



## CHIEF EXECUTIVE APPROVAL 13/2011

*Plumbing and Drainage Act 2002*, part 5, division 1, section 93

File reference: SD 51

### Approval

The **Epsom Filtration System 1 – 20 EP** wastewater treatment plant described in the Specifications and Drawings in the attached Schedule and manufactured by **Treat Rite Pty Ltd** (ABN 12063654053) has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code) dated 19 January 2011.

Approval is granted for a **secondary** wastewater treatment system, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Act 2002* (PDA), part 5, division 1, section 91 and the conditions of approval detailed below.

This approval, the conditions of approval, and the Schedule comprise the entire Chief Executive Approval document.

Any modification by the manufacturer to the design, drawings, or specifications scheduled to this Chief Executive Approval must be approved by the Chief Executive.

Glen Brumby

**Executive Director**  
**Building Codes Queensland**

Date approved: 6/5/2011

Level 5, 63 George Street Brisbane

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ABN 61 331 950 314



## Conditions of approval

1. The systems may only be used on premises that generate per day:
  - (a) maximum hydraulic loading of 5000 L;
  - (b) maximum organic loading of 1500g BOD<sup>5</sup>.
2. An approved system, when installed on premises, must continue producing effluent that meets the following standard:-
  - (a) 90% of the samples taken over the test period shall have a BOD<sub>5</sub> less than or equal to 20g/m<sup>3</sup> with no sample greater than 30g/m<sup>3</sup>.
  - (b) 90% of the samples taken over the test period shall have total suspended solids less than or equal to 30g/m<sup>3</sup> with no sample greater than 45 g/m<sup>3</sup>.
  - (c) where disinfection is provided, 90% of the samples taken over the test period shall have thermotolerant coliform count (determined by either the most probably number of membrane filter technique) not exceeding 200 organisms per 100ml with no sample exceeding 1000 organisms per 100ml.
  - (d) where chlorination is the disinfection process, the total chlorine concentration shall be greater than or equal to 0.5g.m<sup>3</sup> and less than 2.0g/m<sup>3</sup> in four out of five samples taken.
3. The manufacture, installation, operation, service and maintenance of the system must be in conformity with the conditions of this Chief Executive Approval. The system must be supplied with —
  - (e) a copy of this Chief Executive Approval document;
  - (f) details of the system;
  - (g) instructions for authorised persons for its installation;
  - (h) a copy of the owner's manual to be given to the owner at the time of installation; and
  - (i) detailed instructions for authorised service personnel for its operation and maintenance.
4. The system must be serviced in accordance with the details supplied in the owner's service and maintenance manuals.
5. 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 of the notice being issued, to remedy a breach, for which a written notice has been given by the Chief Executive.
6. This approval does not extend, apply to, or include the land application system used in conjunction with an approved system installed on premises.
7. This approval may only be assigned with the prior written consent of the Chief Executive.
8. This approval expires on 6/15 2016 unless cancelled earlier in accordance with paragraph 5 above.

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## SCHEDULE

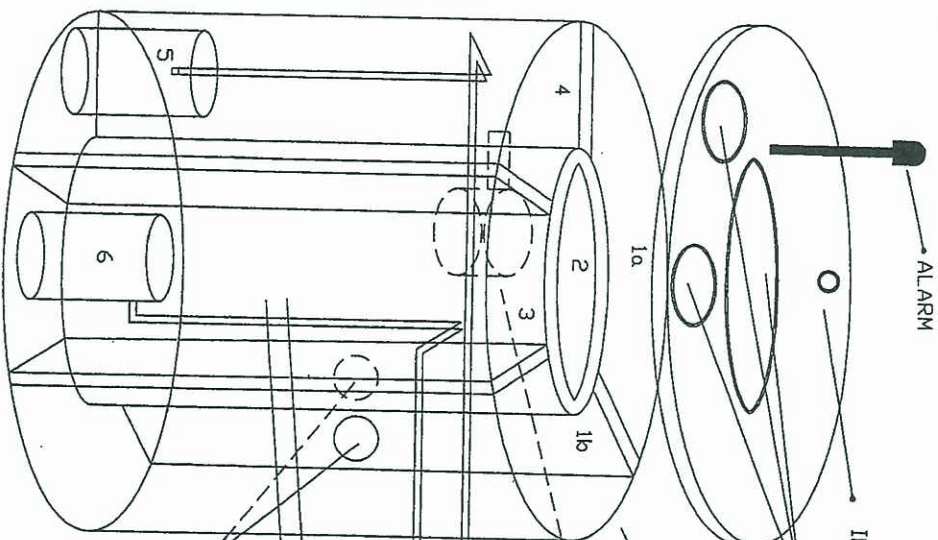
<b>Attachment 1:</b>	Specifications
<b>Attachment 2:</b>	Drawings

Glen Brumby  
**Executive Director**  
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# EPSOM FILTRATION SYSTEM



- 1a & 1b PRIMARY PRETREATMENT CHAMBER 2600 LITRES
  - 2 SECONDARY PRETREATMENT CHAMBER 2500 LITRES
  - 3 FINAL EFFLUENT PUMP WELL 1000 LITRES
  - 4 EFFLUENT PUMP WELL FOR THE SANDFILTER 1000 LITRES
  - 5 EFFLUENT PUMP FOR THE SANDFILTER WITH AUTOMATIC CONTROL
  - 6 FINAL EFFLUENT PUMP FOR THE IRRIGATION WITH AUTOMATIC CONTROL
- OPERATING CAPACITY 7100 LITRES  
 HOLDING CAPACITY 9320 LITRES
- APPLICATION RATE ON SAND FILTER 50 LITRES PER SQUARE METRE PER DAY.

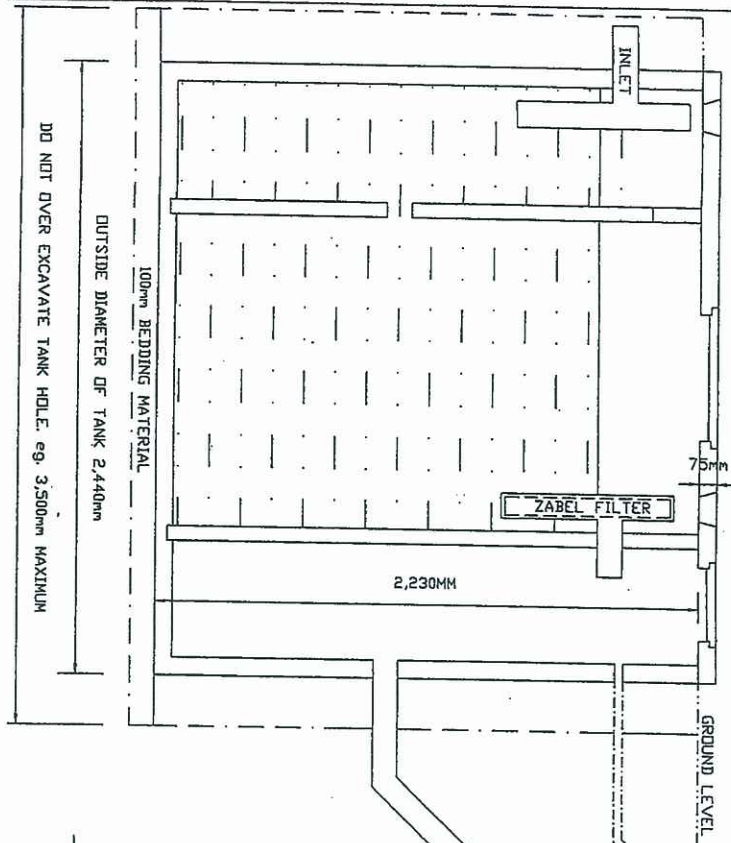
## SAND FILTER

INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS DRAWINGS.

EFFLUENT MUST DISCHARGE INTO A LANDSCAPED AREA OF 200 SQUARE METRES MINIMUM AREA WITH MULCH/BARK ETC. WITH 3mm DRIPPERS/TRICKLE AT EACH PLANT (MIN.40 PLANTS).

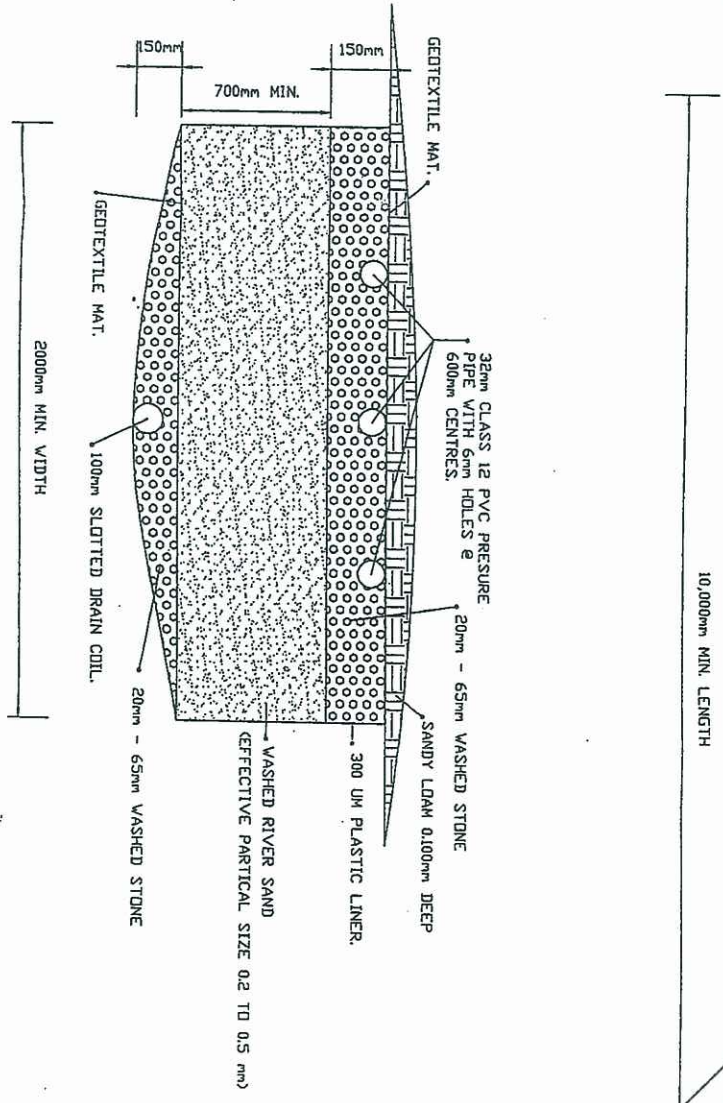
Department of Infrastructure and Planning  
**Chief Executive Approval**  
 Approval No: 13/2011  
 Date of Issue: 6/5/2011  
 Delegate Signature: [Signature]  
 Building Codes Qld

# EPSOM FILTRATION SYSTEM



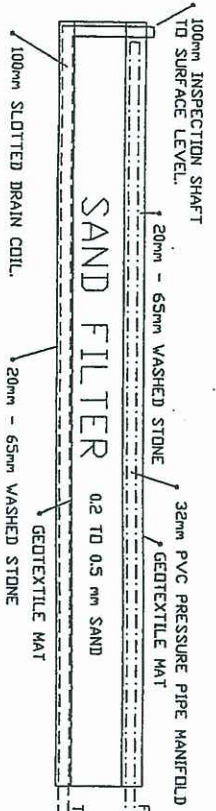
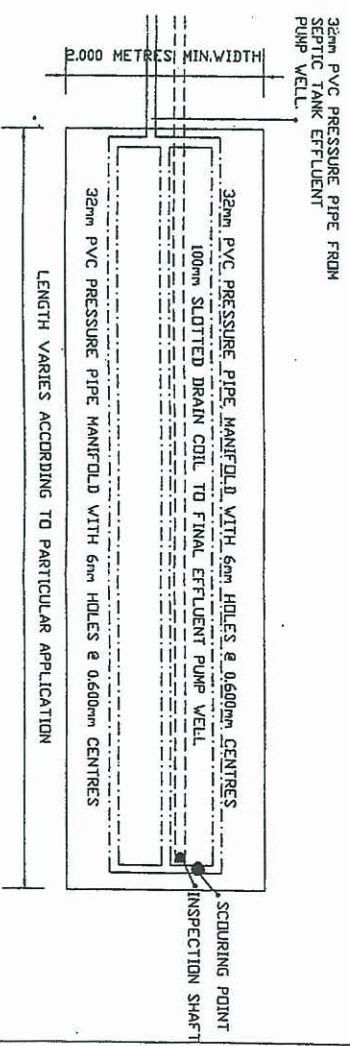
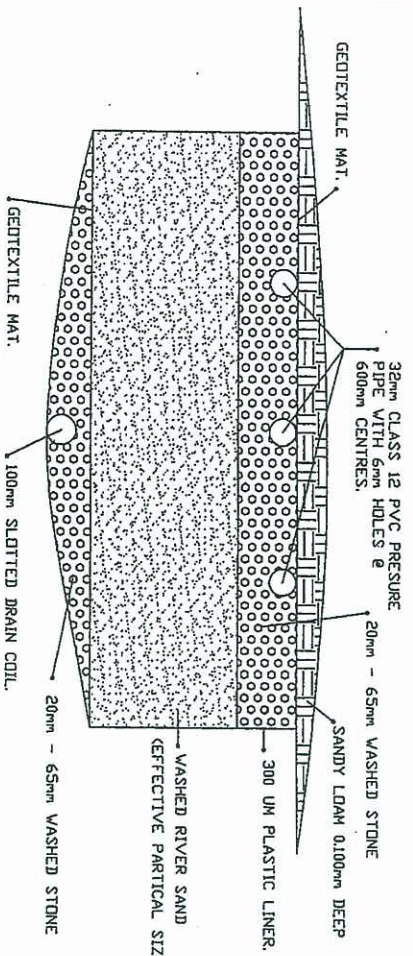
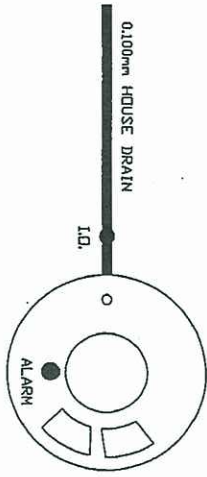
## CHECK LIST:

1. EXCAVATE HOLE - 3500 M SQUARE X 2.330 M DEEP
2. PLACE BEDDING SAND LAYER - 100mm
3. CHECK DEPTH OF HOLE FROM GROUND LEVEL TO BEDDING SAND - 2.230 M
4. INVERT OF INLET SHOULD BE 400mm BELOW GROUND LEVEL
5. EXCAVATE HOLE FOR SAND FILTER 2.0 M WIDE X 10.0 M LONG & SHAPE BOTTOM OF TRENCH AS ILLUSTRATED
6. CHECK THAT LINER ONCE INSTALLED DOES NOT FOLD INWARDS WHEN PLACING GRAVEL & SAND
7. INSTALL GRAVEL, & SAND STRICTLY AS PER THE ILLUSTRATION
8. CHECK THAT THE MANIFOLD HAS BEEN INSTALLED LEVEL
9. CHECK THAT ALL DEBRIS HAS BEEN CLEARED FROM PUMP WELLS
10. CHECK THAT PUMPS & PIPE WORK HAS BEEN INSTALLED CORRECTLY & WITH UNIONS
11. CHECK THAT THE TANK LID HAS BEEN SEALED



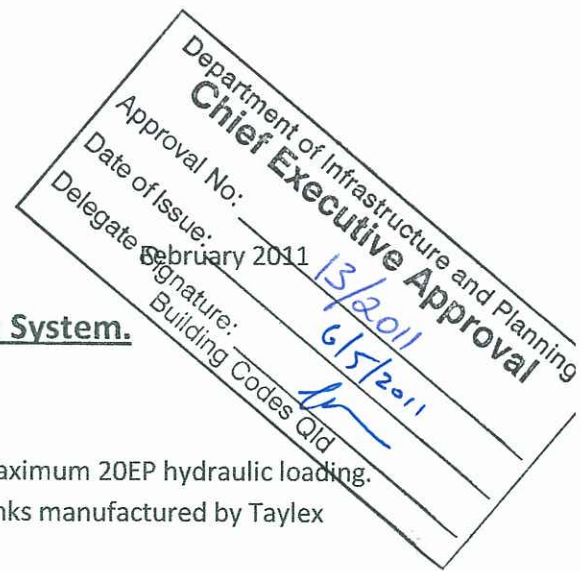
Department of Infrastructure and Planning  
 Chief Executive Approval  
 Signature: *[Signature]*  
 Date of Issue: 6/3/2011  
 Building Codes Officer

# EPSOM FILTRATION SYSTEM



Department of Infrastructure and Planning  
**Chief Executive Approval**  
 Approval No: 13/2011  
 Date of Issue: 13/15/2011  
 Delegate Signature: [Signature]  
 Building Codes Qld

## Specification for the Epsom Filtration System.



**Tank:** One (1) Epsom Tank complete with one Zabel A100 filter for maximum 20EP hydraulic loading. Smaller EP loadings shall be sized to the same design parameters. Tanks manufactured by Taylex Industries or other accredited AS 1546 accredited manufacturers.

**Pumps:** Two (2) x Orange (SP100) submersible pumps , 240 Volts or equivalent. Irrigation Pump to site specific.

**Internal Pipe work:** All internal pipe work associated with the pumps to be 32mm clas12 pressure pipe to AS/NZS 1477 and class 18 solvent weld fittings to AS/NZS 1477.

**Non Return Valves:** Both pumps to be fitted with 32mm solvent weld swing check valve.

### **Electrical**

1. A single isolator switch ( 1-WHS 20) to serve both pumps to mounted at the tank housed in a polyethylene box.
2. Alarm to consist of one (1) 150mm x 110mm x 75mm PVC electrical weather proof box to house one (1) ARLTF62999 transformer to activate one (1) 12 volt weather proof strobe light.
3. Alarm floats to be two (2) micro pressure switches incorporated into the electrical control unit.

**Sandfilter Liner:** Liner to be 14metres x 4.6metres x0.5mm poly liner or similar for maximum 20EP hydraulic loading. Smaller EP loadings shall be sized to the same design parameters.

**Manifold:** To be 32mm class 12 pressure pipe to AS/NZS 1477 and Class 18 fittings to AS/NZS 1477 and 9.0 metres in length x 1.0 metres in width with one central pipe with all three (3) pipes having 6mm holes drilled horizontally through the pipe at 400mm centres.

**Sand:** Sand grading to be 0.2mm to 0.5mm and be washed river sand or gravel.

**Gravel:** Gravel sizes to be 38mm for the top section of the sand filter and 20mm for the bottom section of the sand filter.

**Irrigation:** As per approved Site and Soil Evaluation design.

**Service Interval:** The Epsom Filtration System shall be serviced at twelve (12) monthly intervals

**NOTE:** This specification to be read in conjunction with the Epsom Filtration System design drawings.