

Pressure Sewerage Systems on Redlands Coast

Property owner's guide to
responsibilities and maintenance



This guide helps property owners with properties subject to Council's Pressure Sewerage System Policy (WAT-003-P) understand the requirements of operating and owning a pressure sewerage system.

Council strongly recommends that property owners be familiar with this guide that describes:

- Who is responsible for each part of the unit – the property owner or Council
- How to care for your unit
- What to do if the alarm sounds – a quick troubleshooting guide
- What procedures need to be put in place before you go away

The end section of this guide goes into greater details about conditions and responsibilities for each component of a Pressure Sewerage System.

Contents

| | |
|---|----|
| Why do I have a Pressure Sewerage System (PSS)? | 3 |
| What is a PSS? | 3 |
| Buying or selling a property serviced by PSS..... | 4 |
| Where Council is extending sewerage to an allotment and proposing to use a PSS..... | 4 |
| Maintaining a PSS - property owner's responsibilities..... | 5 |
| How do Pressure Sewerage Systems work? | 6 |
| Avoid blockages and damage to your pump – what not to flush down household drains | 7 |
| What precautions do I need to take when going on holidays or if my house will be vacant for a period? | 8 |
| Troubleshooting - why is my alarm going off?..... | 9 |
| Conditions of connection | 10 |

Why do I have a Pressure Sewerage System (PSS)?

Some properties are connected to a pressure sewerage system where it is impractical to use other systems, such as the gravity sewerage system predominantly used in Redlands Coast.

Pressure sewerage systems are often used in areas when the landscape is either very hilly or very flat, in areas which regularly flood or have high water tables.

What is a PSS?

A pressure sewerage system is made up of a network of fully sealed pipes which are fed by pumping units located at each connected property.

The pumping unit receives the household wastewater and transfers it to the pressure sewer located in the street via a small pipeline within the property. The pressure sewer forms part of the overall pipe network which ultimately transfers the wastewater to the nearest wastewater treatment facility.

Once installed, the only visible parts are the tank lid, boundary kit lid and control panel.

The diagram below shows the components that make up the system and the point of ownership transfer from Council to the property owner.

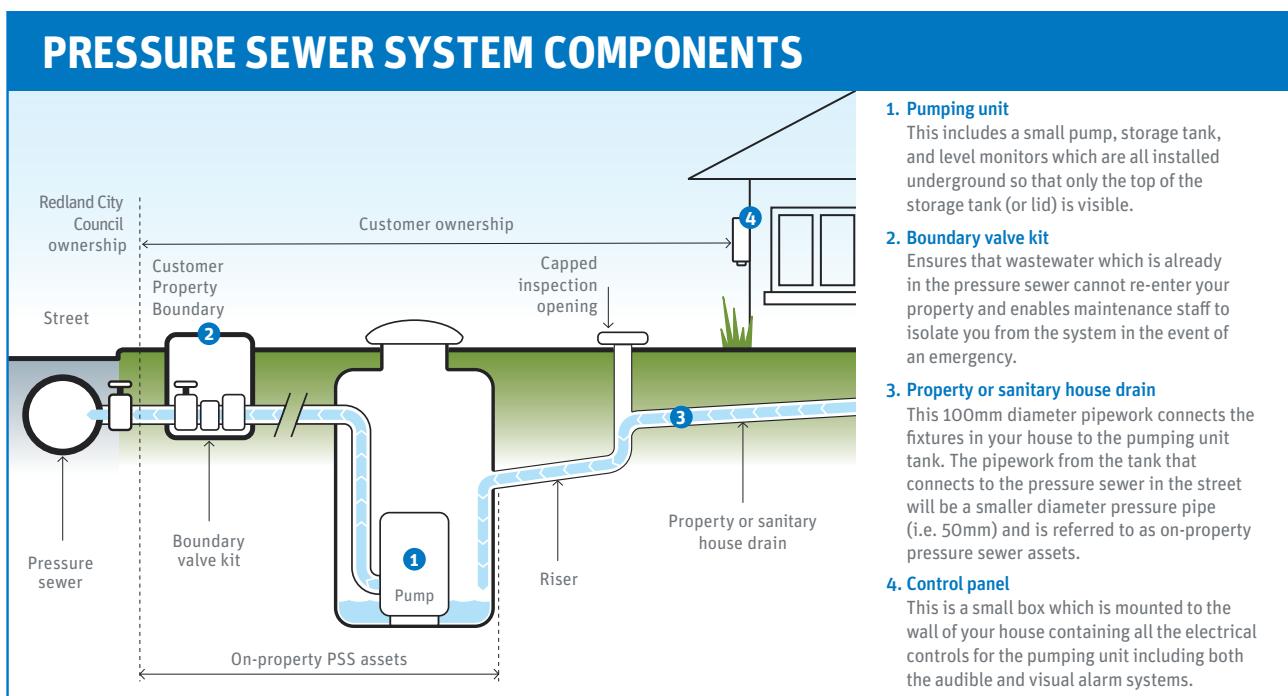


Image adapted from original diagram courtesy of Yarra Valley Water

Properties located within a reticulated pressure sewer area, require on-property PSS components contained within the allotment, and connected to the sewer main in the street for discharge.

Your on-property PSS has five main components:

- Boundary kit
- Pump and collection tank unit
- Pump control box
- Property discharge line
- Property sanitary / house drain

The property owner is responsible for owning and maintaining all components of the on-property PSS. This includes electricity cost of running the pump.

Buying or selling a property serviced by PSS

When you are *buying* the property, it is your responsibility to fully inform yourself of the on-property pressure sewerage infrastructure, its capacity and your ownership obligation before purchasing the property. You are required by Council to maintain and provide on request a current maintenance agreement with a registered service agent (to the satisfaction of Council) to service your on-property assets.

When you are *selling* the property, it is your responsibility to ensure that the vendor's sale agreements acknowledge the existence of a pressure sewerage system servicing your property and advise the purchasers of their responsibilities with regards to the installation, ownership and operation of the on-property pumping units and associated equipment that connects to Council's sewerage system.

Where Council has extended the sewerage network, using PSS, vacant allotments will only be connected by Council once you build on the allotment. Council will supply and install the on-property assets at no cost to you. Please contact Council to confirm if your allotment qualifies for connection and arrange for your connection prior to submitting a plumbing application.

Where Council is extending sewerage to an allotment and proposing to use a PSS

Council will only propose to use PSS if it is not feasible to use a gravity sewer to service your property. This may happen in instances where the land is either very flat or very hilly or there may be poor ground conditions (i.e. swamps or rock).

In these instances, Council will liaise with you during the design process to identify the most suitable location for the tank and pump on your property. This will normally be on the front of the property (street side).

Council will pay for the installation of the collection tank, the pump, the boundary kit and the connection to the Council sewer main in the street.

Council will ensure that all landscaping re-instatement is done to a similar quality than before Council installed the components on your property.

Once installed, the only visible parts are the tank lid, boundary kit lid and control panel.

The control panel will need to connect to your power supply. If Council finds any non-compliant electrical work, Council will not be able to connect the panel until the defective electrical work is rectified by your qualified electrician.

Once connected, Council will test all components and provide a 12 month manufacturer's warranty on defective equipment supplied (this does not apply to wilful or accidental damage to equipment by the property owner or tenant).

You will need to pay for the decommissioning of your septic tank and connection to the PSS upstream of the collection tank.

Council will then donate (by agreement) the on-property assets constructed by Council to you (the property owner). **The ongoing operation, maintenance and renewal of these assets will become your responsibility.** Council will require you to maintain and provide on request a current maintenance agreement with a registered service agent (to the satisfaction of Council) to service your on-property assets.

Wastewater will be treated and disposed or reused by Council.

If your allotment is vacant and Council has extended the sewerage network past your allotment you may be eligible for connection and installation of the on-property assets comprised of the collection tank, grinder pump and small diameter rising main.

Please contact Council to determine if your allotment qualifies.

Maintaining a PSS - property owner's responsibilities

The property owner is responsible for all on-property components of the PSS

- House drain
- Grinder pump
- Collection Tank
- Control System
- Property discharge line and boundary kit

Ownership transfers to Redland City Council at the property isolating valve located on the footpath.

Refer to your supplier operations and maintenance manual for any specific requirements of your system.

Maintenance is important

DO maintain and provide on request a current maintenance agreement with a registered service agent (to the satisfaction of Council) to service your on-property assets.

DO call your registered service agent of your PSS if you have any problems with your system.

DO operate and maintain all components of the on-property PSS so as to not create a nuisance or environmental harm (i.e. odour, noise, sewage overflow). It is an offence under the *Environmental Protection Act 1994* to cause environmental harm.

DO replace any worn or damaged components of your PSS system when they are no longer serviceable i.e. pump. Refer to the Suppliers list provided under "Conditions of connection" for advice on which products Council recommend for use within the RCC area. Council does not guarantee or warrant the performance of the products listed, however Council may from time-to-time exclude items that Council becomes aware of as being defective or resulting in excessive numbers of failures.

DO replace your pump when required with a like-for-like pump unit (the same as originally installed on your allotment with the same pumping flow and head condition specified).

DO advise tenants of their operation and maintenance responsibilities associated with the on property PSS if you rent out the property.

DO Opt-in to Council's disaster notification service, it can be accessed via: disaster.redland.qld.gov.au - best to be opened in Chrome. The service allows the user to receive 1. weather warnings (via email), 2. flooded road closures, and 3. emergency news.

Note that weather warnings can also be accessed directly from the BOM site bom.gov.au

Things to avoid

DO NOT turn off the electricity supply at your electrical distribution board as this may result in wastewater overflows.

DO NOT allow your collection tank to overflow and discharge sewage onto any neighbouring property or drainage channels or water courses.

DO NOT discharge rainwater to your collection tank. This will increase your pumping costs and during times of heavy rainfall may cause a sewage overflow and activate your system alarm.

DO NOT call Redland City Council if you have an emergency fault with your PSS unless your plumber or service agent advises you that the problem is being caused by the Redland City Council owned sewerage network, i.e. a blockage in the sewerage network outside your property.

DO NOT landscape or build over your collection tank lid or the boundary valve kit. Leave sufficient space around each of these components to enable access for maintenance should it be required

DO NOT install or operate pumping equipment that exceed neighbourhood noise limits.

7am to 7pm – where noise is more than five (5) decibels above the background noise level

7pm to 10pm – where noise is more than three (3) decibels above the background noise level

10pm to 7am – where noise can be clearly heard

If noise level exceeds the above levels when measured at a neighbouring premises, the owner may be liable to enforcement action. Background noise level is the ambient noise measurement obtained in the absence of the source noise being investigated.

Check your equipment annually to confirm all elements are still in good working order and remain compliant with the approved installation.

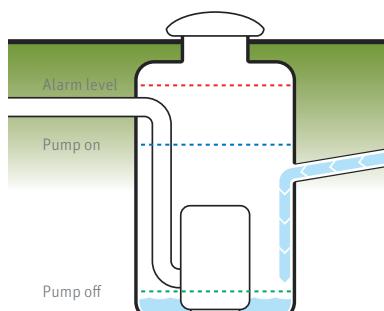
Refer to "**What not to flush down household drains**"

How do Pressure Sewerage Systems work?

Pressure sewerage systems differ from conventional gravity systems because they depend on a collection/pump unit to transfer wastewater off the property. A small collection/pump unit installed on the property pumps the wastewater into our main wastewater pipes.

STEP 1

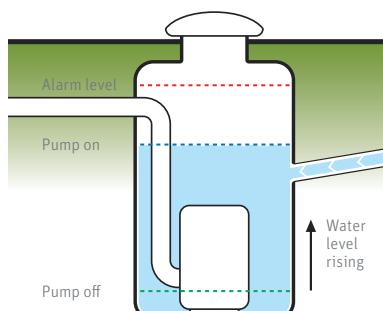
Wastewater enters the storage tank from the household drains (including sinks, toilets, showers, baths etc.)



✗ PUMP OFF

STEP 2

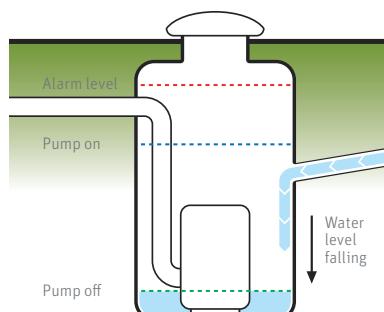
The wastewater level rises above the "pump on" level and the pump automatically turns on.



✓ PUMP ON

STEP 3

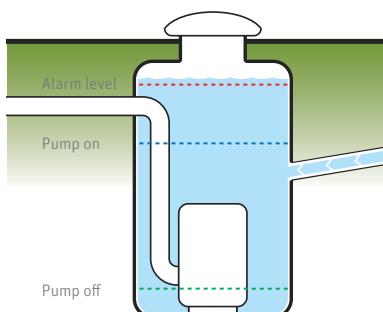
When the wastewater level is reduced below the "pump off" level, the pump automatically turns off.



✗ PUMP OFF

STEP 4

In the event of a power outage or pump failure, the wastewater level may rise above the "alarm level". The audible and visible alarm will automatically be activated. See the section titled "What you need to know about alarms" for further instructions on what to do if the alarm is activated.



✗ PUMP OFF

Image courtesy of Yarra Valley Water



Avoid blockages and damage to your pump – what not to flush down household drains

It is very important that the following items are NOT flushed down any of your household drains (sinks, toilets, showers, baths etc.) and into the pressure sewerage system. They can cause expensive blockages and damage to your pump.

- glass, broken glass
- metal or metal filings
- seafood shells
- aquarium stones
- rocks, sand
- kitty litter
- nappies, nappy liners, baby wipes
- sanitary napkins or tampons
- cotton buds
- socks, rags, pantyhose or clothes
- plastic objects
- milk, food scraps or cooking oil
- explosives
- flammable materials
- lubricating oil and/or grease
- strong chemicals
- paints (water soluble or oil based)
- petrol, gasoline or diesoline
- rainwater



The property owner is responsible for operation and maintenance of the on-property components. If the pumping unit fails due to any of the above items entering the storage tank, you are responsible for all costs of repairs or clearing blockages.

You will need to contact your plumber or PSS service agent to resolve any issues.



What precautions do I need to take when going on holidays or if my property will be vacant for a period?

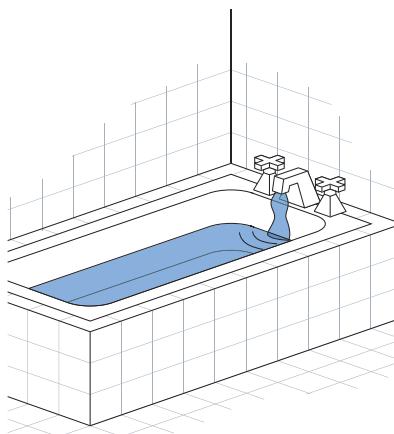
If you are going to be away for more than three days, your pumping unit needs to be flushed out to prevent potential odour problems.

It is suggested that you complete the following activities before going away.

FLUSH THE SYSTEM

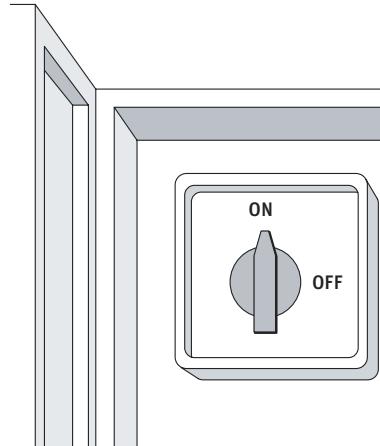
Run at least 190 L of clean water into the pumping unit until the pump activates and runs for about 30 seconds. After that time, turn off the water and allow the pump to run until it shuts off automatically.

You can do this by filling up the bathtub and then emptying it. This will prevent unpleasant odours developing while you are away on your holiday.



LEAVE PUMPING POWER ON

If there are any leaking taps or appliances within your household, there may be a small accumulation of wastewater in the storage tank. If the pumping unit is turned off, it could potentially overflow and there would be no audible or visible alarm to warn you or your neighbours of the problem.



Troubleshooting - why is my alarm going off?

In case of alarms

Please call your service agent in the first instance.

If your service agent believes the fault is in the Council network, please call 07 3829 8999. If the fault is found to be in Council's sewerage network Council will reimburse you the call out fee of your service agent.

NOTE: ALWAYS refer to your specific equipment supplier recommendations, however below is a quick reference guide that may assist you on what to do when dealing with alarms.

| SYMPTOM | ALARM SOUNDS AND FLASHING LIGHTS | POWER OUTAGE | POWER OUTAGE FOR LONGER THAN 8 HOURS | ALARM SOUNDS FREQUENTLY AND THEN TURNS OFF | YOUR NEIGHBOUR'S ALARM SOUNDS |
|--------------|--|--|--|---|--|
| ACTION | TURN OFF AUDIBLE ALARM | WAIT ONE HOUR BEFORE INVESTIGATING | MINIMISE WASTEWATER GENERATION AND ADVISE US | INVESTIGATE | CONTACT US |
| HOW TO DO IT | <p>Press the button on the underside of the control panel to disable the audible alarm.</p> <p>The audible alarm should automatically shut off after a period of time (regardless of whether the button on the underside of the control panel is pressed).</p> <p>The flashing light will only turn off if your service agent resets it, or the problem which has triggered the alarm is resolved.</p> | <p>If the alarm activates following a power outage, wait for one hour before investigating.</p> <p>The alarm may sound when the power is restored as the wastewater level in the storage tank may have built up to above the alarm level.</p> <p>Once power is restored, the pump will recommence pumping but may take up to an hour for the wastewater level in the tank to drop below the alarm level (this is due to a number of other pumps trying to empty their tanks at the same time).</p> <p>Please minimise water usage (showers or clothes washing) during power outages to reduce the risk of an overflow.</p> <p>If the pump is not pumping down the tank within three hours, contact Redland City Council to confirm if there is an issue with the Council's sewerage network.</p> | <p>Reduce water usage by:</p> <p>Not turning on clothes washers and dishwashers while the alarm is active.</p> <p>Taking shorter showers.</p> <p>Where a bath was filled, leave the plug in until after the alarm is cancelled or bucket out the water onto the lawn.</p> <p>Do not discharge any swimming pool or spa backwash water into the system.</p> <p>Use a portable generator or contact Council for assistance in periods of extended power outages, particularly if it appears that the duration may exceed twenty-four hours (excluding time when the residents are asleep). In the event of extended power outage events, the property owner may need to organise for storage tank to be pumped out, or contact Council for assistance.</p> | <p>Determine if there is any sudden discharge (overflow from a swimming pool or rainwater ingress).</p> <p>If the alarm sounds during or after rainfall, rainwater may be entering the collection tank.</p> <p>If the problem continues, please contact your service agent to investigate and repair the issue.</p> | <p>If you suspect your neighbour is not home, please contact us to inspect the property.</p> <p>The audible alarm will automatically shut off after a period of time</p> |

Conditions of connection

Preliminary

In these conditions: you and your, refers to the owner of the property (connected or to be connected) to our pressure sewerage system. Council, we, us and our, refers to Redland City Council.

Our Customer Charter sets out any service levels provided by Council.



Power

You are responsible for the connection of the pumping unit and control panel to mains power.

You must pay for electricity connection and electricity consumption charges.

If you turn off your power supply, your collection tank may overflow and you could be liable for damages to neighbouring properties or infringement penalties under the *Queensland Environmental Protection Act 1994* or *Public Health Act 2005*.

Property or sanitary house drain

A new connection application is required. Council will confirm the connection point to the Council owned sewer for your property if one is available. You are required to engage a plumber to design and install the sanitary house drain on your property. This is 100mm diameter pipework which connects the fixtures in your house to the pumping unit tank in a PSS area or directly to the gravity sewer in a gravity sewer area.

All new plumbing works on your property must be completed by a licenced plumber and approved and inspected by Council Plumbing Services. Any electrical work required to connect the PSS must be carried out by a licenced electrician.

On-Property PSS Assets

In backlog areas only, where Council decided to extend the sewer and is required to use PSS, Council will design, build and commission the on-property components excluding the property / sanitary drain. You are required to contact Council to confirm if your property qualifies as being within a RCC backlog PSS area as this will be noted in the rating system against the property. If your allotment is vacant and qualifies for RCC PSS, Council will install the on-property assets (excluding house drain) at no cost to enable you to connect to the sewerage network when you build on the property. We will meet with you and agree on the location of the on-property PSS assets within your property near the boundary closest to the Council pressure sewerage main. This is your connection point to the sewerage system for your sanitary house drain. Council will donate the on-property assets to you on commissioning of these assets. The on-going ownership, operation, maintenance and renewal of these assets will become your responsibility.

Pressure sewer bursts

If you notice wet ground or water escaping from your plumbing, it is possible that a pipe burst may have occurred. Such breaks are rare and are more likely to occur due to other work being carried out near the pipes. You will need to call a plumber to repair any pipework on your property.

If you notice wet ground or water escaping from the Council pressure sewerage system located on the footpath, please call Council to investigate and repair.

Pumping unit maintenance

Pumping unit repairs are generally simple. In most cases, your service agent will be able to make immediate repairs to your pumping unit. If the problem is more serious, your pumping unit may need to be replaced immediately by your service agent at your cost. Council recommends that you check your pump and electrical equipment annually to ensure they remain compliant.

Pumping unit replacement

You are responsible for all costs associated with the replacement of your pump.

Pumping volume

An increase in wastewater caused by a large number of visitors will not impact the pressure sewerage system. However, the pumping unit might have to pump more frequently.

In cases when there is a prolonged power outage and you have a large number of visitors your collection well may be undersized and may cause an overflow. It is recommended that in these instances you restrict water use to prevent an overflow.

Installation

If your property does not qualify for free installation of the on-property assets, you can make a request to Council to have your property connected at your cost. You are responsible for all costs associated with decommissioning an existing on-site wastewater treatment system and all costs associated with connecting your on-property assets to the RCC sewerage infrastructure.

Septic tanks are not permitted to be retrofitted as a collection tank.

Maintenance

You are responsible for any costs associated with maintaining property drains in good working order. Any work to be carried out on property drains must be carried out by a licensed plumber at your cost.

You are responsible for maintaining your pump and pressure main in good working order. Any work to be carried out on the pumping unit must be carried out by your service agent or a licensed electrician.

Pools and spas

You are not permitted to connect swimming pool or spa discharge (including backwash) water to the pressure sewerage system.

Restricted water use

Whenever you discover anything wrong with the pumping unit (including any power failure) or your property drain, you must restrict as much as possible the amount of water that is sent down your property drains.

This will reduce the amount of wastewater generated from your property while the fault persists thereby helping avoid an overflow at the tank unit.

Pressure Sewerage System Property Owner's Guide

You must ensure that a copy of the pressure sewerage system property owners' guide is kept at the property at all times, even if the property is leased or rented.

You can obtain further copies of this guide from our website at redland.qld.gov.au

Decommissioning old systems

When our pressure sewerage system is installed, you must arrange for a licensed plumber to decommission your existing on-site wastewater system, and arrange to connect to the pressure sewerage system within the time-frame indicated in the notice that the pressure sewerage system is available. You must pay for all work on your property associated with connecting to the Council owned isolating valve on the footpath or in backlog areas, the inlet of the pumping collection tank.

Selling your property

When Council provide any information statements about your property (for example, to a potential purchaser) it will state that the property is in a pressure sewer area and that special conditions of connection apply to it.

Costs and charges

If you are in a backlog area, you must pay the relevant backlog sewerage connection contribution (if applicable) once a connection point to your property is provided.

You will be responsible for the sewerage service charges which apply to all residential or business properties and is set out in the Council charges statement annually.

Property Boundary Kit

Between our property discharge line and the main wastewater pipes there is a one-way valve and isolation valve. These will: prevent flows from other properties entering your property, allow your property to be isolated for repairs and allow flushing of the system if required. Under no circumstances should you operate the Council owned isolation valve. Your boundary kit valves should not be operated unless your service agent is carrying out maintenance on your system. The valves should always be left in the open position on completion of works.

Grinder Pump

The grinder pump is housed within a collection tank on your property. The tank has mechanical and electrical parts. The grinder

pump breaks up solids to allow them to be pumped through the property discharge line to our main wastewater pipes. The collection tank is buried on your property, but the top needs to stick out from the ground to allow access for servicing.

The collection tank should be about 150mm out of the ground at all times. This will allow access for service calls when required. The collection tank cover must not be buried or covered in any way.

Control/alarm panel

The power and control functions for the pump are in a locked panel on the wall of your house, or on a freestanding post near the collection tank. An alarm will sound if there is a problem with the grinder pump. Only licenced electricians can work or service the control/alarm panel. The electrical equipment inside the control/alarm panel and the alarm light work on 240-volt power. Please call your electrician if you have any issues with the control panel.

PSS Suppliers

The following companies supply PSS components. Owners need to inform themselves in relation to the reliability, quality and performance of the product and Council does not warrant the performance of any of these products.

Category: PRESSURE SEWERAGE SYSTEMS

| Product | Manufacturer / Supplier | Trade Name | Size Range |
|--------------------------------------|--|--------------------------------|--|
| Household Pressure Sewer Pump System | eone – D-Series | Grinder Pump Systems | 1022 L / 1892 L |
| Household Pressure Sewer Pump System | eone – W-series | Grinder Pump Systems | 1022 L / 1892 L |
| Household Pressure Sewer Pump System | Aquatec Enviro – Enviroplex | Aquatec pressure sewer systems | 900 L |
| Household Pressure Sewer Pump System | Aquatec Enviro – Enduraplex | Aquatec pressure sewer systems | 950 L |
| Household Pressure Sewer Pump System | Aquatec Enviro – Duplex | Aquatec pressure sewer systems | 1100 L / 1500 L / 3000 L / 5000 L / 7500 L / 10000 L / 15000 L |
| Household Pressure Sewer Pump System | Xylem / ITT Flygt – Flygt Micro Series | Flygt Pressure Sewage Systems | 1200 L / 1900 L |
| Household Pressure Sewer Pump System | Grundfos – SEG Grinder Pumps | Grinder Pumps | |
| Household Pressure Sewer Pump System | Mono – ECO-160 | ECO Pressure Sewerage Systems | 900 L / 1100 L / 2200 L |
| Household Pressure Sewer Pump System | Mono – ECO-180 | ECO Pressure Sewerage Systems | 900 L / 1100 L / 2200 L |

All systems shall comply with WSA Product Specification No. WSAA PS – 401 Grinder Pumps and Related Components for Pressure Sewerage, WSA PS-402 Collection Tanks for Pressure and Vacuum Sewerage

 redland.qld.gov.au

 3829 8999    