GRIFFITH CITY COUNCIL

Home Owners

Pressure Sewer Manual

It is strongly recommended that you read this manual and thereafter keep it in a safe, but readily accessible place. You should re-familiarise yourself with it each year. If the property is rented then the manual should be provided to the tenant along with instructions for them to familiarise themselves with the document. Additional copies of the document are available from Council.

1.0 ABOUT YOUR PRESSURE SEWERAGE SYSTEM

Your property's sewerage service is provided by pressure sewerage system. A typical system is shown as an attachment to this manual These systems have been in operation for around 30 years overseas and should require little more thought or effort on the part of the resident than for a more conventional sewer system, excepting that the resident is required to contact Council if the alarm sounds.

This manual has been put together to assist you on how to operate your pressure sewerage system and what to do if things go wrong.

1.1 The Golden Rules

There are a few golden rules pertaining to the operation of the pressure sewerage systems that you need to be aware of, and comply with at all times. These are:

1. **Do not attempt to repair the unit yourself**. Council is maintaining your unit on your behalf (as part of your sewer rates). Your actions may void the warranties attached to the system.
2. **Do not take off the lid or enter the pumping unit** The inside of the pumping unit represents a confined space working environment that could be lethal, without the appropriate training and equipment.
3. **Do not discharge into the pressure sewerage system any of the prohibited substances set out in 1.3.**
4. **Do not connect your roof or yard drains into to the pressure sewerage system**, The system is not designed to accommodate these additional flows.
5. **When going on holidays, flush the pressure sewerage system.**
6. **If evacuating in an emergency, turn off all power, including the power to the pumping unit.**
7. **When in doubt about your pressure sewerage system ask Council.**

1.2 The Residents Role in the Operation and Maintenance of the Unit

In addition to observing these golden rules, the resident/ property owner is expected to carry out the following in relation to the operation of the pressure sewerage systems.

- Contact Council if the alarm sounds and follow the steps laid out in section 2.0.
- Make sure that the household drains are appropriately maintained and that no roof or yard water is allowed into the pressure sewerage system.
- Do not plant large trees over the sewer lines or in close proximity to the pump unit.

- Make sure the venting into the pumping unit remains clear at all times, so that it can function properly.
- Do not touch the valves in the Boundary Kit.
- Do not turn off the power supply to the pumps except under emergency situations or in response to a broken pressure sewerage pipe.
- Familiarise yourself with the location of the property delivery line, and avoid damage to the pipeline and pumping station.
- When you have contacted Council, ensure that the Council officer will have easy access to the pumping unit.
- The unit is to be connected to the resident power board but will be on its own circuit. The resident will be responsible for meeting the power costs and the pump is not separately metered.

The pumping station operates automatically, turning itself off and on based upon the level of the sewerage in the storage vessel. You as the property resident need do nothing in relation to the normal operation of the pumping unit.

1.3 What should not be discharge into the Sewerage System

The following substances should not be discharged into your pressure sewerage system, to avoid blockages or damage to the pump and/or grinder unit:

- Glass
- Metal
- Gravel/Sand etc
- Seafood Shells
- Goldfish Stone (Aquarium Gravel)
- Diapers, socks, rags or clothes
- Plastic Objects
- Sanitary Napkins or Tampons
- Kitty Litter
- Explosives
- Flammable Materials
- Lubricating Oil and/or Grease
- Strong Chemicals
- Gasoline
- Diesoline

1.4 What if the Pump Breaks Down

If the system breaks down, an alarm will sound to warn you that the system is not working. When this occurs you should follow the steps set out in Section 2. However some of the key maintenance aspects that the resident needs to be aware of are:

- The sounding of this alarm does not mean that you can no longer use your sewerage system. The Pumping unit still has around 400 or more litres of storage above where the alarm will sound. Use of this emergency storage is one of the main advantages to pressure sewerage systems over other sewerage systems. However some precautions must be adopted using this storage.
- There is no specific cost for normal repairs carried out by Council, as these are covered in your sewerage rates. However Council may charge for

damage done to the pipeline or damage pumping unit from abnormal behaviour.

- If the breakdown occurs after normal business hours, the repairs will normally be carried out the next morning as the pressure system has this emergency storage capability. However you should report it immediately.
- You do not have to be there for repairs to be carried out on the unit if you have followed the rules in respect to Council access laid out in 2.6 and Section 4.0 with the exception of secured backyards.

1.5 Going on Holiday

Where the residents are going on holidays, even a weekend away (and there is no one at home) then the pumping unit needs to be flushed out before going away. This is to avoid any potential for odour generation. It is suggested:

i. You run clean water into the pumping unit until the pump activates and runs for about 30seconds. Filling the bathtub and discharging it will achieve such a flush.

ii. Do not turn off the power to the pumping unit if you are turning off the power to the rest of the house. This is in case there are any leaking taps which might fill the storage vessel.

Where residents fail to clean their systems, before going on holidays and Council has to carry out a flush of the units in response to complaints from surrounding neighbours, it may choose to invoice the resident for the costs to carry out that work.

2.0 WHAT TO DO IF AN ALARM SOUNDS

When an alarm sounds the resident should respond by following the simple steps set out below:

2.1 Step 1 – Turn off the Audible alarm

The audible alarm can be turned off by pressing the button on the underside of the alarm panel, refer to figure 2.1. This panel will be mounted on the wall of the house, shed, and garage or on a stand alone post, if located away from the home.

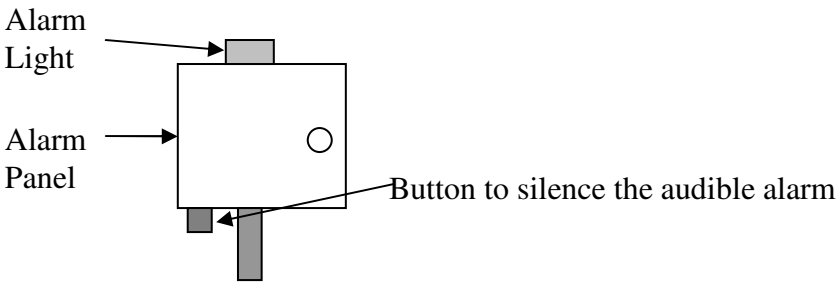


Figure 2.1
Location of Audible Alarm silencing switch

The alarm light cannot be turned off by the resident. It will turn itself off when the repairs are completed and the pumping unit is operating normally.

2.2 Step 2 – Determine if there has been a Power Blackout

If the alarm sounds immediately after a power failure (on a town/suburb wide basis), wait for one hour before calling Council. The alarm could in these instances sound when the power is restored, simply due to the storage that has occurred during the power outage. Therefore there could be a number of units trying to pump at the same time, but the system will limit the number of units that can pump. The system will therefore take a short time to clear.

2.3 Step 3 – Report the Alarm to Council

You should contact Council at the numbers below. However before you report the alarm to Council you should investigate the following:

- Is there any sewerage coming from the Overflow Relief Gully. (An inspection opening just upstream of the pumping unit.)
- Are there any discharges coming from the ground?
- Are there any perceptible odour problems?
- Has there been a power failure (as per step 2) and have you waited the suggested 1 hour before calling.
- Is the pump making any unusual noises?

The operator will ask you these questions, as well as the nearest cross street for reference purposes.

The Contact Numbers for Council's Emergency Services are:

Time	**Contact N^{o}**
Monday to Friday 8:30am – 5:00pm	6962 8100
Outside Business Hours	6964 0886

2.4 Step 4 – Agree with Council when Repairs Carried Out

When you are speaking to the Service Operator you need to confirm if there is an urgent need for the repairs to be carried out immediately. The normal method of repairs is to do these repairs the next morning, for the following reasons.

- To minimise the inconvenience to the residents and their neighbours, who probably don't want to be disturbed late at night.
- To minimise any potential damage to their householder's property (particularly the landscaping) as the repair officers will be able to better see where they are treading in the daylight hours.

- It keeps overall system operational costs down by avoiding costly after hours call outs.

2.5 Step 5 – Minimise Wastewater Generation until Unit is Repaired

In the period between when the alarm sounds and when it is repaired, you should minimise the overall volumes of wastewater being generated. This can be done in the following manner:

- Do not turn on any washing machines or automatic dishwashers whilst the alarm is activated.
- Keep showers brief.
- Where the resident takes a bath, leave the plug in until after the alarm has been cancelled or bucket out the water onto the lawn.
- Switch off any drainage (automated or not) from swimming pools, spa's, etc until after the unit has been repaired.
- Practice good water savings techniques such as not leaving taps running etc.

2.6 Step 6 – Ensure the Council Repair Officers have Access to the Pumping Station

Ensure the Council repair officer has access to the pumping unit. They might also need to carry the pump on a trolley to their truck and therefore a clear pathway will be required. The following actions should be taken:

- Ensure that any property gates are unlocked.
- Ensure that the driveway or pathway leading to these gates is clear to allow access.
- Lock up any pets that might escape the property.
- Ensure the lid of the pumping station is clear of any mulch, pot plants etc, and clearly visible.
- All landscaping that can be removed for around the pumping station should be removed.
- Ensure obstacles in the yard that might prohibit the trolley from gaining access to the pumping station are cleared away and you have a preferred pathway for the unit.

2.7 Step 7 – Confirm the Pumping Unit is repaired before Reverting to Normal Operation

The Council officer will inform the resident before leaving the site that all repairs have been carried out. If you have been away from the property you need to check

that the repairs have been completed before returning to normal operation. This can be determined by the alarm light no longer being illuminated.

3.0 WHAT TO DO IF THE DISCHARGE PIPELINE BREAKS

The pipeline from the pumping station to Council's sewerage reticulation mains is:

- Polyethylene Class 16 (flexible)
- Black in Colour
- Buried at a depth of approx 450mm
- Under Pressure

Being a sealed pipe system there are no (or few) joints that might allow tree root ingress, Also, the pipeline should not break as a result of ground movement. The most likely cause of pipe-breaks will be others digging near the pipeline and accidentally striking the main. Therefore always ensure you are aware of where the pipe is before commencing any digging. In the unlikely event that this line should break, it will behave more like a broken water main. If this occurs then you should take the following steps.

Step 1

Try and determine if the broken pipe is a watermain or a sewer main. Guides as to whether the broken pipe is a sewer main are:

- Smell
- Colour of the Pipe
- Location of the main (Is it where you expected the sewer main to be)
- Pulsing of flows, as they are pumped through these systems. A water main will flow fairly constantly until isolated.
- If the above are inconclusive turn off the household water main or the sewer pump and see if this makes a difference.

Step 2

If you believe it is a broken sewer pipeline, turn off the power to the pump in the household switchboard. These pumps have a separate circuit and will not impact the remainder of the house if they are turned off.

Step 3

Report the broken main to Council (as per section 2.3) and tell them you have switched off the pumps.

Step 4

Minimise the amount of wastewater discharged into the sewerage system, until repairs are carried out.

Step 5

Recommence normal operation only when Council has completed their repairs to the main and the alarm light has gone out. It is probable that the levels will have reached alarm levels when the repairs are affected.

4.0 COUNCIL ACCESS TO THE PRESSURE SYSTEM

The minimal requirements for access by Council repair service people are set out in section 2.6. However some key aspects in respect to access that need to be noted are:

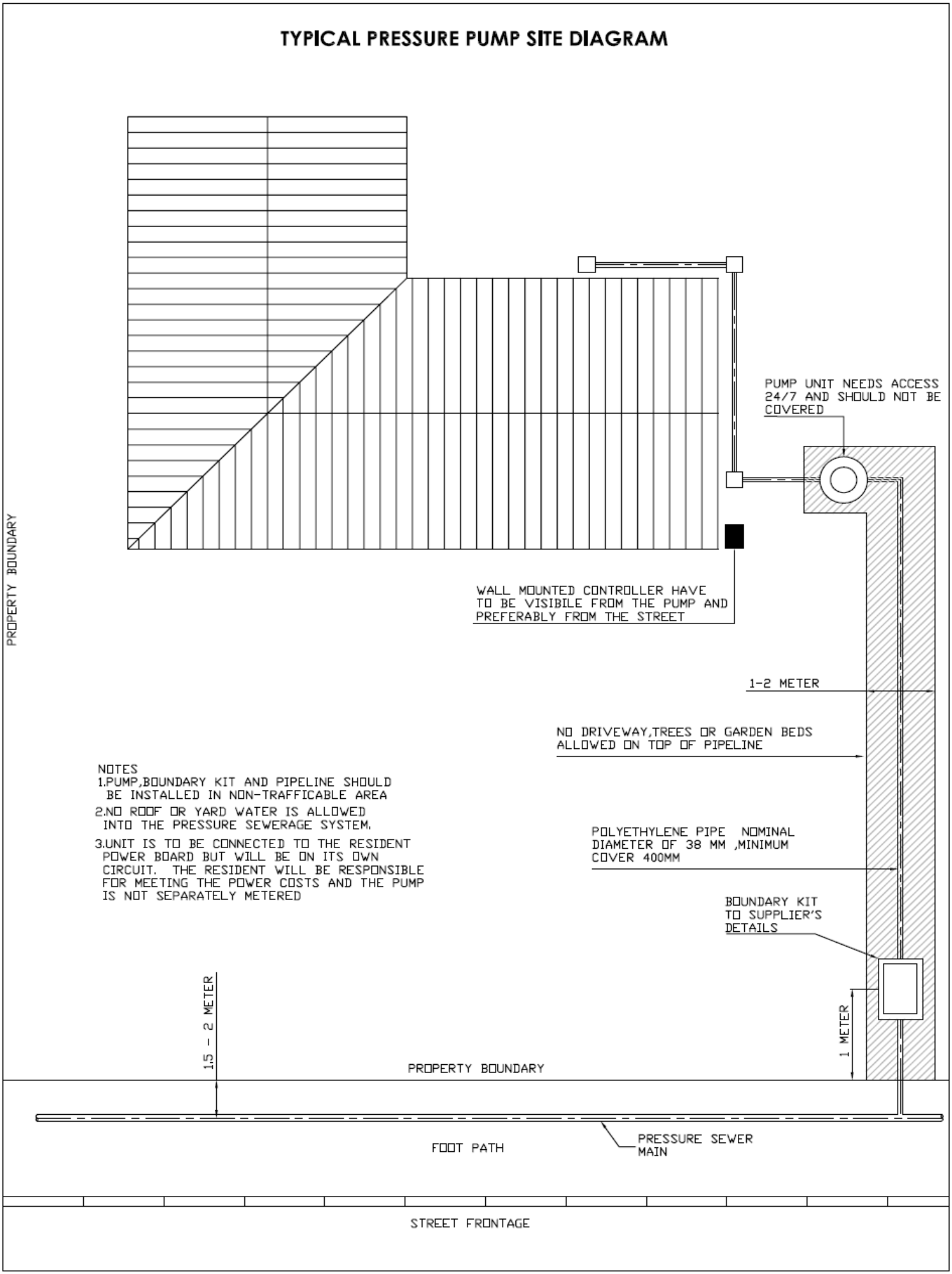
1. The unit is not to be buried, paved, concreted over nor permanently covered with any material
2. When the Council repair agent comes to repair the unit it must be accessible to these repair officers. If the Council officers are unable to locate the unit because it has been covered, Council may refuse to carry out repairs until the owner exposes the unit, and it may charge the resident a service call, even if the unit is not repaired.

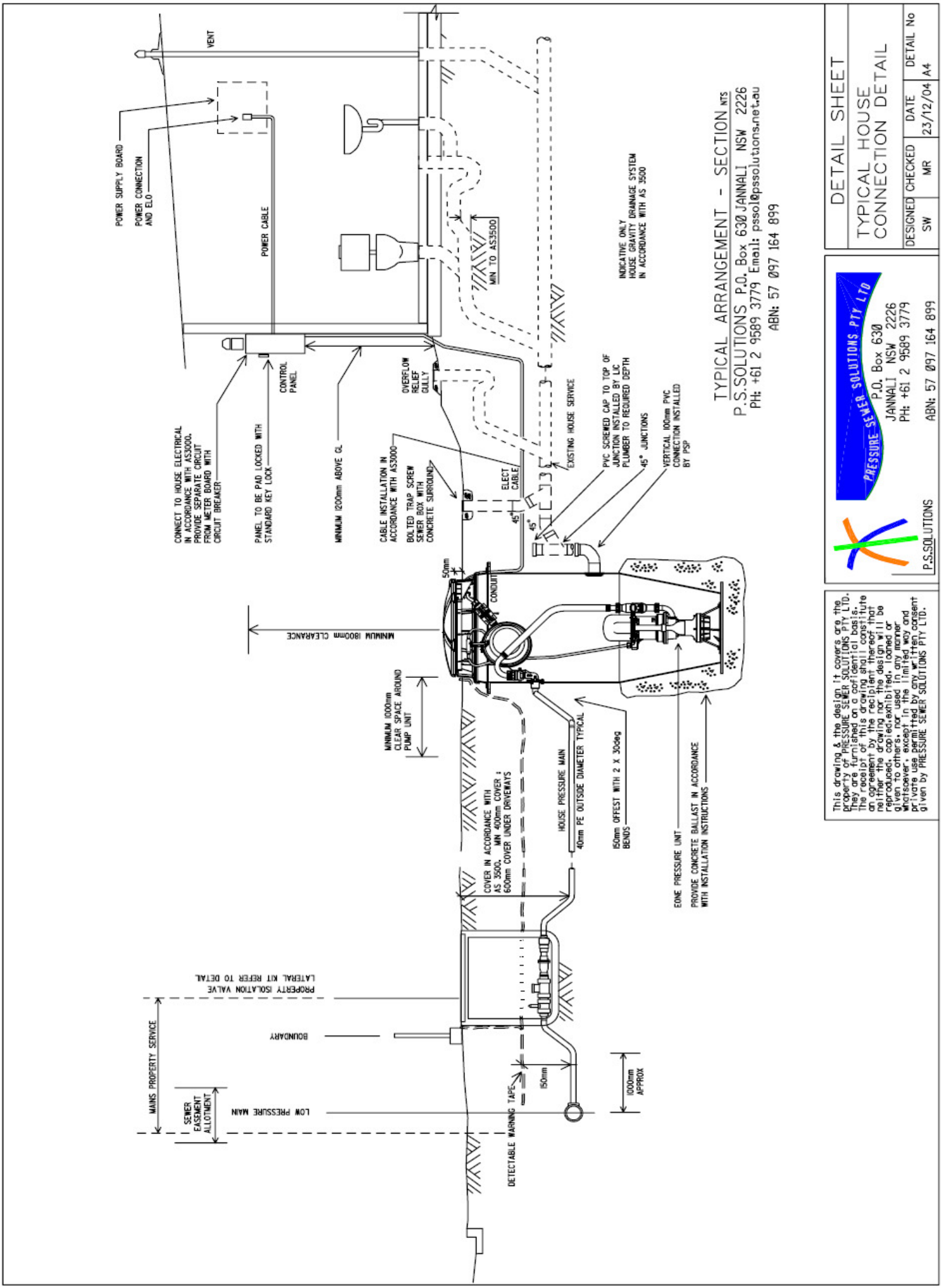
   At minimum, Council may pass on to the resident any costs for it to locate and uncover the pumping unit and it may choose to impose the fines for this covering of the asset under section 635 of the Local Government Act (1993) where it has been covered in a more permanent nature.
3. If pets are not secured Council officers may refuse to enter the property and carry out any repair works where they cannot contact the resident to secure the pets. In these instances Council will not be held liable for any repairs not being carried out and it may elect to send a service call invoice to the resident.
4. Access from any gates to the pumping unit for a trolley device will be required. The officer will need to place a lifting frame above the pumping station to lift out the pump and then carry the pumps away to their vehicle, and thus they need a path for the trolley. Any resident that closes off this access way will be responsible for any additional costs incurred and if additional equipment, such as cranes etc are required. Council will not be held to next day responses in these instances.
5. Any residents with secured properties must be present to allow the Council repair officers, access to the yard at the agreed time, based upon arrangements made when the resident calls to notify Council of the system failure.

5.0 COUNCIL NOT LIABLE

Council will not be held liable for any overflows that may occur on the property where the resident has failed to notify Council. Residents will be liable for any flows that happen off their property and may be prosecuted for environmental breeches if they have failed to notify Council. A record of all notifications will be maintained by Council.

TYPICAL PRESSURE PUMP SITE DIAGRAM




DETAIL SHEET
TYPICAL HOUSE CONNECTION DETAIL
DESIGNED SW
CHECKED MR
DATE 23/12/04
DETAIL No A4
TYPICAL ARRANGEMENT - SECTION NTS
P.S.SOLUTIONS P.O. Box 630 JANNALI NSW 2226
PH: +61 2 9589 3779 Email: pssol@pssolutions.net.au
ABN: 57 097 164 899
PRESSURE SEWER SOLUTIONS PTY LTD
P.O. Box 630
JANNALI NSW 2226
PH: +61 2 9589 3779
ABN: 57 097 164 899
P.S.SOLUTIONS
This drawing & the design it covers are the property of PRESSURE SEWER SOLUTIONS PTY LTD. They are furnished on a confidential basis. The receipt of this drawing shall constitute an agreement by the recipient thereof that neither the drawing nor the design will be reproduced, copied, exhibited, loaned or given to others, nor used in any manner whatsoever except in the limited way and private use permitted by any written consent given by PRESSURE SEWER SOLUTIONS PTY LTD.
VENT
POWER SUPPLY BOARD
POWER CONNECTION AND ELC
POWER CABLE
MIN TO AS3500
INDICATIVE ONLY HOUSE GRAVITY DRAINAGE SYSTEM IN ACCORDANCE WITH AS 3500
CONNECT TO HOUSE ELECTRICAL IN ACCORDANCE WITH AS3000. PROVIDE SEPARATE CIRCUIT FROM METER BOARD WITH CIRCUIT BREAKER
PANEL TO BE PAD LOCKED WITH STANDARD KEY LOCK
CONTROL PANEL
MINIMUM 1200mm ABOVE GL
OVERFLOW RELIEF GULLY
EXISTING HOUSE SERVICE
CABLE INSTALLATION IN ACCORDANCE WITH AS3000
BOLTED TRAP SCREW SEWER BOX WITH CONCRETE SURROUND
ELECT CABLE
45°
PVC SCREWED CAP TO TOP OF JUNCTION INSTALLED BY LIC PLUMBER TO REQUIRED DEPTH
45° JUNCTIONS
VERTICAL 100mm PVC CONNECTION INSTALLED BY PSP
50mm CONDUIT
MINIMUM 1800mm CLEARANCE
MINIMUM 1000mm CLEAR SPACE AROUND PUMP UNIT
COVER IN ACCORDANCE WITH AS 3500, MIN 400mm COVER ; 600mm COVER UNDER DRIVEWAYS
HOUSE PRESSURE MAIN
40mm PE OUTSIDE DIAMETER TYPICAL
150mm OFFEST WITH 2 X 30deg BENDS
EDNE PRESSURE UNIT
PROVIDE CONCRETE BALLAST IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS
PROPERTY ISOLATION VALVE
LATERAL NT REFER TO DETAL
BOUNDARY
MAINS PROPERTY SERVICE
SEWER EASEMENT ALLOTMENT
LOW PRESSURE MAIN
150mm
1000mm APPROX
DETECTABLE WARNING TAPE

Pressure Sewer Division

The EGL Boundary Kit

Boundary Kit

The boundary kit is a purpose-built unit, comprising of a non-return valve, unions and isolation ball valve & tee arrangement. To standardize the installation process, the boundary kit is positioned at a pre-determined distance within each of the property's boundary line, connecting the discharge line from the house to the pressure sewer main. The use of standardised kit facilitates quick removal or isolation of the system from the main sewer line if so required.

Boundary Kit Access Box

The Eone access box is a purposely-built, bottomless polypropylene box designed to house the lateral kit arrangement. The access box comprises of a molded unit with a removable reinforced recessed cover. The design characteristics, enables simple installation of the box after the pipe work and valveing is in place.

EGL
The Environmental Group Limited

Features include:

The Boundary Kit

- EOne non return flap valve used in pressure sewer projects for over 15 years
- Brass or 316 stainless steel isolating valve
- Quick disconnect union couplings with "O"Ring seals
- Pre-assembled to allow ease of connection to polyethylene pipe work.
- Each unit is assembled to a specific length to facilitate quick replacement if necessary.
- Designed to fit snuggly within the purposely built boundary kit access box

The Boundary Kit Access Box

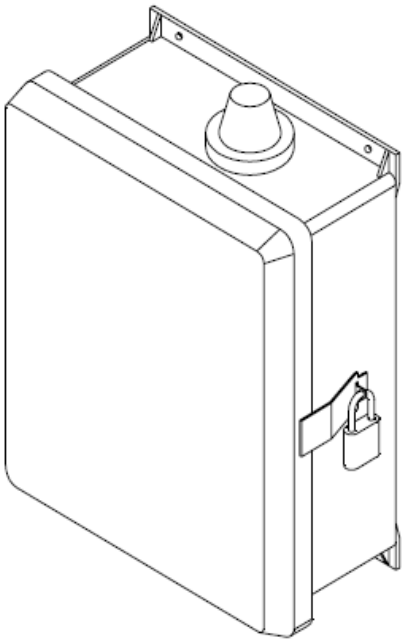
- Low profile, reinforced, non slip cover
- The cover is attached internally by means of a stainless steel cable to prevent theft
- The cover is clearly marked PRESSURE SEWER CONTROL VALVE
- Bottomless design to facilitate installation of the unit.

www.environmental.com.au

Environmental Group (Operations) Pty Ltd
Unit 3, 9 Packard Avenue
Castle Hill NSW 2154 Australia
Telephone: (02) 8858 3499
Facsimile: (02) 9899 3463

MOD 250

Simplex Alarm Panel



Description

The MOD 250 Electrical Panels are custom designed for use with Environment One Simplex Grinder Pumps. They are specified for installations that require an electrical disconnect separate from the residence distribution panel.

MOD Panels are be supplied with audible and visual high water level alarms. They are easily installed in accordance with relevant national and local codes. Standard MOD Alarm Panels are listed by Underwriters Laboratories to ensure high quality and safety.

Please consult factory for special applications.

Standard Features

Corrosion-proof fiberglass enclosure

NEMA 4X rated enclosure

Hinged access panel

Lockable latch with padlock

Circuit breakers

Terminal blocks and ground lugs

Optional Features

No audible alarm

Dry contacts

Remote contacts

120 VAC or 240 VAC service

LM000154, Rev A, 1/02