



Health

Certificate of Accreditation

Domestic Greywater Treatment System

This Certificate of Accreditation is hereby issued by the Director-General of the NSW Ministry of Health pursuant to Clause 41(1) of the Local Government (General) Regulation 2005.

System: Grey Wise Domestic Greywater Treatment System

Manufacturer: Wise Water Solutions Pty Ltd

*Of: Lot 20 McKittrick Road Nannup WA 6275
PO Box 166 Nannup WA 6275*

This is to certify that the Grey Wise DGTS as described in Schedule 1, has been accredited as a sewage management facility for use in a single domestic premises in NSW. This accreditation is subject to the conditions of accreditation and permitted uses specified in Schedule 2, and in accordance with the Domestic Greywater Treatment Systems Accreditation Guideline, February 2005.

*A/Director, Environmental Health Branch
for Director-General (delegation PH335)*

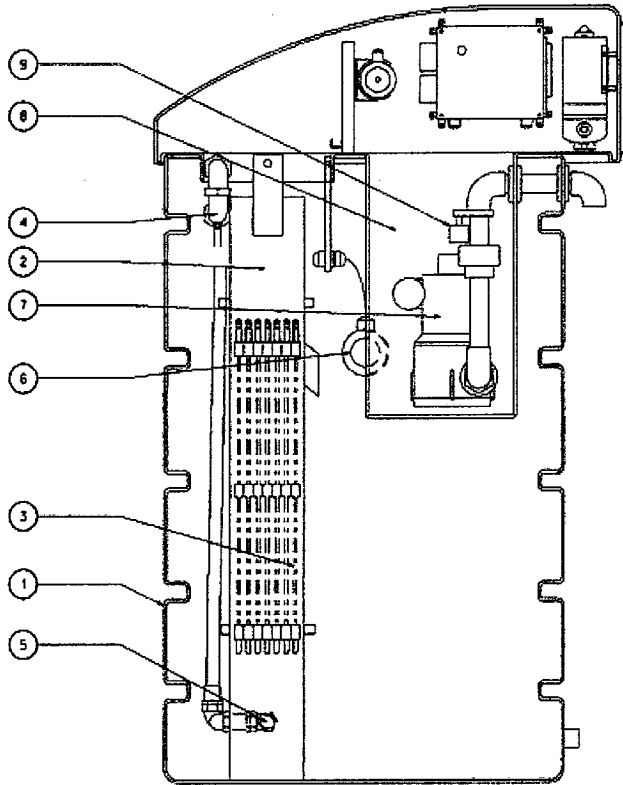
Date of Issue: 25 March 2014

Certificate No: DGTS 009

This Certificate of Accreditation is in force until 31 December 2019

REF NO	000	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	
1	000	GRAY WISE WATER RECYCLING MBR CHAMBER SETOUT - SHIT 2																			
2	001	GRAY WISE WATER RECYCLING MBR CHAMBER SETOUT - SHIT 2																			

MBR CHAMBER SPECIFICATION



MBR TANK SPECS

NUMBER	PART	MATERIAL	QUANTITY	SPEC
1	MBR CHAMBER	H.D.P.E.	1	410 L CAPACITY
2	MEMBRANE CASSETTE	PVC	1	MEMBRANE HOUSING
3	MEMBRANES	POLYETHERSULPHONE	7	MICROFILTRATION
4	SUCTION MANIFOLD	ALUMINIUM	1	7 x 10 mm NIPPLES
5	DIFFUSER	PVC	1	COARSE BUBBLE
6	WORKING LEVEL FLOAT SWITCH	N/A	1 x 12v	MAC3
7	INTERNAL EFFLUENT PUMP c/w AUTO FLOAT	N/A	1 x 240v	CLAYTECH
8	INTERNAL EFFLUENT TANK	H.D.P.E.	1	55 L CAPACITY
9	INTERNAL EFFLUENT TANK H/L	N/A	1 x 12v	MICRO FLOAT

APPROVED

25 MAR 2014

NSW MINISTRY OF HEALTH



TITLE
Gray Wise Water Recycling
MBR CHAMBER SETOUT

DRG. No. GW - 005
SCALE: 1:100
REV. 0

Schedule 1: Specification

Grey Wise Domestic Greywater Treatment System

General Description

The Grey Wise DGTS is designed to treat the greywater from the shower, bath, basin and laundry but not from a kitchen from a domestic dwelling. The Grey Wise DGTS is assembled within an above ground heavy duty polyethylene tank known as the MBR chamber. The MBR chamber contains the membrane housing, membranes and diffuser assembly, along with the MBR working level float switch. The operation of the Grey Wise is set out below:

- Greywater from the dwelling is directed to a pump well (underground pit). The pump well is designed to have an overflow to the sewer to cater for high-flow periods during the day.
- The Grey Wise DGTS, on-demand, activates a pump within the pump well that transfers the untreated greywater to the MBR chamber. The MBR chamber is aerated by a diffuser attached to the bottom of the membrane housing. Air is continuously supplied by an air blower housed in the motor box mounted directly above the MBR chamber.
- The membrane housing within the MBR chamber contains 7 flat sheet membranes with a pore size of 0.2 microns. The membranes are self-cleaning, utilising the shearing action of the diffused air and mixed liquor to scour off any trapped particles or a build-up of bio-mass. Transfer of the treated greywater through the membranes to the Internal Effluent Tank is controlled by a working level float which is set to operate at a differential of 200 mm.
- When the MBR working level float is in the up position, a suction pump is activated transferring (via suction) the treated greywater through the membranes and through an UV disinfection unit to the Internal Effluent Tank.
- When the Internal Effluent Tank reaches an adequate volume a float switch activates an effluent pump which directs the treated greywater to the household re-use storage tank.
- The motor box contains all of the electrical devices required to ensure that the treatment system operates safely and effectively and contains the following components:
 - The air blower, which supplies air to the diffuser.
 - The suction pump, which draws the treated greywater through the membranes.
 - UV disinfection unit.
 - Access to the Internal Effluent Tank and Pump.
 - The electrical control box.

The pump well has a capacity of 360 litres and is manufactured by Graf Plastics Australia Pty Ltd. The MBR chamber has a capacity of 410 litres at the working level. The Internal Effluent Tank has a capacity of 55 litres.

Schedule 2: Conditions of Accreditation

1. General

- 1.1 For each installation the owner/occupier of the premises shall make an application to the Local Authority to install a GreyWise DGTS as a type of sewage management facility in accordance with *Section 68, Part C of the Local Government Act 1993 and Clause 28 of the Local Government (General) Regulation 2005.*

- 1.2 The GreyWise DGTS shall be supplied, constructed and installed in accordance with the design as submitted and accredited by the NSW Ministry of Health for a maximum of eight (8) persons.
- 1.3 Any modification or variations to the accredited design of the GreyWise DGTS shall be submitted for separate consideration and variation of the Certificate of Accreditation by the Director-General of the NSW Ministry of Health.
- 1.4 Each GreyWise DGTS shall be permanently and legibly marked on a non-corrosive metal plaque or equivalent, attached to the lid with the following information:
 - The brand name of the system;
 - The manufacturer's name or registered trademark;
 - The month and year of manufacture.
- 1.5 The manufacturer shall supply with each GreyWise DGTS an owner's manual, which sets out the care, operation, maintenance and on-going management requirements of the system.
- 1.6 The manufacturer shall provide the following information to each local authority where it is intended to install a GreyWise DGTS in their area once Ministry accreditation has been obtained:
 - Statement of warranty
 - Statement of service life
 - Quality Assurance Certification
 - Installation Manual
 - Service Manual
 - Owner's Manual
 - Service Report Form
 - Engineering Drawings on A3 format
 - Detailed Specifications
 - A4 Plans
 - Accreditation documentation from NSW Health.

2. Installation and Commissioning

- 2.1 The Local Authority should require that on completion of the installation of the GreyWise DGTS, that the system be inspected and checked by the manufacturer or the manufacturer's agent. The manufacturer or the agent is to certify that the system has been installed and commissioned in accordance with its design, conditions of Accreditation and any additional requirements of the Local Authority.
- 2.2 The Local Authority should require that all electrical work must be carried out by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.

3. Maintenance

- 3.1 The Local Authority shall require the owner/occupier of the premises to enter into an annual service contract with an accredited representative of Wise Water Solutions Pty Ltd or a service contractor or company acceptable to the Local Authority.
- 3.2 The GreyWise DGTS shall be serviced at maximum four monthly intervals in accordance with the details set out in the owner's and service manuals.
- 3.3 Each service shall include a check on all mechanical, electrical and functioning parts of the system including:
 - general operation of the system;

- the testing of the quality of the treated wastewater;
- inspection and service of pumps and float switches, air blower, air diffuser and membrane assembly; and
- operation of UV disinfection unit.

3.4 The Local Authority should require that a service report sheet, in triplicate, be completed for each service. The original shall be given to the owner, the duplicate forwarded to the Local Authority and the triplicate retained by the service contractor.

4. On-going Management

4.1 The owner's manual prepared by the manufacturer shall contain a plan for the on-going management of the GreyWise DGTS. The plan shall include details of:

- the treatment process,
- procedures to be followed in the event of a system failure,
- emergency contact numbers,
- maintenance requirements,
- inspection and sampling procedures to be followed as part of the on-going monitoring program developed by the local authority.

4.2 At each anniversary of the accreditation date the manufacturer shall submit to NSW Health a list of all GreyWise DGTS installed in NSW during the previous twelve months. NSW Health will randomly select up to 10% of the installed GreyWise DGTS from each year of installation. The manufacturer, at its own cost, shall arrange for the selected GreyWise DGTS to be inspected and sampled. Sampling is to be organised by an independent JAS/ANZ accredited agency. Samples for BOD⁵, TSS and *E coli* are to be determined by a NATA registered laboratory, and samples for any disinfectant concentration are to be determined on site. The results are to be reported to NSW Health by:

- address of premises,
- date inspected and sampled,
- sample identification number,
- BOD⁵,
- TSS,
- *E coli*,
- details of type and condition of UV disinfection unit, and
- service history (if available)

4.3 Effluent from the GreyWise DGTS taken in any random grab sample shall comply with the following standard:

- BOD⁵ less than 30 mg/L
- TSS less than 45 mg/L
- *E coli* less than 100 cfu/100 ml

5. Permitted uses

5.1 The final effluent arising from the GreyWise DGTS is suitable for re-use for the following purposes:

- toilet flushing;
- cold water supply to washing machine;
- garden purposes by irrigation of a type approved by the Local Authority.