Approval

1. The Eco Safe Crown Wastewater Treatment Plant 10EP ("the system") described in the Specifications and Drawings in the attached Schedule and manufactured by B V Hawthorne Pty Ltd ("the manufacturer") (ABN 70 276 315 218) has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code) dated 15 January 2013.

2. Approval is granted for an advanced secondary quality wastewater treatment system, 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 may only be used on premises that generate per day:
   
   (a) a maximum hydraulic loading of 2000L; and
   
   (b) a maximum organic loading of 500g BOD$_5$

7. For the system to meet the requirements of an advanced secondary quality wastewater treatment system, the system must produce the following effluent quality —
   
   (a) 90% of the samples taken must have a BOD$_5$ less than or equal 10g/m$^3$ with no sample greater than 20g/m$^3$; and
   
   (b) 90% of the samples taken must have total suspended solids less than or equal 10g/m$^3$ with no sample greater than 20g/m$^3$; and
   
   (c) 90% of the samples taken must have thermotolerant coliform count not exceeding 10 organisms per 100 mL with no sample exceeding 200 organisms per 100mL.
   
   (d) Where chlorination is the disinfection process, the total chlorine concentration must be greater than or equal to 0.5g/m$^3$ and less than 2.0g/m$^3$ in four out of five samples taken.

8. Each system must be serviced in accordance with the manufacturers 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 and ancillary equipment;
   
   (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. At each anniversary of the Chief Executive Approval date, the manufacturer must submit to the Chief Executive a list of all systems installed in Queensland that they have received an installation and commissioning certificate for during the previous 12 months.

12. Where the Chief Executive is notified of any system failures that they believe are a result of poor design or faulty manufacture, the Chief Executive may randomly select a number of installed systems for audit. The Chief Executive will notify the National Association of Testing Agencies (NATA) accredited laboratory nominated by the manufacturer, which systems are to be audited for Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS). The sampling and testing of the selected systems, if required, is to be done at the manufacturer’s expense. The following results must be reported to the Chief Executive;

(a) Address of premises.
(b) Date inspected and sampled.
(c) Sample identification number.
(d) Biochemical Oxygen Demand (BOD₅).
(e) Total Suspended Solids (TSS).

13. The Chief Executive may, by written notice, cancel this approval if the manufacturer fails — to comply with one or more of the conditions of approval; or within 30 days, to remedy a breach, for which a written notice been given by the Chief Executive.

14. This approval may only be assigned with the prior written consent of the Chief Executive.

15. This approval expires on 22 January 2022 unless cancelled earlier in accordance with paragraph 13 above.

Lindsay Walker
Director
Strategic Policy (Plumbing, Drainage, Committees and Special Projects)

Date approved: 27 January 2017
SCHEDULE

Attachment 1

Specifications for the

Eco Safe Crown Wastewater Treatment Plant 10EP
Specification

Document Ref: Crown.02

DESCRIPTION OF PLANT SECTIONS & TREATMENT PLANT STRUCTURE AND MATERIALS OF CONSTRUCTION

The Plant sections and structure including construction materials are fully described on the enclosed standard drawings.

**Primary Tank:** 3900L concrete (or plastic) septic tank fitted with internal outlet filter (either Zabel or Everhard).

**Sand Filter:** The filter media is fully enclosed in a concrete (or plastic) tank of 2 metres diameter. Refer Drawings “Crown A” & “Crown B”. In the upper part of the tank, there is an inlet filter followed by a distribution mechanism (made from pipes) above the filter media for evenly distributing the effluent onto the filter media. The effluent flows through the filter media. There is a collection pipe below the filter media, which takes the treated effluent to the Pumpwell.

**Pumpwell:** 450L concrete Pumpwell fitted with 350W / 550W automatic submersible pump. The Pumpwell is fitted with a float switch which closes a circuit with a wall plate containing a neon light when the water rises above the start position of the built-in float switch. The Pumpwell also has a disinfection unit. Refer Drawings “Crown A” & “Crown C”.

**Pipework:** Distribution and collection pipework is sewer grade PVC pipes complying with AS1260 & AS1477

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Department of Housing and Public Works
Chief Executive Approval

Approval No: 012017
Date of Issue: 23/11/17
Delegate Signature: [Signature]
Building Codes Queensland

"The Totally Natural Treatment System - Simply the Best"
CHIEF EXECUTIVE APPROVAL No. 01/2017
Plumbing and Drainage Act 2002, part 5, division 1, section 93

SCHEDULE

Attachment 2

Drawings for the

Eco Safe Crown Wastewater Treatment Plant 10EP
65mm Agg. Pipe

CHAMBER 2
(Disinfection Stage 2)

INLET BAFFLE

OUTLET BAFFLE

CHAMBER 3
(PUMPWELL)

INLET BAFFLE

Submersible Pump

50mm thickness concrete partitions

Partition

Scum Board

CHAMBER 1
(Disinfection Stage 1)

OUTLET BAFFLE

PATENT PENDING

Submersible Pump

Scum Board

Outside diameter of tank = 1930mm

Scale: 1:100

Rev. 10.01.08

brian Hawthorne RPEQ MIE Aust.

Note:
The Ecosafe Crown Treatment Plant is a gravity-fed automatic system. It does NOT contain any of the following: electric motors, gearboxes, compressors, valves, diffusers, sludge pumping equipment, electrodes.