

SUNCOAST WASTE WATER MANAGEMENT

INSTALLATION MANUAL

for

OZZI KLEEN

Underground Rainwater Tank

Model – RW 5000 & RW Deluxe

When all else fails please read the manual

Document No: P 001

Revision: A

Revision Date: 23/04/08

SUNCOAST WASTE WATER MANAGEMENT

Established since 1983

Manufacturers of OZZI KLEEN Systems

ABN 62 063 770 534



59 Industrial Avenue
KUNDA PARK Qld 4556

Ph (07) 5459 4900
Fax (07) 5456 4677

CERTIFICATE OF QUALITY

This Rain water harvesting system and all included components have been quality checked and tested. The collection well is Australian Standards AS/NZS 1546.1 Certified. The system was complete and ready to be sold on Dispatch from our factory.

TANK SERIAL NUMBER: _____

QUALITY OFFICER: _____

DATE: _____

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Location Of Work Site:	Date:
Project Leader/Safety Representative: Signature:	

RISK ASSESSMENT SHEET **FOR THE INSTALLATION OF THE UNDERGROUND RAIN HARVESTING SYSTEM**

Equipment/Tools Used

Shovels	Wheelbarrow
Power Tools	Excavator
Power Leads	Truck
Spirit Level	Ladder

PPE (Personal Protective Equipment)

Hard Hat	Hearing Protection
Eye Protection	Safety Harness
Safety Boots	Sun block Cream
Hi Vis Clothing	Gloves

Possible Activities

Plumbing	Levelling
Drainage	Cementing
Electrical	Landscaping
Excavation Work	Manual Labour

Incident Code Rating

CLASS 1 (Highest Risk) Cause Death or Permanent Disablement
CLASS 2 (Medium Risk) Serious Injury or Temporary Disablement
CLASS 3 (Low Risk) Cause Minor Injury or Ailment

POTENTIAL HAZARDS

RISK MANAGEMENT STRATEGIES

Excavation Collapse	Ensure excavation is Battered or Retained as per the Excavation code. Ensure that the excavation work is carried out by a suitably qualified operator. Ensure that the removed soil is placed well away from the top edge of the excavation and that barriers are in place to stop machinery from being too close to the edge of the excavation or flipping over. Be aware of other structures or influences.
Falling Into Excavation	Ensure excavation is Battered or Retained as per the Excavation code. Ensure adequate barriers are in place. Ensure safe entry and exit point as per the code.
Drowning	Ensure that barriers/fall protection and signage are in place around the excavation site if it is raining or the excavation is holding water as it is unlikely that the tank will be installed in these conditions. If the site is to be left unattended, a ladder must be left in the excavation and be higher than the excavation wall to allow persons to be able to remove themselves from the hole. Ensure suitably trained personnel are on site to perform CPR or EAR. Ensure floatation devices are worn.
Incorrect Use Of PPE	Ensure correct PPE is being used for each particular job and that it is being used in the correct manner as per the manufactures instructions.
Cuts And Abrasions	Ensure gloves are worn and that all sharp edges are protected. Ensure broken items such as bottles PVC cut off etc are removed from the work site.
Electrocution	Ensure all work leads and appliances are protected by an approved RCD. Ensure all leads and tools have current test and tag approvals. Ensure all work leads are kept clear of heavy machinery. Watch out for overhead power lines. Disconnect power to any lines which may be cut or disturbed during the installation process.
Injury From Heavy Machinery	Ensure that Hi Visibility clothing is worn and have good communication with a competent operator at all times heavy machinery is in use. Avoid area if possible
Trips And Falls	Ensure work areas are kept clean and free of debris on the ground
Manual Work Strains/Injuries	Ensure good handling techniques are used when doing any manual labour around the work site. If lifting a heavy load use mechanical lifting device or two man lifts
Mechanical Failure	Ensure that all mechanical equipment, lifting chains, straps and slings have been serviced and tested as per their individual codes, standards or requirements

Emergency Contacts

Nearest accessible reliable phone: _____

Nearest hospital: _____ Phone: _____

Nearest doctor: _____ Phone: _____

Ambulance/Police/Fire : Dial 000 or 112 for mobiles

PLUMBER'S INSTALLATION INSTRUCTIONS FOR THE TANK

THE OZZI KLEEN RW 5000 & RW DELUXE IS SUITABLE FOR INSTALLATION IN THE GROUND, PARTIALLY IN-GROUND, OR ABOVE GROUND INSTALLATION SETUP ON A COMPACTED HARD STAND BASE.

FOR INSTALLATION IN-GROUND - A HOLE FOR INSTALLATION WILL HAVE TO BE EXCAVATED APPROX. 2.5 METRES DIAMETER AND 2.6 METRES DEEP WITH A SOUND BASE.

A 100MM LAYER OF BEDDING SAND IS REQUIRED (REFER TO DRAWING).

IF THE HOLE IS OVER EXCAVATED, EXTRA BEDDING SAND WILL BE REQUIRED.

A NORMAL INSTALLATION OF THE RAINWATER TANK WILL LOCATE THE LEVEL OF THE DOWNPIPE INVERT AT 130 mm BELOW NATURAL GROUND LEVEL AND 2420 mm ABOVE THE SAND BASE. THE OVERFLOW INVERT WILL BE AT 560mm BELOW NATURAL GROUND LEVEL AND 1990 mm ABOVE THE SAND BASE.

1. INSTALL THE RAINWATER TANK SO THAT THE TANK IS LOCATED CENTRAL IN THE EXCAVATED HOLE WITH NO LESS THAN 250 mm TO THE NEAREST SIDE. ENSURE THAT THE BACKFILL IS PLACED EVENLY AROUND THE TANK. (SEE DRAWING).

IF THE RAINWATER TANK IS PLACED UNEVENLY IN THE HOLE SO THAT THE TANK IS NEAR TO TOUCHING A SIDE OF THE HOLE THIS WILL NOT ALLOW EVEN BACKFILL AND CAUSE TANK INSTABILITY AND WILL HAVE TO BE RECTIFIED BY THE INSTALLER.

2. INSTALL THE RAINWATER TANK SO THAT THE TOP EDGE OF THE TANK NECK IS JUST ABOVE THE NATURAL GROUND LEVEL TO AVOID SURFACE WATER ENTRY. THIS IS 200mm HIGHER THAN THE TOP OF THE TANK.

IF THE SYSTEM IS INSTALLED TOO LOW IT WILL HAVE TO BE RECTIFIED BY THE INSTALLER.

3. THE TANK IS TO BE COMPLETELY FILLED WITH WATER (APPROX. 5,100 LITRES) OR UP TO THE TANK OUTLET BEFORE ANY BACKFILL IS PLACED AROUND THE TANK.

FAILURE TO DO SO MAY CAUSE TANK INSTABILITY AND ANY DEFLECTION TO THE TANK WILL HAVE TO BE RECTIFIED BY THE INSTALLER.

4. THE TANK IS TO BE INSTALLED IN A POSITION WHERE LOCAL STORM WATER FLOODING AND PONDING AROUND THE TANK WILL NOT OCCUR.

IF THE TANK IS INSTALLED IN A WATER COURSE OR A FLOOD PRONE AREA THE TANK WILL HAVE TO BE RELOCATED BY THE INSTALLER.

5. LANDSCAPING OR THE IMPORTATION OF TOP SOIL THAT IS PLACED AROUND THE TANK AFTER IT IS INSTALLED, WHICH WOULD CAUSE THE TANK TO BE TOO LOW IN THE GROUND IS TO BE AVOIDED.

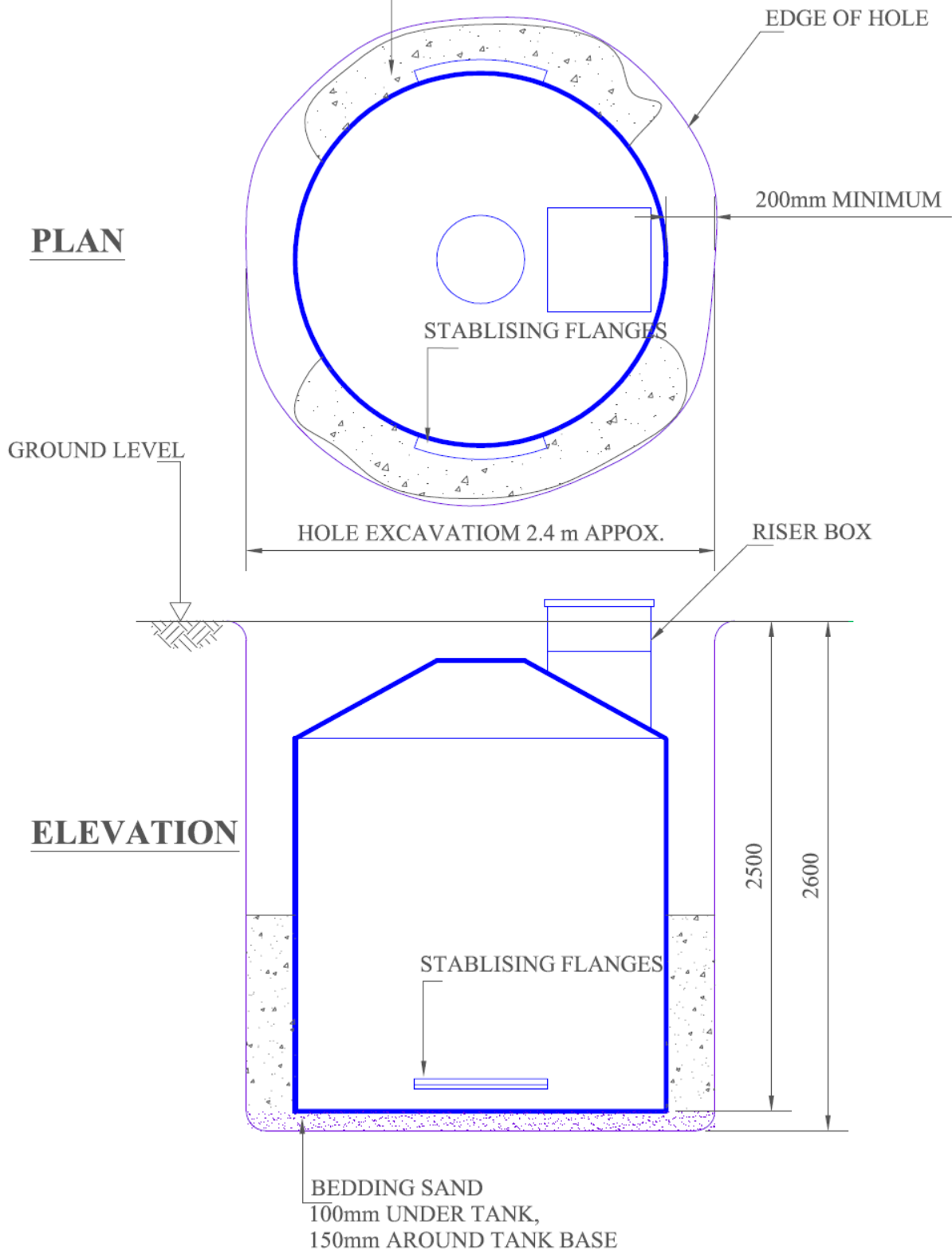
IMPORTED TOPSOIL THAT MAY BE PLACED ON THE TANK AFTER THE INSTALLATION WILL BE THE RESPONSIBILITY OF THE OWNER.

6. IF INSTALLING THE TANK UNDERNEATH A BUILDING, ENSURE THAT THERE IS SUFFICIENT WORKING ROOM BETWEEN THE TANK AND THE BUILDING FOR SERVICING/MAINTENANCE.

A MINIMUM OF 1200 mm HEAD ROOM ABOVE THE TANK LID IS NEEDED FOR THE SERVICE/REMOVAL OF SOME PARTS.

It is important that prior to any work, the included OH&S Risk Assessment Sheet is referred to.

TANK FLANGE TO BE COVERED WITH 300mm CONCRETE OR STABILISED SAND NO LESS THAN 0.5 M3 EACH SIDE (MIN. 3 M3 IN TOTAL FOR HIGH WATER TABLE AREA)



IMPORTANT:

Ensure Tank is filled to the overflow with water before backfilling.

PLUMBERS SPECIAL INSTRUCTIONS

The tank comes with two lifting lugs on the tank top suitable for lifting with a chain or rope. (Not nylon rope) The tank weighs approximately 350 kg. (See Fig.1)



Fig.1

All house downpipes which are to be used to fill the tank are to be connected to a common pipe prior to connection to the rainwater tank.

The downpipe inlet fitting is a **100 mm** diameter PVC DWV Akatherm fitting with the invert **130 mm** below the top of tank and **2420 mm** from the tank floor. The overflow outlet is the same fitting with the invert **560mm** below the top of the tank and **1990mm** from the tank floor. (See Fig.2)

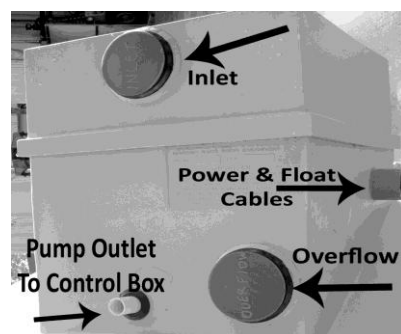


Fig.2

CAUTION: The standard pump installed will pump @ a 10 metre head 80 litres/minute. A larger pump will be required for systems requiring a higher head.

The inlet is made of polyethylene and cannot be glued to, and will require a slip joint or repair joint to make the connection to the house drain.

Tubing used from the control box to the outlets, house or taps must be marked as per relevant local authority. i.e. "Rainwater Water", not potable grade blue line water piping.

PLUMBER'S INSTALLATION INSTRUCTIONS FOR THE CONTROL BOX

The control box can be mounted anywhere within a five metre radius of the main tank. It can be post or wall mounted. There are two different control boxes dependant on the type of system purchased. The RW 5000 control box (See Fig.A), and the RW Deluxe (See Fig.B). In the RW Deluxe, the control box is where the mains water is introduced into the system as well as the pump inlet, electrical mains, pump and float switch cables as well as the outlet from the system to the house. The RW 5000 does not include the mains water section. The pictures show what each connection point is for on both boxes. Connections to the control box are explained in each of the plumbers and electricians special instructions respectfully.

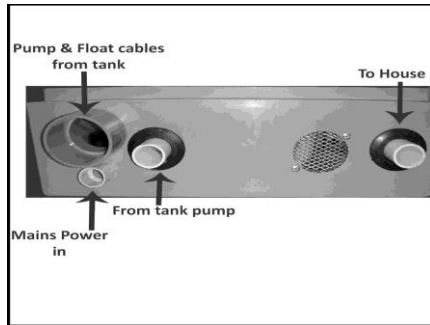


Fig.A RW5000

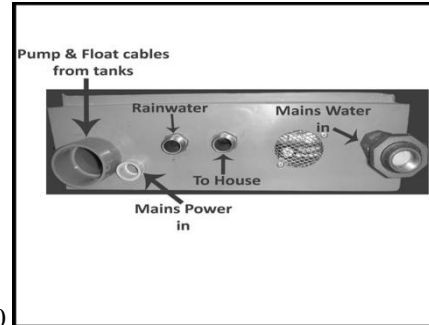


Fig.B RW Deluxe

COMMISSIONING THE SYSTEM

The system is required to be commissioned as per the commissioning certificate. The commissioning certificate included needs to be filled out and returned to the manufacturer or warranty will be void.

If installed the testable double check valve needs to be tested by the plumber (if the appropriate testing certificate is held) or a licensed testing officer in your area and all appropriate paperwork filled out and sent to the relevant parties as per your local council requirements. This will need to be done to get final approval and is not the responsibility of the manufacturer. For further information, please contact your local council.

PLUMBER'S INSTALLATION CERTIFICATE

THE RAINWATER TANK MUST BE INSTALLED AS PER THE FOLLOWING INSTRUCTIONS. THIS FORM IS TO BE FILLED OUT AND RETURNED TO THE MANUFACTURER OR THEIR AGENT AS PART OF THE OWNER'S WARRANTY REGISTRATION.

PLEASE TICK ALL THE BOXES DURING THE INSTALLATION

1. Excavate hole - 2.5 m diameter and approx. 2.6 m deep
2. Place a 100mm layer of bedding sand in the hole
3. Check depth from sand bed to natural ground level no greater than 2500 mm
4. Check depth from down pipe invert to bedding sand no greater than 2420 mm
And overflow invert to bedding sand no greater than 1990mm
5. Check depth of down pipe invert to natural ground level no greater than 130 mm
And depth of overflow invert to natural ground level no greater than 560mm
6. Check that top edge of tank is level with the natural ground level
7. Fill tank to overflow outlet with water
(Approximately 5,100 litres)
8. Connect down pipe from the dwelling to the down pipe inlet on the system, the overflow pipe from the system to the street or drainage area
9. Place stabilized sand/concrete around tank ensuring at least 300mm of cover over tank wings (approx 3 cubic meters)
10. Backfill around tank with clean earth only, (free from large lumps of clay, stones, bricks, foreign objects, or dumped rubbish from other trades persons)

INSTALLATION CERTIFICATION

THE RAINWATER TANK HAS BEEN INSTALLED IN ACCORDANCE WITH THE ABOVE PROCEDURES BY THE INSTALLER

- OZZI KLEEN SERIAL No: _____
- NAME OF INSTALLER: _____
- INSTALLER'S LICENCE NO: _____
- INSTALLER'S SIGNATURE: _____
- DATE OF INSTALLATION: _____
- LOCATION OF INSTALLATION: _____

ELECTRICIAN'S SPECIAL INSTRUCTIONS

INSTALLATION OF POWER TO THIS UNIT MUST BE PERFORMED BY A LICENCED ELECTRICAL CONTRACTOR IN ACCORDANCE WITH THE CURRENT ELECTRICITY ACT.

- The power supply to the Rain Harvesting System is a single-phase service and should be wired in 2.5 mm² cable.
- With the RW Deluxe the float circuit is supplied from the control board to the tank and is 240V AC. The float cables are run with the pump supply cables to the tank, they must be rated for 240V. There is no float circuit with the RW 5000 as the float is on the submersible pump.
- The maximum power consumption of the Rain Harvesting System is approximately 950 Watts.
- The submersible pump is rated at up to 900 Watts. (For standard installed submersible pump, this could change if a non standard pump is used).
- The power supply to the system should come direct from the meter board and be protected by a 10 A RCD (Residual Current Device) and surge protection. The main power point may be considered for general use, therefore it must be RCD protected. It is recommended that the system be connected to an individual dedicated electrical circuit.
- Cabling between the control box and Rain Harvesting Tank should be installed using adequate protection/conduit. 2 cables will be required - 3 core for power supply to the pump and 2 core for the float circuit on an RW Deluxe. Only one cable of 3 core for power supply in 63mm conduit is required for the RW 5000 pump.

The power supply cable for the pump and float is brought from the tank to the control box using 63mm conduit. The 240 V supply for the pump is to be plugged into the control box using the standard 3 pin plug in the control box in the deluxe system. In the standard system the pump is plugged into the flow controller mounted in the control box. The flow controller is to be plugged into the three pin plug socket inside the control box. The float wires are to be connected to the terminals inside the electrical control box beside the main power outlet if it is an RW Deluxe system only. The external electrical conduit to the control box is to be 25 mm.

Note:

The power supply cable from the meter box is to be hard wired to the strip terminals. Power into the unit is connected to L N E as per diagram, or as marked inside the lid of the electrical control box mounted inside the control box and the float cable is also to be connected to the strip terminals inside the electrical control box. The float is switching 240V and is connected to the strip terminals marked FLOAT as per diagram, or as marked in the lid of the electrical control box provided. These wires are not polarity conscious so can be installed either way in the terminal strip.

Terminal strip diagram from inside electrical control box

