



WATER PNG Limited

TRADE WASTE POLICY

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TRADE WASTE POLICY

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TRADE WASTE POLICY

SUMMARY

Water PNG Limited is the national water and wastewater service provider of Papua New Guinea. It is responsible for providing services to the urban districts of the country. These services are primarily for the benefit of residential customers, but where possible it will also provide these services to commercial and industrial enterprises. When a business wishes to discharge anything apart from domestic wastewater to Water PNG's network, it must obtain approval to do so. This Policy sets out the requirements for approval and how Water PNG will manage the acceptance of these substances.

This Policy provides information on the categorisation of trade waste, the application and approval process and how Water PNG will monitor the quality of your trade waste, if accepted. It also outlines the penalties for non-compliance. Most customers will need to install some form of treatment at their own premises (known as pre-treatment) as a condition of acceptance. It is essential that the pretreatment is installed correctly and maintained as directed by the manufacturer and Water PNG.

The management of trade waste is one way that Water PNG can ensure that the wastewater network can operate as intended, without blockages in local networks and overloading treatment systems. This will lead to improved local communities and cleaner creeks, rivers and oceans around our country.

Water PNG looks forward to working with you as the Policy is implemented.

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1 WHAT IS TRADE WASTE?

Trade Waste is the wastewater that is discharged to the Water PNG wastewater network from commercial and industrial business processes. It also includes wastes that are received by Tanker into Water PNG's treatment facilities. It does not include domestic wastewater.

When Water PNG builds and operates its wastewater systems, its primary purpose is to treat the wastewater generated from domestic sources, such as houses, toilets and handbasins at workplaces. Trade Wastewater can contain substances that are not contained in domestic wastewater, or substances that have higher concentrations than what is expected from households. Because of this, Water PNG must assess each potential trade waste discharge to ensure that it can be accepted without causing:

- Blockages and damage to wastewater pipework and pumping systems
- Overloading of wastewater treatment systems
- Environmental harm
- Health and safety impacts to workers and the public
- Treatment by-products to not be safely and beneficially disposed of

These objectives form the basis of how trade waste discharges will be managed.

2 LEGISLATION

The *National Water Supply and Sanitation Act 2016* and the *National Water Supply and Sanitation (Amendment) Act 2020* give Water PNG its powers to operate across all declared water and sanitation districts of the country. Water PNG's right to enforce trade waste requirements is contained in the 2016 and summarised below:

- Part V Sec 22 requires the owner of land to apply for permission to connect to a sanitation system or undertake plumbing work or alterations
- Part V1 Section 25 allows Water PNG to impose charges, once endorsed by the Independent Consumer and competition Commission, and gazetted
- Part VII Sec 34 allows Water PNG staff to inspect premises connected to the wastewater network.
- Part VIII Sec 43 compels Water PNG to determine and periodically publish policies and standards for water supply and sanitation systems.

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3.2 POLICY STATEMENT

Water PNG accepts trade waste to its wastewater network provided it can be safely transported and treated without affecting people, Water PNG's wastewater assets and treatment systems, and the environment. All trade waste discharges will be assessed prior to being accepted, and monitored once approved. If on site pre-treatment is required, the discharger is responsible for its installation, operation and maintenance.

Trade Waste discharges place additional pollutant loads on sewerage systems. There are also additional risks associated with accepting discharges. This will be considered when considering approved discharges and developing Permit conditions. The cost of managing these risks and the additional wastewater loads will be recovered through trade waste charges.

Discharges that continually fail to comply with their Permit conditions may face financial penalties or disconnection from the wastewater network and/ or water supply network. Water PNG reserves the right to recover the cost of clean up of illegal and unauthorised discharges directly from the party responsible.

3.3 HOW THE POLICY WILL BE MANAGED

Water PNG will manage implementation of the Policy through a number of policy instruments. These instruments are:

1. **Customer Categorisation.** Trade waste generating processes vary considerably and therefore require different management regimes. The categorisation of your business process will determine the pretreatment installation and maintenance requirements, monitoring framework and charges.
2. **Mandatory Pretreatment.** Most trade waste discharges are in the commercial food or automotive service sector. These customers will be required to install trade waste pretreatment that is mandated by Water PNG. Water PNG will also set the maintenance frequency (pump-out regime). Once the pretreatment is installed the Permit holder is responsible for ensuring the maintenance event occurs at the specified time.
3. **Substance Guideline Values.** Where a trade waste business process is not listed as needing mandatory pretreatment, the Permit holder will be required to demonstrate how they will meet Water PNG's Guideline Values for the substances that are present in the trade waste discharge. This usually involves installing more complex pretreatment. The Permit holder will be responsible for operating and maintaining their pretreatment and demonstrating compliance through regular trade wastewater sampling and analysis.
4. **Application Process:** Any customer wishing to discharge trade waste will be required to apply in writing on the prescribed form. The information provided will enable Water PNG to assess whether the wastewater can be accepted

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5. **Trade Waste Permissions.** If your trade waste discharge is accepted the details will be formalised in a Permit. This Permit will be an agreement between you and Water PNG that outlines the conditions you must follow to keep discharging trade wastewater. It will also outline the steps Water PNG will follow to cease the discharge if you do not continually manage the trade waste discharge.
6. **Charges.** Water PNG will seek to recover the cost of providing a trade waste service through applying charges. These charges will cover the cost of assessing and managing trade waste discharges. Additionally, charges will be set to recover the additional load of trade waste substances discharge to the wastewater network.

The remainder of this document provides further details on them management plan and how these policy instruments will be utilised.

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4 MANAGEMENT PLAN

4.2 CUSTOMER CATEGORISATION

All trade waste processes are classified into three categories. The classification is important as it will determine how we will assess the impact of the wastewater; what level of pretreatment is required and the type of monitoring and maintenance that will be required by the discharger and Water PNG.

The categories are:

- 1. Low risk processes**
- 2. Commercial processes**
- 3. Industrial processes**

1. Low risk – business processes that are of low risk to the Scheme but aren't classified as domestic sewage. The processes have some minor pretreatment requirements. There are no Trade Waste charges applicable provided the customer installs and maintains the prescribed trade waste pretreatment. The processes will be listed in the Permit.

A full list of these processes and pretreatment requirements is contained in Appendix A

2. Commercial – these processes require on-site pretreatment prescribed by us before the trade wastewater can be permitted. Once approved, the details of each commercial process and the corresponding pretreatment will be included in the Permit. The pretreatment maintenance will be set by Water PNG and can be reviewed annually. The property will be regularly monitored and will be subject to Trade Waste Fees and charges.

A full list of these processes and pretreatment requirements is contained in Appendix A

3. Industrial - Any process not listed as low risk or commercial. Each business process will be assessed by us based on the Trade Waste Policy Objectives and the Guideline Values. If approved, the details of each process and any special conditions will be included in the Property Agreement. The Responsible Discharger will be required to also enter into an Agreement with us. They will provide and maintain pretreatment and monitor the wastewater quality and quantity by regular sampling and analysis of the trade waste stream. The discharge will be regularly monitored by us and will be subject to Trade Waste Fees and charges. Quality charges will be based on the actual mass of substances discharged.

A full list of the Guideline Values is contained in Appendix B

As the business sector evolves, we may change or create a business process with appropriate notice.

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4.3 MANDATORY PRETREATMENT

Business processes listed in category 1 or 2 will be accepted to the wastewater network provided they install the pretreatment listed for their business process and keep it maintained (pumped out) as detailed by Water PNG. The sizing is defined as the 'working capacity' of the pretreatment, which is the volume of water which is held in the pretreatment based on the position of the outlet pipe. You may install larger pretreatment if you believe there is scope for the business to grow. Pretreatment that is smaller will not be accepted and will be considered non-compliant.

When you apply for your Trade Waste Permission you will be required to provide details on the pretreatment being installed, including its dimensions, working capacity and location on the property.

Water PNG has a standard design for the most common form of mandated pretreatment, the grease arrestor. These are used on commercial food premises such as restaurants, cafés and commercial kitchens. If the proposed grease arrestor is not based on this design, it will need to be assessed as part of the approval process.

The pretreatment will need to be installed by a licensed plumber and will be inspected by Water PNG before the installation is approved.

Grease Arrestors

In most cases, the minimum working capacity of a grease arrestor is 1000 litres. In some cases, the capacity may be achieved by installing multiple arrestors.

Where it is intended that several trade waste generators share the use of a grease arrestor, the following information is required to be clearly tabled on the plan submitted with the application for approval:

- a) the working capacity of the arrestor;
- b) details of the loading to be discharged by each trade waste process;
- c) the names of the businesses and shop number(s) sharing the arrestor.

The maximum working capacity of a single grease arrestor is 5000 litres. Where the hydraulic loading exceeds this volume, the site drainage must be split over multiple arrestors.

Grease arrestors must be located to allow access for inspection, pump out and cleaning. Access to a hose cock will be required for cleaning.

All grease arrestors shall be fitted with full length and width opening, gas tight covers and frames.

The use of solvents, enzymes, mutant or natural bacterial cultures, odour control agents or pesticides in grease arrestors is prohibited unless specifically approved by Water PNG.

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Maintenance cleaning (pumpout) of grease arrestors shall be carried out based on the details in the property's Trade Waste Permit. Evidence of the pumpout, such as waste company dockets, should be kept on site and be made available at inspections.

Oil/ Water Separators

Appropriately sized mineral (petroleum) oil separators for the treatment of oily wastewater will be required for business discharging to sewer from automotive and machinery maintenance businesses. The most common forms of pretreatment include:

- a) Triple stage interceptor pits
- b) Coalescing plate separators.
- c) Hydro-cyclones.

Each application will require details of the nature of the oily waste to be treated, the proposed treatment system and site location. Above ground separators are rated by the capacity of the pump used to transfer oily wastewater into the separator. The pretreatment must be located to allow access for inspection, maintenance cleaning. Access to a hose cock will be required for cleaning.

Maintenance cleaning of mineral oil arrestors shall be carried out on in accordance with conditions of the trade waste approval. Evidence of the pumpout, such as waste company dockets, should be kept on site and be made available at inspections.

Other Arrestor Applications

Arrestor installations may be used for other trade waste treatment applications such as silt separation, cooling or neutralisation. Each application should include details of the nature of the waste to be treated, the proposed treatment method and site location.

A full list of these processes and pretreatment requirements is contained in Appendix A

4.4 SUBSTANCE GUIDELINE VALUES

If your business is not listed in Appendix A, assessment of whether your trade waste will be accepted will be based on your ability to meet the Substance Guideline Values listed in Appendix B. These values are based on a suite of variables, including the availability of technology to treat to these levels, and Water PNG being able to manage a limited volume of trade wastewater with these values.

The concentration value will be set, unless otherwise stated in Appendix B, by a composite sample, which is defined as one or more equal aliquots over a production day. In the case of substances that have a value based on worker and public safety the value is derived from a discrete sample.

In most cases, you will be required to install and operate trade waste pretreatment. The pretreatment will need to be installed so that there is a point where wastewater samples of the trade wastewater can be taken without being contaminated with site domestic wastewater. If the

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trade waste volume will exceed 10 kL/day you will also be required to install flow measurement on the trade waste discharge.

4.5 APPLYING FOR A TRADE WASTE PERMIT

No customer has an automatic right to discharge trade waste to the wastewater network. Part 5 Sect 22 of the Act requires the property owner to apply to connect to a sanitation system or to do plumbing work relating to a connection. Additionally, Sect 23 requires the submission of a proper plan of the plumbing and drainage of the building.

A person or a company intending to discharge trade waste to sewer must make written application for an approval to discharge. The application forms are available by downloading them from the Water PNG website, or copies are available at Water PNG Offices. If you are not the owner of the property you are required to obtain their signature on the application form as they will be the Permit holder and will be responsible for payment of any fees.

If you are an existing customer and don't have a Trade Waste Permit or approval from Water PNG or the former water utilities, you will also have to apply for a Permit.

In addition to filling out the Application Form, you will be required to provide:

- A property sketch showing the location of the trade waste generating process(es) and the proposed location of trade waste pretreatment
- A sketch of the proposed pretreatment, including dimensions and working capacity
- Details of the plumber undertaking the connection work.

If your trade waste discharge is more complex, you may also be required to provide information on the proposed trade wastewater quality and any chemicals that will be used in the manufacturing process.

Once your application is received it will be assessed by Water PNG's Wastewater Quality Team. The outcome of the assessment will be provided to you in writing. You will be advised that your application

1. has been assessed and approved subject to conditions
2. held over until you provide more information
3. rejected due to reasons which will be stated in the letter.

4.6 TRADE WASTE PERMISSIONS

We will assess your application based on the information provided and the ability to ensure that our Trade Waste Objectives can be met. If the information provided is satisfactory and we believe we can accept the wastewater, you will be notified in writing that your application is approved, and you can proceed with setting up the business and installing trade waste pretreatment. We will ask you to provide us with an expected completion date for plumbing works and the date when your business commences operation. This is so we can monitor the progress of your development and inspect the pretreatment once installed.

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Businesses that apply for permission to discharge trade wastewater to the sewer but do not meet our conditions for discharge will be refused permission. Existing businesses that do not meet our conditions for discharge may have their Permission suspended and/ or terminated. We may disconnect the trade wastewater service to a customer's property if the customer discharges trade wastewater to the sewer without Permission. If we have reason to believe that the business may continue to operate without the trade wastewater service, we may also disconnect or restrict the water supply to the Property.

When you inform us that your business has been established and trade waste pretreatment installed, we will visit your property to verify that we can give you permission to continue to discharge to our network. The inspection will check that the pretreatment is operating and the business information you provided us with at Application stage has not varied significantly.

If you are a Category 1 or 2 Customer, we will include the business process information in the Trade Waste Permit. If the trade waste pretreatment requires routine maintenance, such as a regular pump-out of a grease trap, we will also include a schedule of when these maintenance events should occur. It will then be the Permit holder's responsibility to arrange the maintenance event and keep records on site as evidence.

If you are a Category 3 Customer, we will undertake a similar verification procedure and we will enter into an Agreement with the discharger. This Agreement will include details such as:

- The trade waste generating process(es)
- The substances present in the wastewater
- The allowable daily concentration and mass of each substance
- Pretreatment and flow monitoring equipment that must be maintained
- Monitoring requirements of both parties, including sampling and analysis of trade wastewater
- Non-compliance procedures
- Incident notification protocol
- Cease discharge protocol

Any trade wastewater samples must be analysed by laboratories registered with the Papua New Guinea National Laboratory Accreditation Service (PNGLAS) to perform that class of test or specific test/s. Water PNG will assess these results against both the concentration and mass specified in the Agreement.

Effluent Improvement Programs

For Category 1 and 2 Permits, the installation of a properly sized, approved pre-treatment, together with an acceptable maintenance program in accordance with the Permit conditions will be deemed as compliant. If the wastewater is non-compliant due to change on site, the discharger will be required to submit an Effluent Improvement Program that outlines when additional pretreatment will be installed. Water PNG will allow a discharger 6 months to comply.

For Category 3 Agreements, where persistent breaches of Agreement conditions occur, Water PNG will require Effluent Improvement Program. This program will include details of:

- Pre-treatment to achieve compliance

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- Timeframe for installation
- Provision for monitoring and reporting trade waste quantity and quality.

The timeframe for the Program must not exceed two years

Inspection and Monitoring

Water PNG will carry out inspections of the premises and pretreatment facilities as specified in the Permit. Water PNG may also inspect premises upon complaint or if it has reasonable grounds to believe the Permit holder is in breach of conditions.

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

- a) Ensure all chemical storage areas to ensure that they are properly bounded and are not improperly connected to sewer.
- b) ensure there are no storm water connections to the trade waste system or wastewater network.
- c) ensure that there are no unregistered trade waste connections to storm water or sewer and that there is no potential for trade waste to overflow improperly to sewer, storm water or waterways.
- d) ensure that pre-treatment facilities are regularly and properly serviced and standby equipment is available where necessary.
- e) Monitoring of strength and flow is undertaken as required under the trade waste approval.
- f) Assessment of work practices to ensure that they do not result in a breach of the trade waste approval or legislation

4.7 CHARGES

Trade Waste fees and charges are regulated by the Independent Consumer and Competition Commission (ICCC). In determining the fees and charges Water PNG aims to recover the costs directly attributable to the acceptance and processing of trade waste.

The types of fees and charges are as follows:

Application Fees

Category 1 and 2K < >
Category 3.....K < >

Annual Permit Fees

Category 2 Permit Fee
Category 3 Agreement Fee

Non-compliance Fees

Reinspection FeeK < >/hour or part thereof

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Quality Charges

| | |
|---------------------------------|-----------|
| Category 2 Quality Charge | K < >/kL* |
| Category 3 Quality Charge | |
| BOD ⁵ | K < >/kg* |
| Suspended Solids | K < >/kg* |
| Grease | K < >/kg* |

*non-compliant discharges will be charged at 3times the standard rate until compliance is achieved

Analysis Charges

The cost of four (4) wastewater analysis has been included in the Annual Agreement Fee. Where additional sampling is required due to non-compliance the costs will be borne by the Agreement holder.

Septage and Other Liquid Waste Fees

Private licensed waste transporters disposing of septage, portable toilet or other approved liquid waste to the sewer or sewage treatment plant under approved conditions shall be charged as per Water PNG's determined schedule of fees.

5 REQUIREMENTS FOR SPECIFIC WASTE TYPES

5.2 REMOVING AND DISPOSING OF REGULATED WASTE FROM PREMISES

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

Removing and disposing of septic tank waste, portable toilet waste, holding tank waste, grease arrestor and pretreatment sludges shall only be undertaken by a licensed waste transporter. Such waste may be disposed of in accordance with approval conditions.

5.3 ENZYMES AND BACTERIAL CULTURES

Enzymes and mutant or natural bacterial cultures may be permitted for use in certain biological pre-treatment systems by way of specific application to Water PNG. Applicants will need to demonstrate that the product to be used does not adversely impact on the sewerage system or the environment.

Any person wishing to discharge commercial products containing genetically modified organisms (GMO's) must first obtain approval for discharge to coastal and inland waters from the Conservation and Environment Protection Authority (CEPA). Water PNG may then grant approval for discharge only after concurrence is sought from CEPA regarding the nature and quantity of discharge.

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

5.4 FOOD WASTE DISPOSAL UNITS

Food waste disposal units (garbage grinders / sink-to-sewer disposal units) may be approved for non-domestic use by specific application and the provision of additional pretreatment.

5.5 MEDICAL, CLINICAL, VETERINARY AND INFECTIOUS WASTES

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

No pathological, infectious or hazardous liquid wastes, and radioactive substance deemed to pose a threat to public health and safety can be discharged to the sewer without prior approval from the Water PNG. Such wastes shall require pre-treatment to render them non-infectious or non-hazardous prior to discharge. When approved for discharge, trade waste charges will apply.

5.6 CONTAINMENT OF TOXIC/HAZARDOUS SUBSTANCES

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

5.7 DISCHARGES FROM OPEN AREAS

The discharge of rainwater and storm water to sewer is prohibited.

The ingress of surface water from a potentially contaminated open area to the wastewater network can cause severe operational problems. However, there may be circumstances when it is environmentally beneficial to accept a portion of the flow under strict controls.

The discharge to sewer from any potentially contaminated open area that is raised or bunded may be considered, provided the quality and quantity requirements of this plan are met.

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

All applications for discharge from open areas must have controls incorporated in the design that will ensure that:

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- a) all contaminated liquid waste is pumped to sewer at an acceptable rate;
- b) all discharge to sewer ceases automatically after a predetermined level of rainfall volume (mm) and/or intensity (mm/hr) occurs;
- c) the "first flush" volume is collected and segregated during wet weather with additional runoff directed to the storm water system.
- d) the "first flush" volume collected is pumped to sewer, after any necessary pre-treatment, no sooner than one (1) hour after rain ceases;
- e) a suitable device for the determination of volume is installed.

Charges in accordance with the discharge category classification will apply.

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APPENDICES

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APPENDIX A – LOW RISK AND COMMERCIAL BUSINESS PROCESSES AND PRETREATMENT REQUIREMENTS

CATEGORY 1: LOW RISK BUSINESS PROCESSES

Low Risk business processes are deemed to have permission to discharge to the wastewater network provided they meet the listed requirements. No Trade Waste Quality Charges are applicable.

| Business Process | Trade Waste Pretreatment Requirements |
|--|--|
| Aquariums | Must meet PNG Quarantine Requirements |
| Beautician | No requirements |
| Ceramics and pottery (hobby and schools) | Plaster trap or settling tank on sinks |
| Building Site | No discharge to the sewerage network. Pipe work with open connection points must be capped |
| Dental Surgery | Amalgam trap and segregation of waste amalgam |
| Dental Technician | Plaster Traps on affected sinks |
| Doctor's Surgery | No requirements |
| Dog groomer, pet shop | In floor bucket traps. No use of organophosphate based treatments |
| Dry cleaners | No solvents can be discharged to the sewerage network |
| Florist | No herbicides or pesticides |
| Funeral Parlour | No requirements |
| Hairdresser | In sink screening and bucket traps in floor waste |
| Lens Grinding | Solids settlement pit under laboratory sink |
| Mobile Carpet Cleaner | 20 micron final filter |
| Residential Car Wash Bay | <ul style="list-style-type: none"> Locate vehicle wash bay on a roofed and bunded hard surface or enclosed area and install an in-floor bucket trap Discharge to sewer via minimum 1,000 litres/hour oil/water separator |

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| | |
|--|--|
| | <p>system or 1,000 litre general purpose pit</p> <ul style="list-style-type: none"> • Display a sign stating, 'No degreasing or mechanical work in the wash bay' and have condition monitored by Strata Committee |
| Residential Bin Wash Area | <ul style="list-style-type: none"> • Roof and bund bin wash area to exclude rainwater and install an approved in-floor bucket trap • Discharge directly to the wastewater system (sewer) via floor waste • Use only soap-based products to clean garbage bins or • Bund bin wash area to exclude run-off from other areas and install approved diversion system* • Use only soap based products to clean garbage bins |
| Sanitary Bin Washing | <ul style="list-style-type: none"> • Roof and bund bin wash area to exclude rainwater and install an in-floor bucket trap • Discharge directly to the wastewater system (sewer) via floor waste • Use only soap-based products to clean garbage bins or • Bund bin wash area to exclude run-off from other areas and install approved diversion system • Use only soap-based products to clean garbage bins |
| Swimming Pool (Residential, Hotel, Hospital) | No open areas discharging rainwater to the wastewater network |
| Venetian Blind Cleaning | No requirement |

CATEGORY B: COMMERCIAL BUSINESS PROCESSES

The Business Processes listed require the Property Owner to apply for Permission to discharge trade wastewater. Each business will be required to install onsite pretreatment and will be responsible for its maintenance. The type of pretreatment is prescribed by Flow Systems. Trade Waste Charges are applicable

| Business Group | Business Processes | Pretreatment Requirements |
|--|---|---|
| Automotive Industry | Car Detailers, Car Washes, Mechanical Workshop, Panel Beaters, Service Station, Vehicle Wrecking Yard | Dedicated wet area that is roofed and bunded, with a minimum 600 litre solids settlement pit. Waste is then pumped to an above ground oil/ water separator |
| Commercial Food Premises | Butchers, Care Facility Kitchens, Caterers, Commercial Bakeries, Delicatessens, Function Centres, Restaurants, Take Away Food | Grease Trap of minimum 1000 litres capacity. The Commercial Food Premises table lists minimum requirements for specific business processes |
| Commercial Laundries | Laundries attached to care facilities, hotels and function centres. Laundromats | Lint screening. Temperature should not exceed 38°Celsius |
| Photographic Premises | Graphic arts, medical facilities with x-ray processing, Minilabs | Silver rich solutions collected and disposed off-site |
| Shopping Centres and Public Entertainment Venues | Commercial Precincts with common pretreatment for multiple businesses | Minimum 1000 litre grease trap with a sizing allowance of 500 litres per business process. The maximum size of any grease arrestor is 5000 litres. If a larger capacity unit is required, the flow from business processes will need to be separated. |
| Other Processes | Aquatic Centres, Battery rooms, Boiler rooms and Cooling towers | Instantaneous flow rate restrictions may apply |

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COMMERCIAL FOOD PROCESSES

Most stand-alone commercial food premises require a minimum 1000 litre capacity grease arrestor. The table below lists business types with specific minimum sizing requirements.

| Business Process | Minimum size Grease Trap |
|---|---------------------------------|
| Asian BBQ | 2000 litre |
| Burger and Chicken Chain Restaurants | 2000 litre |
| Hotels with room service and breakfast | |
| 50 – 199 rooms | 2000 litre |
| 200 – 400 rooms | 4000 litre |
| Restaurants and Function Rooms with seating over 69 seats | |
| 70 – 399 seats | 2000 litre |
| 399 – 599 seats | 3000 litre |
| 600 – 1000 seats | 5000 litre |

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APPENDIX B – CATEGORY 3 GUIDELINE VALUES.

The substances and their values are based on achievable effluent quality through readily available trade wastewater pretreatment equipment. These values are guidance only and could be replaced by more stringent conditions should the Trade Waste Policy Objectives not be met in a particular Sanitation District Scheme.

The substances will be listed in a Trade Waste Agreement with an upper concentration and daily mass limit. This will be monitored by regular sampling and analysis by both the Permit Holder and the Utility.

Trade Waste Charges are Applicable

| Substance | Value | Comments |
|------------------------------------|------------------|--|
| Ammonia | 100 mg/L | Measured by discrete sample |
| Biochemical Oxygen Demand (5 days) | 1000 mg/L | Subject to Sanitation District Scheme capacity assessment |
| Boron | 100 mg/L | |
| Bromine | 10 mg/L | |
| Chemical Oxygen Demand | 2000 mg/L | Subject to Sanitation District Scheme capacity assessment |
| Chlorine | 10 mg/L | |
| Cyanide | 5 mg/L | Cyanide amenable to alkaline chlorination |
| Fluoride | 30 mg/L | |
| Nitrogen | 120 mg/L | |
| Oil and Grease | 200 mg/L | Subject to Sanitation District Scheme capacity assessment |
| pH | 6.8 – 10.5 units | Measured on site as a discrete reading |
| Phosphorous | 35 mg/L | |
| Sulphates | 1500 mg/L | |
| Sulphite | 100 mg/L | |
| Suspended Solids | 600 mg/L | |
| Temperature | <38°C | Measured on site as a discrete reading |
| Total Dissolved Solids | | Subject to Sanitation District Scheme capacity assessment. Daily mass limits will be applied |
| Metals in Solution | | |
| Aluminium | 100 mg/L | |
| Arsenic | 2 mg/L | |
| Cadmium | 0.5 mg/L | |
| Chromium | 4 mg/L | No Hexavalent Chromium present in wastewater |
| Cobalt | 8 mg/L | |
| Copper | 10 mg/L | |
| Iron | 100 mg/L | |
| Lithium | 10 mg/L | |
| Manganese | 100 mg/L | |
| Mercury | 0.03 mg/L | |
| Molybdenum | 8 mg/L | |
| Nickel | 6 mg/L | |
| Selenium | 4 mg/L | |
| Silver | 2 mg/L | |
| Tin | 5 mg/L | |
| Zinc | 8 mg/L | |
| Organic Compounds | | |
| Aldehydes | | |

TRADE WASTE POLICY

| | | |
|---|-------------|---|
| Acetaldehyde | 3 mg/L | Measured by discrete sample |
| Butyl Carbitol | 100 mg/L | Measured by discrete sample |
| Dimethyl Sulphide | 1 mg/L | Measured by discrete sample |
| Formaldehyde | 20 mg/L | Measured by discrete sample |
| Propionaldehyde | 3 mg/L | Measured by discrete sample |
| Ketones | | |
| Acetone | 100 mg/L | Measured by discrete sample |
| Methyl Ethyl Ketone | 20 mg/L | Measured by discrete sample |
| Pesticides | | |
| Total | 1 mg/L | Measured by discrete sample |
| Organophosphorous | 0.1 mg/L | Measured by discrete sample |
| Per and Poly-flouro alkyl substances (PFAS) | 0.0002 mg/L | Measured by discrete sample |
| Petroleum Hydrocarbons | | The presence of any petroleum hydrocarbons will necessitate the installation of an LEL meter on the customers pump connection |
| Total | 25 mg/L | Measured by discrete sample |
| C ₆ – C ₉ | 3 mg/L | Measured by discrete sample |
| Benzene | 0.02 mg/L | Measured by discrete sample |
| Toluene | 0.3 mg/L | Measured by discrete sample |
| Ethyl Benzene | 0.8 mg/L | Measured by discrete sample |
| Xylene | 1 mg/L | Measured by discrete sample |
| Phenolic Compounds | | |
| Total Phenols | 80 mg/L | Measured by discrete sample |
| Pentachlorophenol | 5 mg/L | Measured by discrete sample |
| Polynuclear Aromatic Hydrocarbons (PAH) | 5 mg/L | Measured by discrete sample |
| Volatile Organic Compounds | | |
| Halogenated (Total) | 1 mg/L | Measured by discrete sample |
| Trichloromethane (Chloroform) | 0.1 mg/L | Measured by discrete sample |
| Tetrachloroethylene (perchloroethylene) | 0.01 mg/L | Measured by discrete sample |
| Trichloroethene (Trichloroethylene) | 0.1 mg/L | Measured by discrete sample |

PROHIBITED DISCHARGES

- Flammable/explosive substances.
- Non- medical diagnostic radioactive substances.
- Pathological, infectious and cytotoxic waste .
- Genetically modified (engineered) organisms.
- Stormwater and uncontaminated water.
- Chlorinated pesticides

TRADE WASTE POLICY

APPENDIX C: DEFINITIONS

Authority In examples described herein, an organisation or its employees which operates and manages a sewerage system.

BOD Standard parameter of organic pollution – a measurement of the (BOD) dissolved oxygen required by the micro-organisms in the biochemical oxidation of organic matter over a five-day incubation period, correctly known as 5-day BOD and written as BOD₅

Discharger/Occupier The occupant of the property or premises from which wastewater is discharged into the sewerage system.

CEPA The Conservation Environment and Protection Authority, who is responsible for the protection and monitoring of the environment

WATER PNG Water PNG (formerly PNG Waterboard) established under ‘*National Water Supply and Sewerage Act 1986*’ became effective on the 01st of January 1987. It is responsible for all declared water districts throughout PNG except NCD.

Sewage / Wastewater The total borne waste generated on a property or by a community intractable waste. That waste of which no environmentally sound treatment process is presently available (in the region in question, i.e. a process may exist elsewhere).

Oils and Grease Fats, oily and greasy materials of animal, vegetable or mineral origin

Occupier The authorised occupier of any property or premises

Trade Waste Liquid trade or factory wastes or chemicals or other impurities from any business, trade or manufacturing premises other than domestic waste, storm water or unpolluted water.

Agreement See trade waste agreement

Arrestor An apparatus designed to intercept and retain silt, sand, oil, grease, sludge and other substances in a waste discharge.

Board In this plan a reference to Board means the WATER PNG or any person appointed or authorised by the Water PNG to act on behalf of the Board as the case may require.

Bio-solids The treated solids (sludge) mainly organic, produced by sewage treatment. Domestic sewage. Faecal matter and urine of human origin and liquid household wastes from water closet pans, sinks, baths, basins and similar fixtures designed for use in private dwellings.

Effluent The liquid discharged following a wastewater treatment process.

Generator See trade waste generator

Human wastes Human faecal substances and urine.

TRADE WASTE POLICY

Permit See trade waste permit

Prohibited substances A substance prescribed in Appendix D this Draft

Regulated waste Non-domestic waste (whether or not it has been treated or immobilised) and includes for an element – any chemical compound containing the element; and anything that has contained the waste.

Sewage The wastewater from the community including all faecal matter, urine, household and commercial wastewater that contain human waste.

Sewerage or Sewerage System A sewer, access chamber, vent, engine, pump, structure, machinery, outfall or other work used to receive, store, transport or treat sewage.

Storm-water Drainage A drain, channel, pipe, chamber, structure, outfall or other work used to receive, store, transport or treat storm water

Trade waste The water-borne waste from business, trade or manufacturing premises, other than: waste that is a prohibited substance; or human waste; or storm water.

Trade Waste Agreement Trade waste approval for the discharge of liquid waste classified as Category 3. It states the terms and conditions to be met by the trade waste generator and the owner with respect to the discharge of trade waste into Board's sewerage system.

Trade waste approval Written approval by Board for a person to discharge trade waste to the sewerage system. See Trade waste agreement and Trade waste permit.

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

Trade Waste Permit Trade waste approval for the discharge of liquid waste classified as Category 1 or 2. It states the terms and conditions to be met by the trade waste generator and the owner with respect to the discharge of trade waste into Board's sewerage system.

Mg/l Milligram per litre (1kg/1000kl)

KL/d Kilotitres per day (1,000 L/d)

L/d Litres per day

ML/d Million Litres per day (1,000,000 L/d)

SS Suspended solids are the solids in a liquid which can be removed through sedimentation or filtration; excludes the larger contents removed by screens and the colloidal or dissolved solids.