substances)</b>	<500 mg/L	MBAS is a measure of anionic surfactants. High MBAS can <ul style="list-style-type: none"> <li>Adversely affect the efficiency of activated sludge plants</li> <li>Impair the aesthetics of receiving waters</li> </ul>
<b>**Ammonia plus Ammoniacal ion (measured as N)</b>	60-97.5 mg/L or UDML of 162-263g/day	High Ammonia may: <ul style="list-style-type: none"> <li>Adversely affect the safety of operations and maintenance personnel</li> <li>Significantly contribute to the nutrient load discharged to the receiving environment.</li> <li>Higher temperatures and low pH can enhance these effects. Values can be subject to localised pH and temperature conditions.</li> </ul>
<b>Sulphate (measured as SO<sub>4</sub>)</b>	<1500 mg/L	High sulphate will contribute to the potential for the generation of sulphides and mercaptans in the wastewater leading to an odour problem. They can also damage the wastewater collection and treatment structures.
<b>Sulphite (measured as SO<sub>3</sub>)</b>	<15 mg/L	The strong reducing properties of sulphites increase the potential for anaerobic conditions to form because the process removes oxygen. The reactions are pH and temperature dependent. Release of SO <sub>2</sub> gas could pose an occupational health and safety risk to maintenance staff.
<b>Sulphide (measured as S)</b>	5 mg/L	
<b>Chlorine (measured as Cl<sub>2</sub>)</b>	<5 mg/L	High chlorine concentrations can: - <ul style="list-style-type: none"> <li>Adversely affect the safety of operations personnel;</li> <li>Cause corrosion of system infrastructure.</li> </ul>
<b>Aluminium</b>	<10 mg/L	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate as a scale that can cause a system blockage.
<b>Arsenic</b>	0.05 mg/L	
<b>Barium (Ba)</b>	2 mg/L	
<b>Boron (B)</b>	2 mg/L	
<b>Cadmium (Cd)</b>	0.05 mg/L	
<b>Total Chromium (Cr)</b>	1 mg/L	

<b>Chromium (trivalent Cr 3+)</b>	5 mg/L	
<b>Chromium (hexavalent Cr6+)</b>	1 mg/L	
<b>Copper (Cu)</b>	0.2 mg/L	
<b>Iron</b>	<10 mg/L	Iron salts can precipitate creating a potential for system blockage. High concentrations of ferric iron can also cause problems with colour. Iron can cause problems with UV quartz sleeves by accelerating the fouling process
<b>Lead (Pb)</b>	0.5 mg/L	
<b>Manganese</b>	<5 mg/L	Manganese concentrations need to be limited to that which the plant can tolerate and extent of the water reuse. Manganese cause problems with UV quartz sleeves by accelerating the fouling process
<b>Mercury (Hg)</b>	0.05 mg/L	
<b>Nickel (Ni)</b>	0.2 mg/L	
<b>Silver (Ag)</b>	0.25 mg/L	
<b>Tin (Sn)</b>	5 mg/L	
<b>Zinc (Zn)</b>	0.5 mg/L	
<b>Benzene</b>	< 25 µg/L	
<b>Cyanide</b>	0.1 mg/L	
<b>Phenol</b>	< 50 µg/L	

UDML= Upper Daily Mass Load. The Upper Daily Mass Load may be applied in circumstances involving small volumes of wastewater or for very large waste generators. It provides limits for the total loading permitted per day instead of mg/L.

\*\* Denotes additional charges apply where concentrations fall within the specified range. No additional charge applies to concentrations below the lower value and concentrations above the upper value are not accepted.



## Appendix D: Prohibited Discharges

- Substances, such as fibrous material, large solid particles, materials likely to polymerise, that could block or otherwise be detrimental to the operation of the wastewater infrastructure.
- Substances, such as volatile solvents, that could generate hazardous gases or vapours in the wastewater infrastructure system.
- Chlorinated hydrocarbons.
- Fluorinated surfactants.
- Discrete oil or other materials that are immiscible with water.
- Stormwater and any other contaminated or uncontaminated water.

### Notes

1. Discharge from cyanide bath is accepted only after detoxification (the acceptable level of 0.1 µg/L g/L in the table above refers to rinses only). Cyanide is defined as cyanide which may be destroyed by alkaline chlorination.
2. The use of solvents, enzymes, genetically modified bacteria, or odour control agents in pre-treatment facilities is prohibited unless approved by GMB Water.
3. Radioactive liquid waste limits shall comply with the provisions set by the Environment Protection Agency's Radiation Protection Branch (phone 8463 7825).
4. GMB Water's Trade Waste team will determine specific discharge limits for contaminants such as herbicides, biocides, pesticides and flammable compounds.

Source: SA Water

## REFERENCES

1. Redland City Council's Trade Waste Management Plan (GL-1234-001), 2017 (QLD)
2. Douglas Shire Council's Trade Waste Environmental Management Plan (QLD)
3. Toowoomba Regional Council's Trade Waste Management Plan (QLD)
4. South Gippsland Water Trade Waste Customer Charter, 2012 (VIC)
5. City West Water Trade Waste Customer Charter (VIC)
6. SA Water – Commercial food preparation and service, 2018
7. SA Water – Commercial food preparation and service, 27/02/2015



## Version Information

Version	Date	Comments	Author	Reviewed By
1.0	Mar 2021	Initial Issue for consultation	MR, EA	CW
1.1	Apr 2021	External review – Tonkin Consultancies		CW
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