



# Certificate of Accreditation

## Aerated Wastewater 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:* ***Econocycle model ENC 10-1 AWTS***

*Manufacturer:* ***Eco-Septic Pty Ltd trading as Econocycle***

*Of:* ***15 Econo Place, Silverdale, NSW, 2752***



*This is to certify that the Econocycle model ENC 10-1 AWTS 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 Sewage Management Facility Accreditation Guideline, May 2005.*

A handwritten signature in black ink, appearing to be "L. Smith".

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

*Date of Issue: 27 October 2010*

*Certificate No: AWTS 015*

**This Certificate of Accreditation is in force until 31 December 2015**

## **Schedule 1: Specification**

### **Econocycle model ENC 10-1 Aerated Wastewater Treatment System**

#### General Description

The Econocycle model ENC 10-1 Aerated Wastewater Treatment System (AWTS) is designed to treat the wastewater from a residential dwelling occupied by a maximum of 10 persons. The Econocycle model ENC 10-1 AWTS is contained in one vertical axis type cylindrical precast concrete collection well with a design capacity of 7000 litres. The operational water level in the aeration chamber of the system is 1440 mm. The system consist of:

- A primary sedimentation chamber with a capacity of 3050 litres;
- A contact aeration chamber with a capacity of 2500 litres, divided into two sections and each containing a block of contact filter media measuring 800 mm long x 800 mm wide x 1200 mm high with a surface area of 50 m<sup>2</sup>;
- A sedimentation/clarifying chamber with a capacity of 420 litres;
- An irrigation pump chamber with a capacity of 420 litres incorporating a capacity of 300 litres for chlorine contact of the effluent;
- A chlorine disinfection unit installed on the outlet of the clarification filter;
- Air is supplied to the contact aeration chamber by an air blower with an output of 80 litres/minute at 1.5 m water depth;
- A submersible irrigation pump which delivers a minimum flow of 2.0 m<sup>3</sup>/hour at a minimum head of 7 m, or better.



## **Schedule 2: Conditions of Accreditation**

### **1.0 General**

- 1.1 For each installation the owner/occupier of a premises shall make an application to the Local Authority to install an Econocycle model ENC 10-1 AWTs as a waste management facility in accordance with Section 68, Part C of the Local Government Act 1993 and Clause 26 of the Local Government (General) Regulation 2005.
- 1.2 The Econocycle model ENC 10-1 AWTs shall be supplied, constructed and installed in accordance with the design as submitted and accredited by the NSW Department of Health.
- 1.3 Any modification or variations to the accredited design of the Econocycle model ENC 10-1 AWTs shall be submitted for separate consideration and variation of the Certificate of Accreditation by the Director-General of the NSW Department of Health.
- 1.4 Each Econocycle model ENC 10-1 AWTs 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 Econocycle model ENC 10-1 AWTs and 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 an AWTs in their area once Departmental 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.

## **2.0 Installation and Commissioning**

- 2.1 The Council should require that on completion of the installation of the Econocycle model ENC 10-1 AWTS, 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 council.
- 2.2 The Council 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.

## **3.0 Maintenance**

- 3.1 The Council shall require the owner/occupier of a premises to enter into an annual service contract with a representative of Econocycle or a service contractor or company acceptable to the Council.
- 3.2 The Econocycle model ENC 10-1 AWTS shall be serviced at three monthly intervals in accordance with the details set out in the owner's and service manual.
- 3.3 Each three monthly service shall include a check on all mechanical, electrical and functioning parts of the system including:
  - The chlorinator and replenishment of the disinfectant,
  - Pumps, air blower, fan or air venturi,
  - The alarm system (where possible),
  - 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.
- 3.4 The Council should require that a service report sheet, in triplicate, is completed for each service. The original shall be given to the owner, the duplicate forwarded to the Council and the triplicate retained by the service contractor.



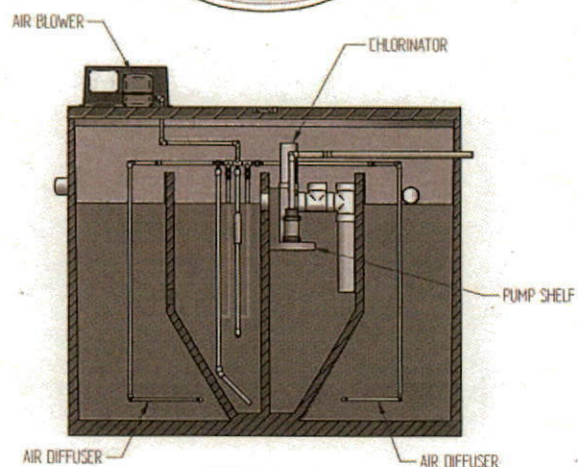
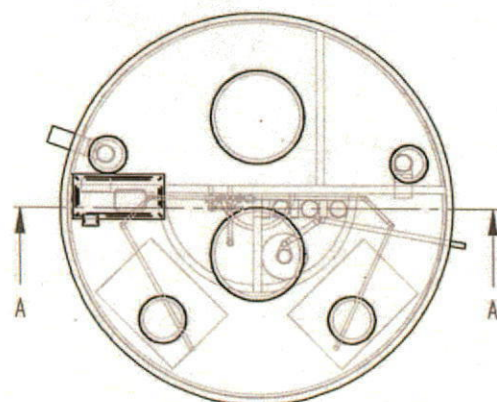
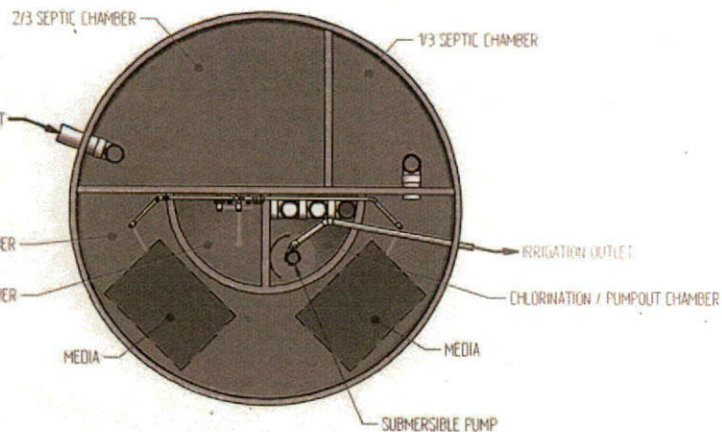
#### **4.0 On-going Management**

- 4.1 The owner's manual prepared by the manufacturer shall contain a plan for the on-going management of the Econocycle model ENC 10-1 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 the on-going monitoring program developed by the local authority.
- 4.2 Effluent from the Econocycle model ENC 10-1 AWTS taken in any random grab sample shall comply with the following standard:
- BOD<sup>5</sup> (less than 30 mg/L)
  - SS (less than 45 mg/L)
  - Thermotolerant coliforms (less than 100 cfu/100 ml)
  - Free residual chlorine (greater than 0.2 and less than 2.0 mg/L)

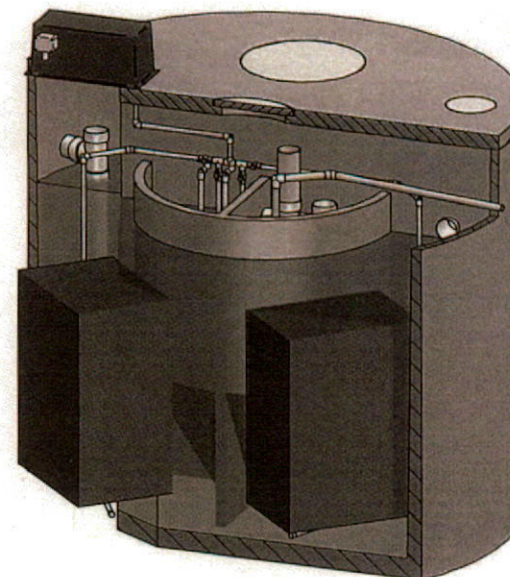
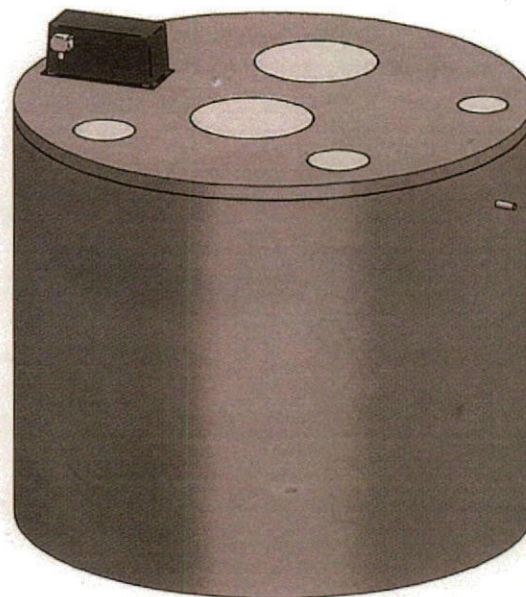
#### **5.0 Permitted uses**

- 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 1547:2000:
- above ground spray irrigation; or
  - surface drip irrigation covered by mulch; or
  - sub-surface drip irrigation installed at around 100 mm depth.

Each of the three forms of irrigation is subject to the approval of the Council.



SECTION A-A



APPROVED

27 OCT 2010

DEPARTMENT OF HEALTH, N.S.W.

NOTES:

1. SYSTEM CAPACITY 10 PEOPLE
2. SEPTIC TANKS MANUFACTURED AND TESTED IN ACCORDANCE WITH AS/NZS 1546.1:2008

<b>Econocycle</b> <small>ADVANCED WASTEWATER TREATMENT SYSTEMS</small>		PROJECT	ENC10-1	
<small>UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MM</small>		TITLE	TANK ASSY CERTIFICATION DRAWING	
<small>DO NOT SCALE</small>		DATE PLOTTED	24/09/2010	SHEET SIZE A3
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