



Department of Housing and Public Works	 <b>Queensland Government</b>
<b>Chief Executive Approval</b>	
Approval No. <u>10/2014</u>	
Date of Issue <u>21/8/14</u>	
Delegate Signature: 	
<b>CHIEF EXECUTIVE APPROVAL 10/2014</b> <i>Plumbing and Drainage Act 2002, part 5.</i>	

## Approval

1. The **Earthsafe D10 S/C with nutrient reduction** ("the system") described in the Specifications and Drawings in the attached Schedule and manufactured by **Eco Water (Qld) Pty Ltd** (ABN 64 143 207 658) ("the manufacturer") has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code) dated 15 January 2013.
2. Approval is granted for the advance secondary quality wastewater treatment system with nutrient reduction, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Act 2002*, part 5 and the conditions of approval detailed below.
3. This approval, the conditions of approval and the Schedule comprise the entire Chief Executive Approval document.
4. Any modification by the manufacturer to the design, drawings or specifications scheduled to this approval must be approved by the Chief Executive.

## Conditions of approval

5. The manufacture, installation, operation, service and maintenance of the systems must be in conformity with the conditions of this Chief Executive Approval.
6. The advanced secondary quality wastewater treatment system with nutrient reduction, which is an example of the approved systems, may only be used on premises that generate per day
  - (a) a maximum hydraulic loading of 3,000 litres; and
  - (b) a maximum organic loading of 700 grams BOD<sub>5</sub>.
7. The system must continue to meet the requirements of secondary quality wastewater treatment system, producing the following effluent quality —
  - (a) 90% of the samples taken must have a BOD<sub>5</sub> less than or equal to 10 g/m<sup>3</sup> with no sample greater than 20 g/m<sup>3</sup>.
  - (b) 90% of the samples taken must have total suspended solids less than or equal to 10g/m<sup>3</sup> with no sample greater than 20g/m<sup>3</sup>.
  - (c) 90% of the samples taken must have a thermotolerant coliform count not exceeding 10 organisms per 100 mL with no sample exceeding 200 organisms per 100 mL.
  - (d) The manufacturer has included nitrogen and phosphorus reduction in the treatment process, the effluent compliance criteria must continue to meet, in addition to the above, the following nutrient criteria:
    - a. 90% of the samples taken, with 95% confidence limits shall have a total nitrogen concentration less than or equal to 10 mg/L; and
    - b. 90% of the samples taken, with 95% confidence limits shall have a total phosphorus concentration less than or equal to 05mg/L.

8. Each system must be serviced in accordance with the details supplied in the owner's service and maintenance manuals.
9. Each system must be supplied with —
  - (a) a copy of this Chief Executive Approval document;
  - (b) details of the system;
  - (c) instructions for authorised persons for its installation;
  - (d) a copy of the owner's manual to be given to the owner at the time of installation; and
  - (e) detailed instructions for authorised service personal for its operation and maintenance.
10. This approval does not extend, apply to, or include the land application system used in conjunction with an approved system installed on premises.
11. The Chief Executive may, by written notice, cancel this approval if the manufacturer fails —
  - (a) to comply with one or more of the conditions of approval; or
  - (b) within 30 days, to remedy a breach, for which a written notice been given by the Chief Executive.
12. This approval may only be assigned with the prior written consent of the Chief Executive.
13. This approval expires on 20 August 2019 unless cancelled earlier in accordance with paragraph 7 above.

## SCHEDULE

**Attachment 1: Specifications**

**Attachment 2: Drawings**



Lindsay Walker

**A/Executive Director  
Building Codes Queensland**

Date approved: 21 August 2014

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**CHIEF EXECUTIVE APPROVAL No. 10/2014**  
*Plumbing and Drainage Act 2002, part 5, division 1, section 93*

**SCHEDULE**

**Attachment 1**

Specifications for the  
**Eco Water (Qld) Pty Ltd – Earthsafe D10 Model S/C with Nutrient Reduction**

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Building Codes Queensland	

D10 polymer or concrete system design construction and material specifications

Polypropylene tanks manufactured by Reln Industries to comply to the relevant AS/NZS 1546.3 standards for septic tank lids and side loadings.

Height: 2038 mm  
 Diameter: 1998 mm  
 Liquid volume 3200 litres (each)

Concrete tank precast reinforced concrete in accordance with AS/NZS1546.3

Diameter: 2500mm  
 Height: 2226mm  
 Liquid volume 8000 litres

Electrical control box housing manufactured in Polyethylene

All electrical components meet relevant ANZ standards

Air blower type, Thomas 80 litre minute linear compressor (or equivalent)

High water warning float manufacturer Mac3

Internal chamber material components manufactured in polypropylene

All system fastener rods and screws manufactured in marine grade (316) stainless steel.

Irrigation pump (standard) Claytech Bluesub 15m head pump or equivalent.

14.5m max head  
 170LPM max flow  
 80L/min @ 10m

Optional irrigation pump (high head) Pentair Subinox 36m head

Triple impellor  
 36m max head  
 80 L / min @ 10 m

Contact media Polyethylene contoured sheet

All system pipe work is manufactured in ANZ standard compliant PVC and solvent welded

Final polishing unit Pentair P21 model

Please refer to the Owners Manual Earthsafe D10 p8 – 9 for the process overview for the function of each component and the complete plant.

Please refer to the maintenance manual Earthsafe D10 for the replacement of faulty pumps. Paragraph 20 – 21

Technical advice and all replacement parts are available from Eco Water QLD Ph (07) 3205 3666.

9 Mackie Way, Brendale 4500, or email [info@wastewaterequipment.com.au](mailto:info@wastewaterequipment.com.au).

Website <http://www.ecowatertreatment.com.au/>.

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**SCHEDULE**

**Attachment 2**

Drawings for the

**Eco Water (Qld) Pty Ltd – Earthsafe D10 Model S/C with Nutrient Reduction**

