



Certificate of Accreditation

Domestic Greywater Treatment System

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

System: ***Aqua Clarus M800sx DGTS***

Manufacturer: ***Aqua Clarus Holdings Pty Ltd***

Of: ***4/43 Kates St, Morningside, QLD, 4170***

This is to certify that the Aqua Clarus M800sx greywater treatment system as described in Schedule 1, has been accredited as a sewage management facility for use in 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
for Secretary (delegation PH335)*

Issue Date: 1 February 2021

Certificate No: DGTS 012

Expiry Date: 31 December 2025

Schedule 1: Specification
Aqua Clarus M800sx Greywater Treatment System

General Description

The Aqua Clarus M800sx greywater treatment system is designed to treat all domestic greywater from a residential dwelling occupied by a maximum of 8 people. The Aqua Clarus M800sx greywater treatment system is contained in an above-ground roto moulded UV stabilised polyethylene cabinet.

The key processing steps in the M800sx system involves the treatment of the greywater in a bioreactor followed by membrane filtration, UV disinfection, and an alarm system. The greywater is pumped to the bioreactor from an external sump or pump well. The greywater is then dosed to the bioreactor consisting of a trickle bed filled with chopped 50 mm agricultural pipe 20 mm in length and a collection chamber at the base of the bioreactor. The liquid collected in the base is recirculated to the top of the trickle bed.

During recirculation a quantity of liquid is diverted to a membrane tank from where it is pumped through a membrane filter and UV disinfection unit into a small internal tank. At this stage the treated water is pumped to irrigation or if reused for toilet flushing and laundry use is pumped to a small above-ground external tank installed to store the treated water for this purpose. A small amount of bio-solids build up in the trickle bed and feed tank and is pumped from the system to the sewer or directed to a sub-soil vegetation cell outside the system.

Schedule 2: Conditions of Accreditation

1. General

- 1.1 The owner/occupier of the premises shall make an application to the Local Authority to install an Aqua Clarus M800sx greywater treatment system as a waste 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 Aqua Clarus M800sx greywater treatment system shall be supplied, constructed and installed in accordance with the design as submitted and accredited by the NSW Ministry Health.
- 1.3 Any modification or variations to the accredited design of the Aqua Clarus M800sx greywater treatment system shall be submitted for separate consideration and variation of the Certificate of Accreditation by the Secretary of the NSW Ministry of Health.
- 1.4 Each Aqua Clarus M800sx greywater treatment system 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 the owner/occupier of the premises with 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 on its web site or to each local authority where it is intended to install a greywater treatment system in their area once Ministry accreditation has been obtained:

<ul style="list-style-type: none">• Statement of warranty• Statement of service life• Quality Assurance Certification• Installation Manual• Service Manual• Owner's Manual• Service Report Form	<ul style="list-style-type: none">• Engineering Drawings on A3 format• Detailed Specifications• A4 Plans• Accreditation documentation from NSW Health.
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2. Installation and Commissioning

- 2.1 The Local Authority should require that on completion of the installation of the Aqua Clarus M800sx greywater treatment system, the system is 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 a premises to enter into an annual service contract with a representative of Aqua Clarus Holdings Pty Ltd or a service contractor registered with the local authority as an accredited person to carry out maintenance work.

- 3.2 The Aqua Clarus M800sx greywater treatment system shall be serviced at four monthly intervals in accordance with the details set out in the owner's and service manual.

If the Aqua Clarus M800sx greywater treatment system is connected remotely by telephone to the office of Aqua Clarus Holdings Pty Ltd or its nominated service technicians, the Aqua Clarus M800sx greywater treatment system can be serviced at six monthly intervals.

- 3.3 Each service shall include a check on all mechanical, electrical and functioning parts of the system including:

- Pumps, membrane filters, UV disinfection unit,
- The alarm system,
- Sludge accumulation in the treatment tank,
- Operation of the treatment cycles in the treatment tank,
- The effective operation of the effluent re-use options

- 3.4 A service report sheet, in triplicate, shall 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 Aqua Clarus M800sx greywater treatment system. 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 Effluent from the Aqua Clarus M800sx greywater treatment system taken in any random grab sample shall comply with the following standard:

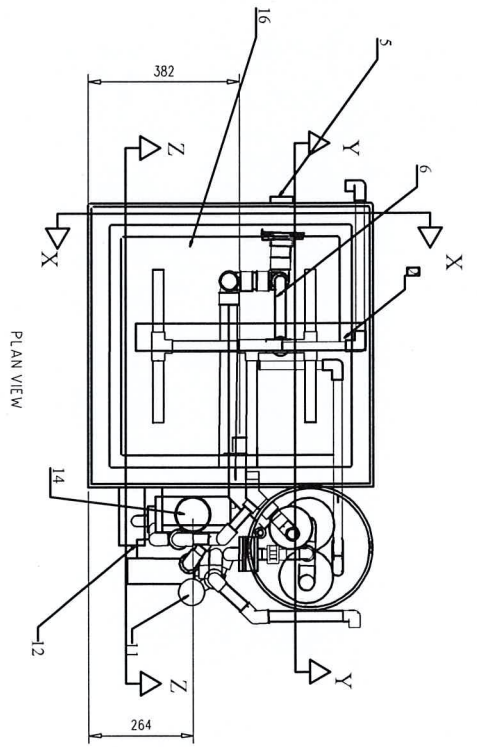
- | | |
|--------------------|-------------------------|
| • BOD ⁵ | less than 20 mg/L |
| • SS | less than 20 mg/L |
| • Faecal coliforms | less than 10 cfu/100 ml |

5. Permitted uses

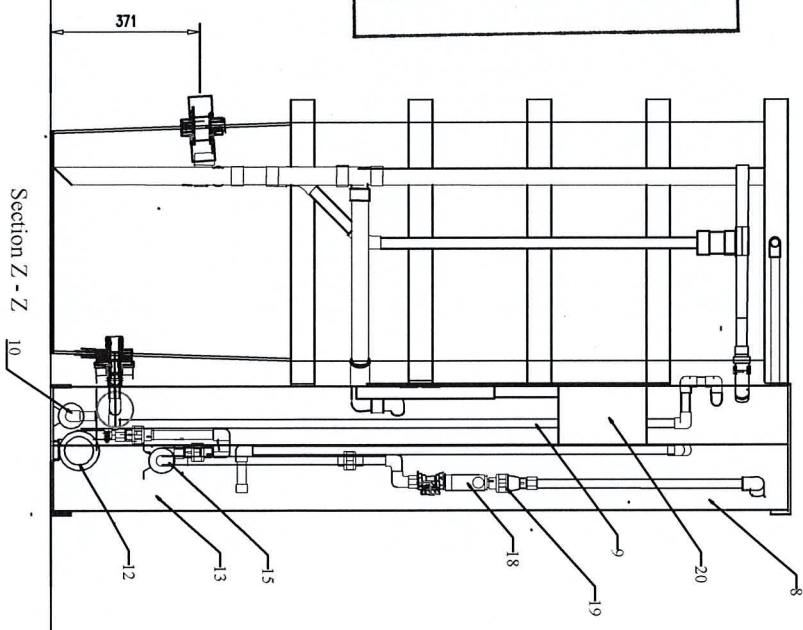
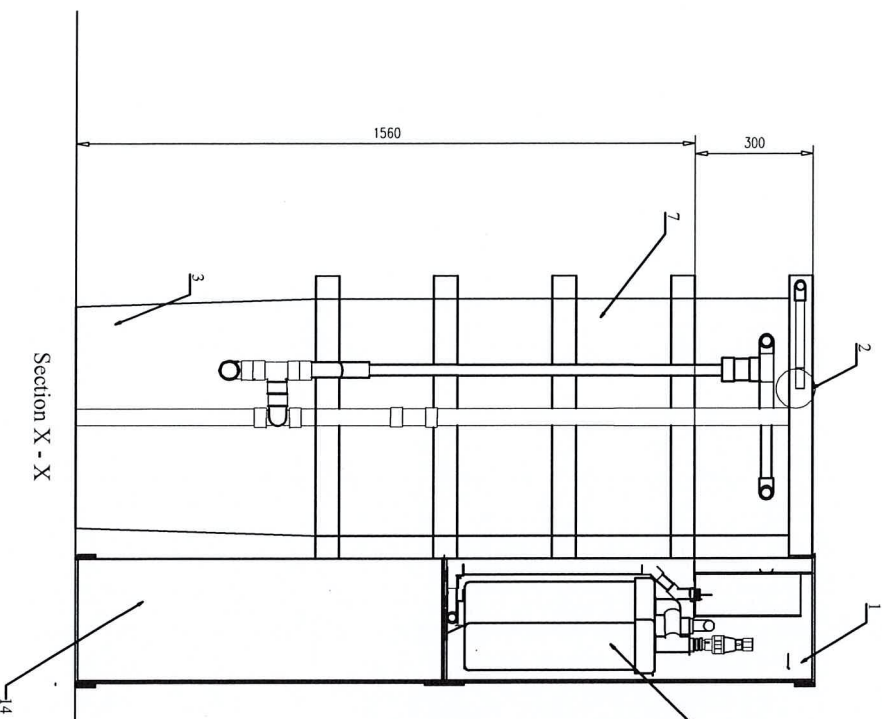
- 5.1 The effluent from the Aqua Clarus M800sx greywater treatment system is suitable for re-use for the following purposes:

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

ITEM	DESCRIPTION	DETAIL
1	Inlet Pipe	20mm PVC Pressure pipe
2	Pre-filter	100mm mesh tube
3	Collection Tank	600 X 600 Everhard tank
4		
5	Overflow to drain	40mm DWV
6	Return Pipe	20mm to 40mm DWV
7	Treatment Tanks	600 X 600 X 1800 Everhard
8	Membrane Tank	300 mm stormwater pipe with end caps
9	Recirc pipe	20mm PVC pressure
10	Recirc pump	MD15M Magnetic drive pump with prescreen
11	UV	Wedeco LCU 2 or equivalent
12	Water Pump	MP20RZ Magnetic drive pump
13	Water Tank	300mm stormwater pipe with end caps
14	Floats	Electronic
15	Booster pump	MD15M magnetic drive pump
16	Trickle media	Chopped AG pipe 200m3/m2
17	Membrane	2 X Microdym Nadir UF Membranes BT 420
18	Solenoid	12V DC
19	Non return valve	20mm PVC
20	Controller	Aqua Chlorus
21	Blower	To deliver 30l/min as specified for membrane
23	Outlet pipe	20mm PVC pressure



ACCREDITED
1 FEB 2021
NSW MINISTRY OF HEALTH



M800sx GREYWATER SYSTEM
INTERNAL VIEWS
Without Cabinet
M800s-02-003