



Certificate of Accreditation

Sewage Management Facility

Aerated Wastewater Treatment System

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

System: Rivatec Model ES10PC AWTs

Manufacturer: Rivatec Environmental Pty Ltd

Of: 6 Marklea Close, Tuggerah, NSW, 2259

The Rivatec Model ES10PC AWTs 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.

*A/Director, Environmental Health
for Secretary (delegation PH335)*

Issued: 4 December 2020

Certificate No: AWTs009

Expires: 31 December 2021

Schedule 1: Specification

Rivatec model ES10PC Aerated Wastewater Treatment System

General Description

The Rivatec model ES10PC Aerated Wastewater Treatment System (AWTS) is designed to treat the wastewater from a residential dwelling occupied by a maximum of 10 persons. The Rivatec model ES10PC AWTS is contained in one vertical axis type cylindrical precast concrete collection well with a design capacity of 7100 litres and is manufactured by Central Coast Septics Accreditation no: STCW015. The operational water level in the aeration chamber of the system is 1650 mm. The system consists of:

- A primary sedimentation chamber with a capacity of 3250 litres;
- A contact aeration chamber with a capacity of 2850 litres and containing two blocks of filter media manufactured by Tapex Pty Ltd and measuring 600 mm long x 540 mm wide x 540 mm high with a surface area of 70 m²;
- A clarifying chamber with a capacity of 460 litres;
- A chlorine contact chamber with a capacity of 165 litres;
- A irrigation pump chamber with a capacity of 165 litres;
- A chlorine disinfection unit installed on the outlet pipe of the clarifier;
- Air is supplied to the contact aeration chamber by a Nitto LA80, Hiblow HP80 or equivalent with an output of 80 litres/minute;
- A submersible irrigation pump selected from the DAB300 (7 metre low head) or DAB600 (11 metre high head) or equivalent.

Schedule B: Conditions of Accreditation

1. General

- 1.1 Prior to installation the owner/occupier of the premises shall make an application, in accordance with Clause 26 of the *Local Government (General) Regulation 2005*, to the local authority for approval to install and operate the Rivatec model ES10PC AWTS as a Sewage Management Facility in accordance with Section 68, Part C of the *Local Government Act 1993*.
- 1.2 The local authority shall apply those Conditions of Accreditation, appropriate to the owner / occupier, to any approval to operate the Rivatec model ES10PC AWTS issued under Clause 45(4), *Local Government (General) Regulation 2005*.
- 1.3 In accordance with Clause 36 of the *Local Government (General) Regulation 2005*, the Rivatec model ES10PC AWTS shall have an expected service life of 5 years in the case of mechanical and electrical components and 15 years in the case of other components.
- 1.4 The owner / occupier shall ensure that the Rivatec model ES10PC AWTS is installed or constructed:
 - in accordance with the accredited specifications of the type tested unit and in accordance with good trade practice, and
 - so as to allow ease of access for maintenance, and
 - with regard to the health and safety of users, operators and persons maintaining the facility, and
 - must be installed or constructed so as to make appropriate provision for access to and removal of contents in a safe and sanitary manner, and
 - must, if it is intended to be a permanent fixture, be anchored to prevent movement.
- 1.5 The manufacturer / supplier shall ensure that the Rivatec model ES10PC AWTS is supplied, constructed and installed in accordance with the design (including the disinfection unit) as submitted and accredited by the NSW Ministry of Health. The Rivatec model ES10PC AWTS shall not be modified or altered except that alternate individual mechanical and electrical components such as pumps, PLCs, etc., may be substituted provided that the component meets the Accredited design specification.
- 1.6 Any permanent modification or variations to the accredited design of the Rivatec model ES10PC AWTS shall be submitted for separate consideration and variation of the Certificate of Accreditation by the NSW Ministry of Health. Modifications will be considered in accordance with section 2.3.13 of AS1546.3:2017.

- 1.7 Each Rivatec model ES10PC AWTS shall be permanently and legibly marked by the manufacturer in accordance with section 3 of AS1546.3:2017.
- 1.8 The manufacturer shall supply with each Rivatec model ES10PC AWTS an owner's manual, which sets out the care, operation, maintenance and on-going management requirements of the system. The owner's manual prepared by the manufacturer shall specifically contain a plan for the on-going management of the Rivatec model ES10PC AWTS. 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 any on-going monitoring program developed by the local authority.
- 1.9 The manufacturer shall provide the following information to each local authority where it is intended to install a Rivatec model ES10PC AWTS in their area once accreditation has been obtained:
- Statement of warranty
 - Statement of service life
 - Quality Assurance Certification
 - Installation Manual
 - Service Manual
 - Owner's Manual
 - Manufacturer's Service Report Form
 - Engineering Drawings
 - Specifications
 - A4 Plans
 - Certificate of Accreditation documentation from NSW Health.
- The manufacturer need not provide the above information to the local authority where the information or document is contained on the manufacturer's web site.

2. Installation and Commissioning

- 2.1 The owner / occupier shall have the Rivatec model ES10PC AWTS 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 owner / occupier shall ensure that all electrical work is carried out on the Rivatec model ES10PC AWTS by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.
- 2.3 The owner / occupier shall not commission the Rivatec model ES10PC AWTS unless the land application system has been completed.

3. Maintenance

- 3.1 The owner / occupier of the premises shall enter into a minimum 12-month contract or agreement with a service agent and ensure that the Rivatec model ES10PC AWTS is serviced:
- in accordance with the manufacturer's / supplier's service manual and using the manufacturer's / supplier's service sheet; and
 - by a service agent who
 - has completed a course on the servicing and maintenance of STS; and has some supervised servicing experience or extensive un-supervised experience;
 - is employed or authorised by the manufacturer / supplier of the Rivatec model ES10PC AWTS;
 - uses replacement parts which meet the minimum specification of the Rivatec model ES10PC AWTS;
 - has advised of their name, contact details and credentials to the local authority;
 - submits a completed NSW Health "Local Council Service Report" (attached) to the local authority immediately after each and every service;
 - shall report to the local authority any instances where the owner / occupier refuses to authorise repairs, replacement of parts or maintenance; and

- does not perform electrical work or enter confined spaces unless trained and is suitably qualified to do so.
- 3.2 The owner/occupier shall not service the Rivatec model ES10PC AWTS unless they are an authorised agent.
- 3.3 The Rivatec model ES10PC AWTS once installed and commissioned shall be serviced at 3 monthly intervals.
- 3.4 The manufacturer / supplier of the Rivatec model ES10PC AWTS shall place on its web site a copy of the service manual, service sheet or form and specifications for the Rivatec model ES10PC AWTS to facilitate servicing, maintenance and repairs. Commercial-in-confidence documents may be provided directly to the service agent without uploading to the web site.
- 3.5 Each three monthly service shall, as a minimum where provided, include a check on all mechanical, electrical and functioning parts of the system including:
- The chlorinator and replenishment of the disinfectant,
 - Any alternative disinfection unit,
 - Replace a UV light globe at recommended intervals and keep a record,
 - Pump and air blower,
 - The alarm system,
 - Slime growth on the filter media,
 - Operation of the sludge return system,
 - The effluent irrigation area,
 - On-site testing for free residual chlorine, pH and dissolved oxygen at the appropriate check points.

4. Verification

- 4.1 Effluent from the Rivatec model ES10PC AWTS 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
 - Free residual chlorine greater than 0.2 and less than 2.0 mg/L

5. Permitted uses

- 5.1 The effluent is suitable for re-use for garden purposes by way of any of the forms of irrigation as described in AS/NZS 1547:2012:
- above ground spray irrigation; and/or
 - surface drip irrigation covered by mulch; and/or
 - sub-surface drip irrigation installed at around 100 mm depth; and or
 - any form of sub-soil application.

Each of the forms of irrigation or application is subject to the approval of the local authority.

| Local Council STS (DGTS) Service Report: February 2018 | | |
|---|-----------------------------------|-------------------------------------|
| Owner's Name: | Local Council: | |
| Installation Address: | | |
| System Brand & Model: | <input type="checkbox"/> Domestic | <input type="checkbox"/> Commercial |
| Date of this service: / / | Date of last Service: / / | Next service due: / / |
| Has the STS/DGTS been serviced in accordance with the manufacturer's / supplier's requirements and using the service sheet? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why not? | | |
| STS/DGTS functioning correctly? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why not? | | |
| According to sludge-judge or other methodology is de-sludging needed? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended? | | |
| Offensive odours? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended? | | |
| Alarms tested and functional? <input type="checkbox"/> Yes <input type="checkbox"/> No If not "functional" what action is recommended? | | |
| Final Effluent Quality Tested? <input type="checkbox"/> Yes <input type="checkbox"/> No Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No Chlorine tablets remaining? <input type="checkbox"/> Yes <input type="checkbox"/> No Quality? <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory On what evidence is this judgement made? If "Unsatisfactory" what action was recommended? | | |
| Land Application Area Surface ponding? <input type="checkbox"/> Yes <input type="checkbox"/> No Run off? <input type="checkbox"/> Yes <input type="checkbox"/> No Excess plant growth? <input type="checkbox"/> Yes <input type="checkbox"/> No Effluent leaving premises? <input type="checkbox"/> Yes <input type="checkbox"/> No High risk areas contaminated? * <input type="checkbox"/> Yes <input type="checkbox"/> No * Patio, play areas, BBQ, etc Operating satisfactorily? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Not operating satisfactorily" what action was recommended? | | |
| Overall Condition of STS? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Comments / Action Recommended / Repairs Needed / Repairs Performed: | | |
| Has the owner / occupier taken recommended actions? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Service Agent: | Contact Details: | |
| Signature: | Date: | |

Source: Adapted from "Checklist 4.2: Operational AWTS inspection report for use by service providers and Council inspectors" in *Designing and Installing On-Site Wastewater Systems*, Sydney Catchment Authority, May 2012



**Rivatec
Environmental**

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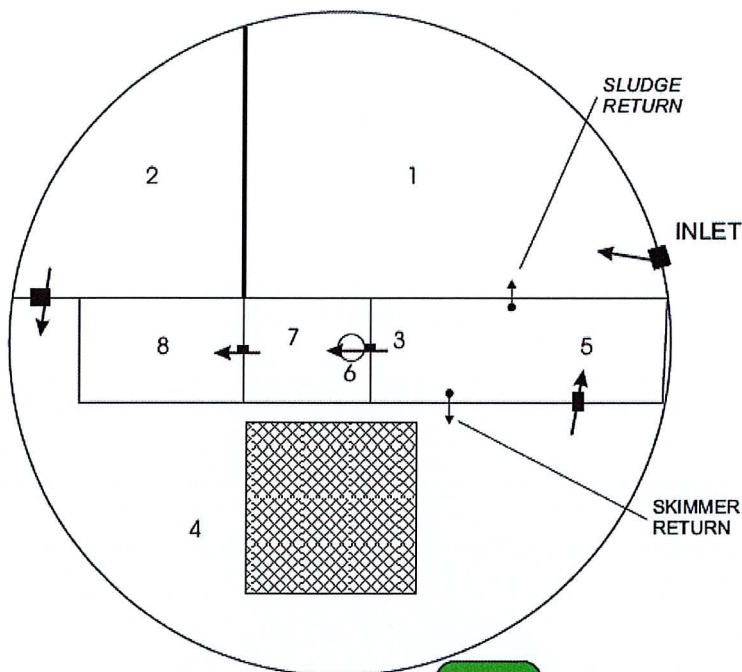
6 Marlea Close
Tuggerah 2259
NSW

Designed; SF

Date; 2006

Lic; 339816C

SITE;



LEGEND;

Treatment Process

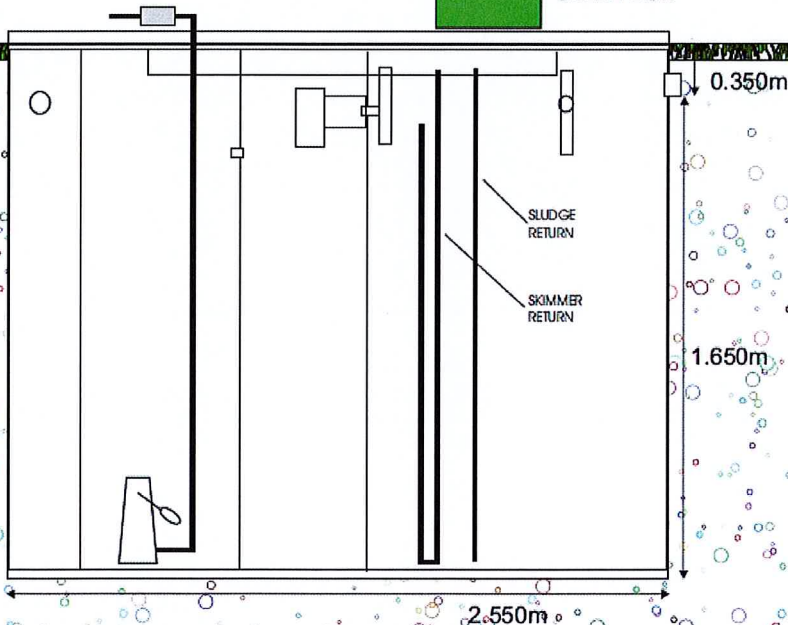
1. 2/3 PRIMARY TREATMENT
2. 1/3 PRIMARY TREATMENT
Minimum 3247lt
3. SURGE REDUCTION
4. AERATION
Minimum 2852lt
5. CLARIFIER
Minimum 460lt
6. CHLORINATOR
7. CHLORINE RETENTION
Minimum 165lt
8. PUMP WELL
Minimum 165lt

ACCREDITED

4 DEC 2020

NSW MINISTRY OF HEALTH

GREEN BOX



HOLE EXCAVATION

DEPTH - 2.000m
WIDTH - 3.000m

NOTE:

ALL TANKS TO COMPLY WITH - AS/NZ 1546.1 ALL PVC FITTINGS TO COMPLY WITH - AS/NZ 1477
SYSTEM DESIGN BY EARTHSafe NEWCASTLE PTY LTD
TANK MANUFACTURE
CENTRAL COAST SEPTICS ■