



Home Owners' Manual

Dutton Way Sewerage System

September 2013

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1 Introduction

This document is the Home Owners' Manual for the Dutton Way Sewerage System. This information is provided to assist you with its safe, long term and reliable operation.

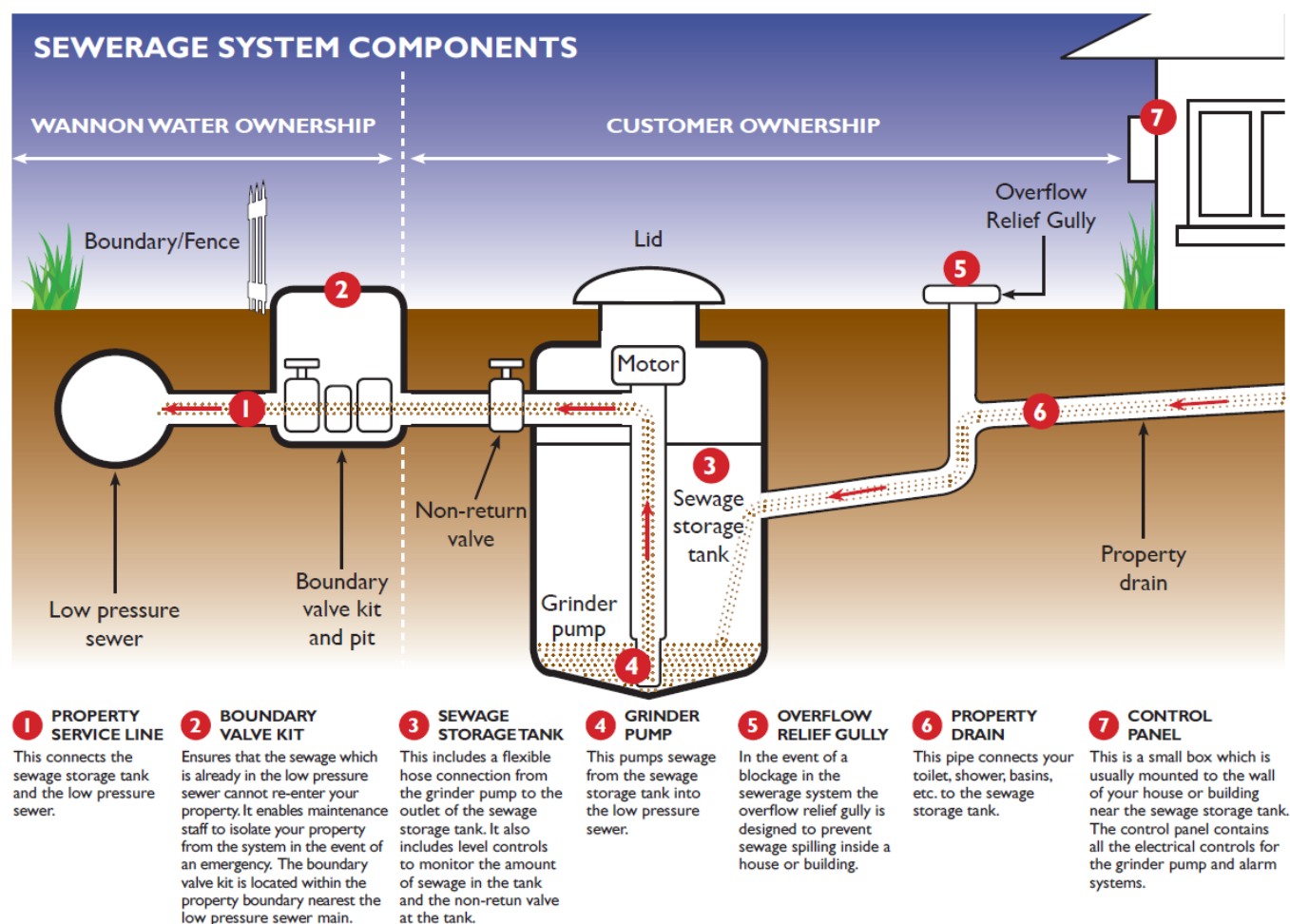
This Home Owners' Manual should be read in combination with the operating manual provided with your sewerage system. Should there be any inconsistencies please contact Wannon Water for advice noting that the operating manual will generally take priority.

2 The components of Dutton Way Sewerage System

The diagram below sets out ownership of the Dutton Way Sewerage System components.

Wannon Water is responsible for the installation, maintenance, repair and replacement of the sewerage system up to and including the property boundary kit except in instances caused by, or the responsibility of, the customer or a third party.

The property owner is responsible for the installation, maintenance, repair and replacement of the sewerage system from the inlet of the property boundary kit. The sewerage system is required to comply with the performance specification set out in **Appendix 1**.



2.1 Property service line

Wannon Water owns and is responsible for the property service line between the boundary valve kit and the low pressure sewer.

2.2 Boundary valve kit and pit

Wannon Water owns and is responsible for the boundary valve kit including the non-return valve located just within the property.

2.3 Property service line

The property owner owns and is responsible for the property service line between the outlet of the sewage storage tank and the inlet of the property boundary kit. The property owner is responsible for the non-return valve located on the outlet of the sewage storage tank.

2.4 Sewage storage tank

The majority of the sewage storage tank is buried underground with only the lid protruding from the ground. The sewage storage tank lid is not to be covered or buried. Burying the lid may lead to system failures and will delay access to the grinder pump in the event of an emergency.

Within the sewage storage tank there are mechanical and electrical systems that co-ordinate the operation of the grinder pump.

The property owner owns and is responsible for the sewage storage tank including, but not limited to, where the sewage storage tank is leaking.

2.5 Grinder pump

The grinder pump is located inside the sewage storage tank and initially grinds and then pumps the sewage through the property service line to Wannon Water's low pressure sewer.

The grinder pump emits minimal noise and its operation should not be noticeable unless you are next to the grinder pump. The pump will normally operate for 15-20 minutes each day under normal operating loads.

The property owner owns and is responsible for the grinder pump except where Wannon Water has maintenance responsibilities in accordance with Part 4 of this Home Owners' Manual.

2.6 Overflow Relief Gully (ORG)

The overflow relief gully, more commonly known as the ORG, is located outside at a point below the level of the lowest fixture in the building. The lowest fixture within a building will usually be the shower so the ORG should be located at a point lower than the shower and should also be located lower than the bottom of the doorway(s) into the building. It is recommended that the ORG is kept clear at all times to ensure that if a blockage causes a backflow it will not flow into the building (up through the shower or through a doorway).

Due to the low lying nature of properties in the Dutton Way area, property owners are required to install an ORG that has a device fitted that is designed to prevent outside water from entering the sewerage works.

The property owner owns and is responsible for the ORG.

2.7 Property drain

The property drain allows sewage from the building to be taken to the sewage storage tank. The property drain will usually include a breather vent that allows air to go out of the sewage storage tank when sewage is going into the tank and to allow air to come into the tank when the grinder pump is pumping sewage out.

The property owner owns and is responsible for the property drain.

2.8 Control panel

Power to the grinder pump is provided from the electrical distribution box via the control panel. The control panel usually has alarms such as a flashing light and/or audible alarm to indicate a system fault.

The property owner owns and is responsible for the control panel.

3 What to do if the alarm is activated

When the sewage reaches a nominated high level in the sewage storage tank an alarm in the form of a flashing light will be activated. Once the alarm is activated there is approximately 24 hours' emergency storage. This means that even after the alarm is activated the system can continue to be used if you minimise water use. If the level in the storage tank does not decrease after a set time an audible alarm will sound.

3.1 Power failures and blackouts

If the alarm is activated immediately after a power failure or blackout, wait for one hour after power has been restored. If your alarm is still activated after one hour of power being restored at the property, contact Wannon Water or your registered plumber. The alarm could have been activated when the power is restored simply due to the fact that sewage has built up to a high level in the sewage storage tank whilst there has been no pumping during the power failure. Once power has been restored, the grinder pump should start pumping to reduce the level in the sewage storage tank.

Where Wannon Water is requested to attend the property by the property owner following activation of the alarm and it is subsequently determined that the problem does not relate to an area that Wannon Water has responsibility, the property owner may be charged a fee. Examples include where there is a blown fuse in the electrical distribution box or that there is a power outage and the property owner did not follow the instructions in this Home Owners' Manual.

3.2 Floods and storm events

During a flood or storm event, you are not required to make any alteration to the normal operation of the system. In the event that the sewage storage tank is inundated with water, the alarm may be activated, however, this should clear within a short period of time and the alarm will reset. You are requested to contact Wannon Water if power is available at the property and the alarm does not reset within one hour.

3.3 Minimising wastewater generation

You can minimise wastewater generation when the alarm has been activated by:

- keeping showers to a minimum;
- after taking a bath, leaving the plug in or bucket out the water onto the lawn;
- switch off any drainage from swimming pools and spas;
- practice good water saving techniques such as not leaving taps running;
- do not use washing machines; and
- do not use automated dishwashers.

Minimising wastewater generation does not mean you cannot use the system. Toilets can still be flushed and food preparation can proceed.

3.4 Frequent sounding alarms

If you notice that the alarm is frequently activated and then turns off, please investigate by determining if there is any sudden discharge into the sewage storage tank. If the alarm is activated when it rains it could be that rainwater is entering the sewage storage tank. This should not occur and you are requested to report occurrences to Wannon Water.

3.5 Turning off the alarm

Turn off the alarm by pressing the reset button on the outside of the control panel.

3.6 Alarm activated when you are not at home

It is advisable to notify your neighbours of the location of your grinder pump and the control panel so that if your alarm is activated when you are not at home they can contact Wannon Water who will inspect the property.

4 Repairs to the grinder pump

4.1 Requirements

Wannon Water will repair or replace the grinder pump where:

- the property owner has entered into a Customer Agreement – Dutton Way Sewerage System with Wannon Water; and
- the Grinder Pump Maintenance provisions of the Customer Agreement – Dutton Way Sewerage System apply; and
- the property owner is complying with the requirements of this Homes Owners' Manual, the Customer Agreement – Dutton Way Sewerage System and the operating conditions specified by the manufacturer.

Works on all other components of the sewerage system up to, but not including the boundary valve kit, are the responsibility of the property owner.

Section 4 does not apply where the property owner has not satisfied the requirements set out above.

4.2 Access to grinder pump

In accordance with the requirements of the Customer Agreement – Dutton Way Sewerage System, you must ensure that Wannon Water has unrestricted access to the grinder pump. This includes a requirement to ensure that pets are restrained and the grinder pump is clear of any other obstruction including but not limited to fences, bushes, potted plants, garden furniture and garden beds. Wannon Water may recover costs from you where Wannon Water is required to attend the property but is unable to access the grinder pump for any reason.

4.3 Grinder pump maintenance and repair costs

Where the property owner uses the sewerage system in accordance with the manufacturer's specifications and this Home Owners' Manual, it is expected that there will be minimal maintenance required to be undertaken to the grinder pump.

Where it is found that maintenance and/or repairs undertaken by Wannon Water were the result of one of the following, Wannon Water may recover the costs from the property owner:

- matter discharged into the grinder pump that you have been advised not to as per this Home Owners' Manual or the operating conditions specified by the manufacturer ;
- interfered with the grinder pump;
- sealed off the venting unit;
- interfered with any other aspect of the Dutton Way Sewerage System; or
- not complied with any aspect of this Home Owners' Manual, the Customer Agreement – Dutton Way Sewerage System or the operating conditions specified by the manufacturer .

4.4 Other sewer maintenance and repairs

If you experience operational problems with any other aspect of your sewerage system other than the grinder pump you should contact your plumber to investigate and undertake repairs at your cost. This includes operational problems associated with, but not limited to, the following:

- sewage storage tank;
- damage caused by negligence;
- corrosion issues associated with bore water;
- accumulated solids in the sewage storage tank;
- damaged or blocked house service line or property drain; and
- leaks into or out of the sewage storage tank or any pipe work.

5 Special precautions

5.1 Entry to sewage storage tanks

Entry to the sewage storage tank is prohibited and you must never gain access to the sewage storage tank or the boundary valve kit. Accessing a sewage storage tank could result in death where there has been a build-up of lethal gasses.

Sewage storage tank lids require significant effort to remove and there is no need for property owners to ever enter the sewage storage tank. Should Wannon Water believe that access has been gained to the sewage storage tank or the boundary valve kit, you may void maintenance obligations Wannon Water has under the Customer Agreement – Dutton Way Sewerage System.

5.2 Unoccupied house

When you will be absent from the property for a period longer than one week the sewage storage tank will need to be pumped out. This will ensure that it does not “turn septic” and become a potential source of odours. It is recommended that:

- you run approximately 200 litres of clean water into the sewage storage tank until the grinder pump activates and runs for about one minute. This can be achieved by running water into the bathtub and then releasing the water into the sewerage system; and
- do not turn off the power to the pumping unit. If the unit were to be turned off, this would not allow the alarm to function. Leaving the power turned on will also assist should you experience a leaking or burst water pipe/tap where that water is entering the sewerage system – the grinder pump will operate to pump away the leaking water, rather than the leaking water exiting the sewerage system through the ORG.

5.3 Black water connections only

Black water refers to wastewater discharged from toilets and grey water refers to wastewater discharged from other areas such as wash basins, laundry or showers.

If your property only has black water connected to the low pressure sewerage system and is yet to connect your grey water, it is recommended that regular flushing of the sewage storage tank take place to reduce the risk of odours developing. It is recommended that:

- you run approximately 200 litres of clean water from a hose down the ORG every six months until the grinder pump activates and runs for about one minute; or
- flush your toilet a number of times until the grinder pump activates and runs for approximately one minute.

Should odour complaints be received, you will be requested by Wannon Water to take action and may be subject to further action and/or penalties imposed by the Environment Protection Authority should odour complaints persist.

5.4 Substance not permitted to be discharged into the low pressure sewerage system

Certain substances and objects are not permitted to be discharged into the low pressure sewerage system. To do so may result in a blockage of the sewerage system or damage to the grinder pump. The following substances and objects are not permitted to be put in the sewerage system:

- Cooking oil and fats
- Glass
- Metal
- Seafood shells
- Gravel, sand, rocks, aquarium stone or coffee grinds
- Nappies, sock, rags or clothes
- Chemicals other than those used in normal domestic products such as dishwashing powder/liquid, detergents and hair dyes
- Storm water, rain water runoff or groundwater infiltration
- Plastic or wooden objects
- Paints (water soluble and oil based)
- Sanitary napkins or tampons
- Kitty litter
- Flammable materials or explosives
- Lubricating oil or grease
- Petrol or diesel
- Salt water (sea water) other than saline water from groundwater bores used for flushing toilets
- Unused medication
- Newspaper or advertising material

As with any wastewater treatment system that discharges to the environment, Wannon Water encourages the use of low sodium and low phosphorus products to minimize the impact these chemicals have on the environment such as reducing algal blooms and salinity.

If you are in doubt about any substance entering the sewerage system, please contact Wannon Water for advice.

6 Frequently asked questions

6.1 Roof and rain water

The grinder pump is not designed to accommodate rain water which should never be put into any sewerage system. This will lead to alarms being activated and possibly even the sewage collection tank overflowing. If you notice that the alarm is regularly activated during or after rain you should contact Wannon Water.

6.2 Building works

Underground sewerage system infrastructure may be able to be moved to accommodate building works such as a house extension. When contemplating any such building works you should contact Wannon Water for initial advice. You are not permitted to build over the grinder pump, sewage storage tank or the house service line. Further, if you are planning to build within three meters of the grinder pump, sewage storage tank or house service line you are required to contact Wannon Water for advice.

6.3 Granny flats and other dwellings on the property

It might be possible to service additional small dwellings from a single grinder pump. This is dependent upon the nature of the land and property owners should seek advice from Wannon Water in the planning stages of your development.

6.4 Landscaping

Landscaping over the sewerage system infrastructure is permitted, however, the sewage storage tank lid is not to be covered. It is important that sufficient space is left to access the sewage storage tank lid. This includes leaving a path for access by staff and wheeled trolleys for movement of heavy items such as the grinder pump.

6.5 Garages, car parks and garden sheds

Ensure that temporary or permanent structures are not built over or within three meters of the sewerage system infrastructure. You are also responsible for protecting the electrical supply from the control panel to the grinder pump.

6.6 Additional guests at the property

Increases in sewage discharged to the grinder pump either through parties or large numbers of visitors coming and staying at the property should not impact on the low pressure sewerage system. The grinder pump will operate more frequently and the alarm may be activated for short periods depending on the load placed on the grinder pump.

6.7 Swimming pools

Water from swimming pools could result in large amounts of water being discharged quickly into the sewerage system. In some instances the rate of discharge may be greater than the capacity of the grinder pump. If this were to occur, the alarm would activate until the grinder pump is able to catch up. An additional tank that regulates inflow into the grinder pump unit may be required to be installed to prevent the sewerage system from becoming overloaded.

6.8 Power supply

You are responsible for providing and maintaining the power supply, independent circuit breaker (located in your electrical distribution box) and power supply to the control panel that operates the grinder pump. You are also responsible for power usage charges associated with the grinder pump.

7 Contacting Wannon Water

Telephone: 1300 926 666 between 8.15am to 5.00pm Monday to Friday
1300 926 668 after hours

Email: info@wannonwater.com.au

Mail: Wannon Water
PO Box 1158
Warrnambool Vic 3280

In person: 66 Gray Street, Hamilton
15 Townsend Street, Portland
25 Gateway Road, Warrnambool

Internet: www.wannonwater.com.au

8 Appendix 1 – Sewerage System Performance Specification

Dutton Way On-Property Pressure Sewer Pump units must meet the following performance characteristics:

Consideration	Performance Specification
Pumping Head	<ul style="list-style-type: none"> Pump must be capable of pumping to at least 56 metres head.
Pump Flow Rate	<ul style="list-style-type: none"> Flow rate must be between 0.4 to 0.6 litres per seconds as a minimum at 56 metres head.
Max Pump Head	<ul style="list-style-type: none"> Maximum pumping head of 80 metres.
Well Capacity	<ul style="list-style-type: none"> Pump Well capacity between 1000 -1500 litres.
Emergency Storage	<ul style="list-style-type: none"> Emergency storage volume within tank (above alarm level) – minimum of 560 litres.
Emergency Storage Volume	<ul style="list-style-type: none"> Pump units must have emergency storage in the event of power outage or collection system failures. The emergency volume is the additional storage above the high level alarm level. Approximately 24 hours average household flows must be retained prior to spillage.
Tank Depth	<ul style="list-style-type: none"> The depth of the storage tank should be minimised as far as is practical to reduce the depth of excavation required due to ground water.
Tank Material	<ul style="list-style-type: none"> Must be able to withstand all foreseeable stresses placed on it by the ground surrounding it, regardless of the ground type. Must be resistant to corrosion or degradation that may be caused by sewage in the tank, and surrounding saline groundwater.
Tank Shape	<ul style="list-style-type: none"> All sewage within the tank must be able to reach the inlet of the pump. The shape of the tank should prevent the build-up of solids. The shape of the tank should serve to minimise sewage detention time to reduce the risk of odour generation.
Connections	<ul style="list-style-type: none"> Must have clear and obvious points for the connection of the property's sanitary drain. Must be fully watertight.
Tank Access	<ul style="list-style-type: none"> Must be designed to eliminate the need for physical entry. Components must be able to be removed from within the tank without the need for physical entry. Tank cleaning with a vacuum truck must be able to be undertaken.
SPS Operation	<ul style="list-style-type: none"> The residual volume of sewage left in the tank after cessation of pumping should be minimised to reduce the risk of septicity.
Tank Lid	<ul style="list-style-type: none"> Must be made of a material that is not subject to UV degradation. Must not be damaged by light vehicular loading (e.g. ride-on mower).
Lid Seal	<ul style="list-style-type: none"> Must have a seal to prevent the inflow of stormwater and other material. Must operate in conjunction with house drain vent. Must have a seal to prevent odour from escaping the pumping unit.
Tank Buoyancy	<ul style="list-style-type: none"> Must be able to prevent flotation of the storage tank, either through the tank design or installation method.
Low Voltage Protection	<ul style="list-style-type: none"> Following a power outage, pumps should be able to restart automatically once power has been restored. Pumps must not be damaged by power outage (i.e. must be able to shut down in the event that the voltage drops below a set limit during a "brown out").
Grinding Test	<ul style="list-style-type: none"> Pumps must be capable of macerating sewage into fine slurry. Ground sewage must be fine enough to allow discharge from the unit through pipes with an internal diameter of 32mm. Must be able to operate while destroying a range of materials that can be expected in domestic sewage streams including materials discharge in contravention of this Home Owner's Manual.

Consideration	Performance Specification
Over-Pressure Protection	<ul style="list-style-type: none"> Wannon Water requires every pump to be fitted with over-pressure protection. Over-pressure protection must be adjustable. The typical pressure cut off level preferred by Wannon Water is 55 metres however this level should be able to be adjusted up to 80 metres. A pressure transducer (Vegawell 52 or similar) is to be used in lieu of thermal or electrical shut off methods.
Backflow Protection	<ul style="list-style-type: none"> The outlet of all pumps must be fitted with a non-return valve in the event that the non-return valve in the Boundary Valve Kit fails.
Electrical Connections	<ul style="list-style-type: none"> The pump must be able to be removed or replaced without the need for an electrician.
Pumping Unit Lifetime	<ul style="list-style-type: none"> The expected lifetime of the pump and components should be as long as possible. Consideration must be given to highly corrosive sewage due to use of saline groundwater for toilet flushing.
Casing	<ul style="list-style-type: none"> The material for the casing of the Control Panel is to be stainless steel, marine grade aluminum or high grade Poly. The casing of the Control Panel is to be waterproof. The Control Panel is to be lockable.
Electrical Isolation	<ul style="list-style-type: none"> The Control Panel must be capable of electrical isolation. Must be capable of adhering to lock-out tag-out procedures.
Electrical Circuit Diagram	<ul style="list-style-type: none"> An electrical circuit diagram is to be mounted inside the door of every Control Panel.
Property Electrical Capacity	<ul style="list-style-type: none"> The required components (including pump/s) must be designed to connect into a typical household's electrical system without the need for capacity upgrades. The current draw from the pump and associated components must not cause any detriment to the household's electrical system (such as flickering lights) upon pump start-up, or when the pump is operational.
Electrical Cable	<ul style="list-style-type: none"> Must be a single length of cable with no intermediate joins.
Alarms	<ul style="list-style-type: none"> The Control Panel is to include both audible and visual alarms. Alarms are to notify of high level being reached. Some form of back-up alarm should operate in the event that power to the Control Panel is lost (e.g. through tripping of the circuit breaker or power outage). This may be a separate battery operated alarm on the building switchboard. Audible alarm is to mute after a pre-determined period of sounding. Audible alarm must be able to be silenced by the press of a button on the outside of the control panel.
Marker Plates	<ul style="list-style-type: none"> The Control Panel is to include a marker plate that details the serial number of the Pressure Sewer/ Pumping Unit and the appropriate contact number in the event of a fault (Wannon Water contact number must not be nominated for fault repairs to pumping units unless agreed by Wannon Water).
Level Switch	<ul style="list-style-type: none"> Switch/s is to be programmed with pump cut in level, pump cut out level and high level alarm level. Must be able to notify the residents of any problems by triggering the high level alarm. Must be unaffected by other components inside the tank (e.g. cables and lifting ropes). Must be unaffected by the build-up of fats and other components of raw sewage. Must operate independently of the pump.
Spare Parts	<ul style="list-style-type: none"> The supplier is to be able to supply spare parts. Spare parts must be available for every component in the Pumping Unit. This includes spare pumps, components and associated maintenance equipment.

Consideration	Performance Specification
Ease of Use by Customers	<ul style="list-style-type: none"> • The system should be able to operate automatically. • The system should not overflow or malfunction under normal use conditions (i.e. emptying a bath or spa).
Falling from Heights	<ul style="list-style-type: none"> • The supplier should design their tanks in consideration of the Occupational Health and Safety (Prevention of Falls) Regulations 2003. • The Pumping Unit should be designed to provide a safe working environment around the tank.
Confined Space Entry	<ul style="list-style-type: none"> • The need for person entry should be eliminated. • Components must be able to be removed from within the tank without the need for a person to enter the tank.
Manual Handling Risk	<ul style="list-style-type: none"> • With reference to the OH&S (Manual Handling) Regulations 1999, where the manual handling risks in removing pumps and associated components cannot be eliminated, risks must be reduced as far as practicable.
Future Maintenance	<ul style="list-style-type: none"> • The supplier will be required to provide relevant maintenance contractor staff with sufficient training on the operation and maintenance of the Pumping Unit. • Sufficient reference material is to be provided to detail how to undertake all maintenance processes required by the Pumping Units and associated components. • The supplier shall educate the property owner to facilitate safe operation and maintenance of the pumping units.