

**TREATMENT PLANT APPROVAL 12/2019**  
*Plumbing and Drainage Act 2018, part 4.*



**Approval**

1. The **Envirotech ASF – Generation II – Advanced Secondary Quality Wastewater Treatment System** (“the system”) described in the Specifications and Drawings in the attached Schedule and manufactured by **Envirotech IP Pty Ltd ATF Envirotech Trust** (ABN 76 262 979 491) (“the manufacturer”) has been assessed in accordance with the (previous) Queensland Plumbing and Wastewater Code (QPW Code) dated 26 October 2017.
2. Approval is granted for the advanced secondary quality wastewater treatment system, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Act 2018*, part 4 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**

1. The manufacture, installation, operation, service and maintenance of the systems must be in conformity with the conditions of this Treatment Plant Approval.
2. The advanced secondary quality wastewater treatment system, which is an example of the approved systems, may only be used on premises that generate per day
  - (a) a maximum hydraulic loading of 1,500 litres; and
  - (b) a maximum organic loading of 700g BOD<sub>5</sub>.
3. The system must continue to meet the requirements of advanced 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 100mL.
  - (d) The total chlorine concentration must 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.
4. Each system must be serviced in accordance with the details supplied in the owner’s service and maintenance manuals.

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5. Each system must be supplied with —
  - (a) a copy of this Treatment Plant 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.
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. At each anniversary of the Treatment Plant 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.
8. 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 (BOD<sub>5</sub>) 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 (BOD<sub>5</sub>).
  - (e) Total Suspended Solids (TSS).
9. 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.
10. This approval may only be assigned with the prior written consent of the Chief Executive.
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 1 January 2024 unless cancelled earlier in accordance with paragraph 9 above.

Lindsay Walker

**Director**  
**Plumbing, Drainage and Special Projects**  
**Building Legislation and Policy**

Date approved: November 2019

Level 7,  
63 George Street Brisbane  
GPO Box 2457, Brisbane Qld 4001  
**Telephone** +61 7 3008 2557  
**Facsimile** +61 7 3237 1248  
**Website** [www.hpw.qld.gov.au](http://www.hpw.qld.gov.au)

ABN 61 331 950 314

**TREATMENT PLANT APPROVAL No. 12/2019**  
*Plumbing and Drainage Act 2018, part 4*



**SCHEDULE**

**Attachment 1**

Specifications & Drawings for the

**Envirotech ASF–Generation II–Advanced Secondary Quality Wastewater Treatment System**

## SPECIFICATION SHEETS

- Pumps – 1. Filter Dosing Pump – automatic (in-built ON-OFF float switch  
Type – centrifugal – vortex  
Model: AVI30 “Global”  
Make: Leader  
Country of Manufacture: Italy  
Supplier: ATS Pumps BRISBANE  
Performance: max head 5m  
max flow 130L/min  
Power requirement: single phase 240V, 330 Watt
2. Waste Sludge Pump – automatic  
- as per 1
3. Effluent Pump – automatic  
As for 1 and 2 except large pump  
Performance: max head 9m  
max flow 330L/min  
Power requirement: single phase 240V, 750 Watt

### Float Switches

1. High-level Alarm Filter Dosing Pump Well  
Type – plastic floating ball with internal micro-switch  
Function – 3-wire unit  
Make – Q.E.  
Country of manufacture: Italy  
Supplier: ATS Pumps BRISBANE  
Current Rating: max 16 amps
2. High-Level Alarm Effluent Pump Well  
- as per 1

### U.V. Disinfection Unit

Location: top of tank connected into effluent irrigation pipeline  
Type of lamp: high output low pressure mercury vapour lamp  
Max throughput: 42 Lpm  
Power requirement: 48 Watt  
Material of Manufacture: stainless steel  
Name of Manufacturer: Sterilight  
Model no. of unit: UV S12Q-PA  
Supplier: IBC water

- Liner - for A.S.F. Gen II size 6m x 1.2m  
- required liner size  
(6+1.5) x (1.2 +1.5) – to allow for walls and roll-up at top to finish  
= 7.5m x 2.7m  
- material – polypropylene

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Delegated Authority  
Department of Housing & Public Works



- construction – woven strands with finish coating to both sides
- equivalent to Rheem CANVACON 5000 (used in truck tarpaulims)
- supplier P.S.A. – Protective Structures Australia, YATALA

- Geotextile
- manufacturer and supplier: Geofabrics Australia
  - factory Melbourne:
  - company's Qld office: Sumner Park
  - grade of product: A12
  - layer at top of A.S.F. to prevent silt entering the media

- Pipework
- P.V.C.
    - 100mm dia sewer
    - 25mm dia Class 12
    - fittings to suit
  - supplier: REECE PLUMBING

Raw Materials for A.S.F.

- supplier: BORAL RESOURCES

Layer across floor of pit to cover the slotted underdrain pipe

- general thickness 150mm
- with extra mounding over the crown of underdrain
- size of material 20mm
- to be supplied clean/washed with no finer material

Body of A.S.F.

- thickness of layer: 600mm
- size of material: all between 5 and 7 mm
- to be supplied clean/washed with no finer material
- product used by BORAL in the manufacture of bitumen aggregate for road pavement construction

Top layer into which the pressure distribution pipework/manifold is embedded

- depth layed before placing pipework manifold 100-150mm
- final covering layer 50mm deep
- size of material 20mm
- to be supplied clean/washed with no finer material

Sand for furnishing – to be applied after

- placing the geotextile layer across the 20mm layer
- grading of sane – “medium sand” not a fine sand (ideally)
- sometimes supplied a “manufactured sand” with a similar size distribution/grading to “medium sand” (naturally formed)

Approximate Quantities\* for ordering

	Cubic capacity	Weight (dry)
5.7mm aggregate	5.3m <sup>3</sup>	7.4 tonne
20mm aggregate	3.5m <sup>3</sup>	5.3 tonne
Medium sand	2.0m <sup>3</sup>	3.0 tonne

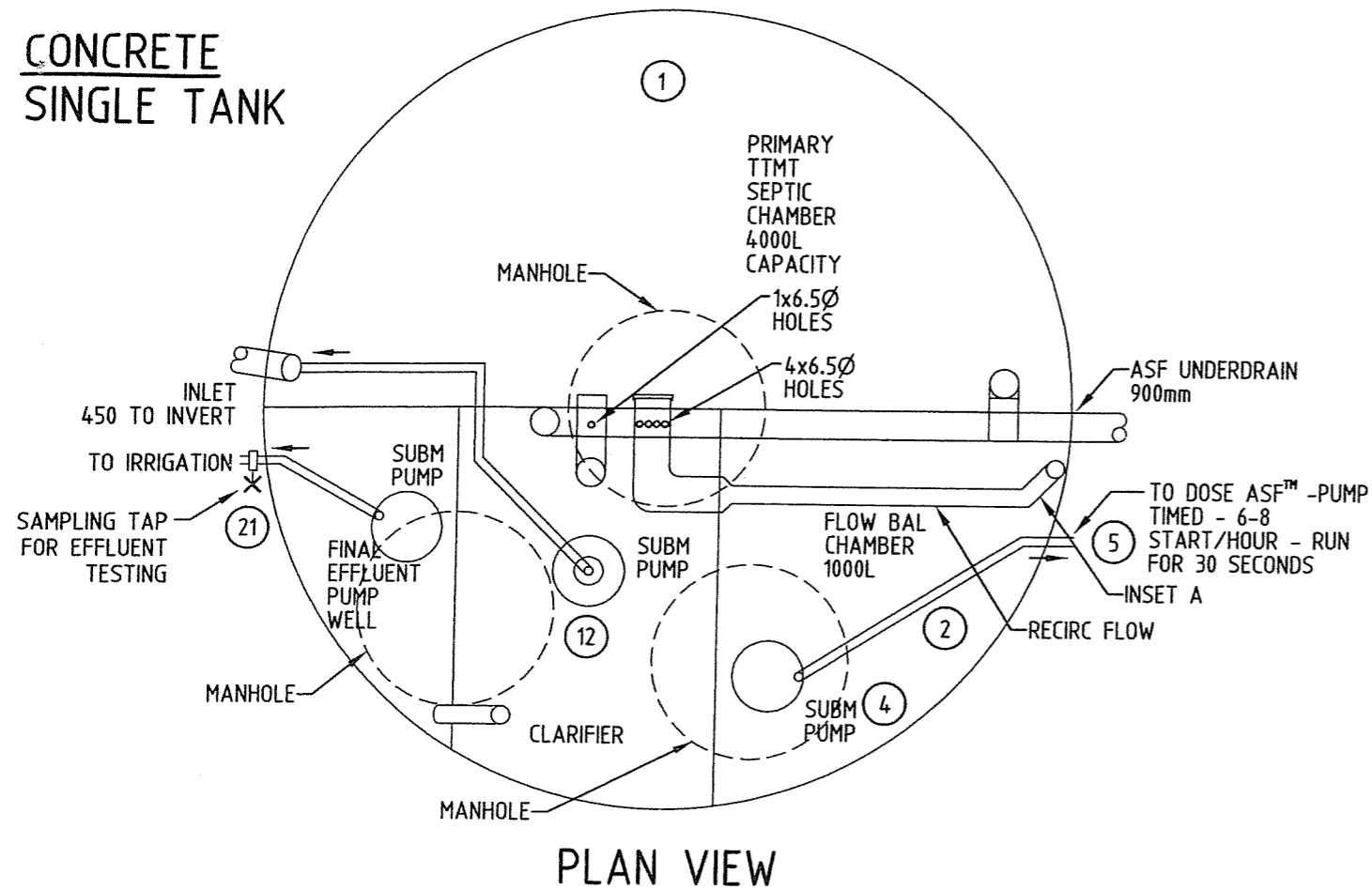
\*extra material for bedding purposes not incl

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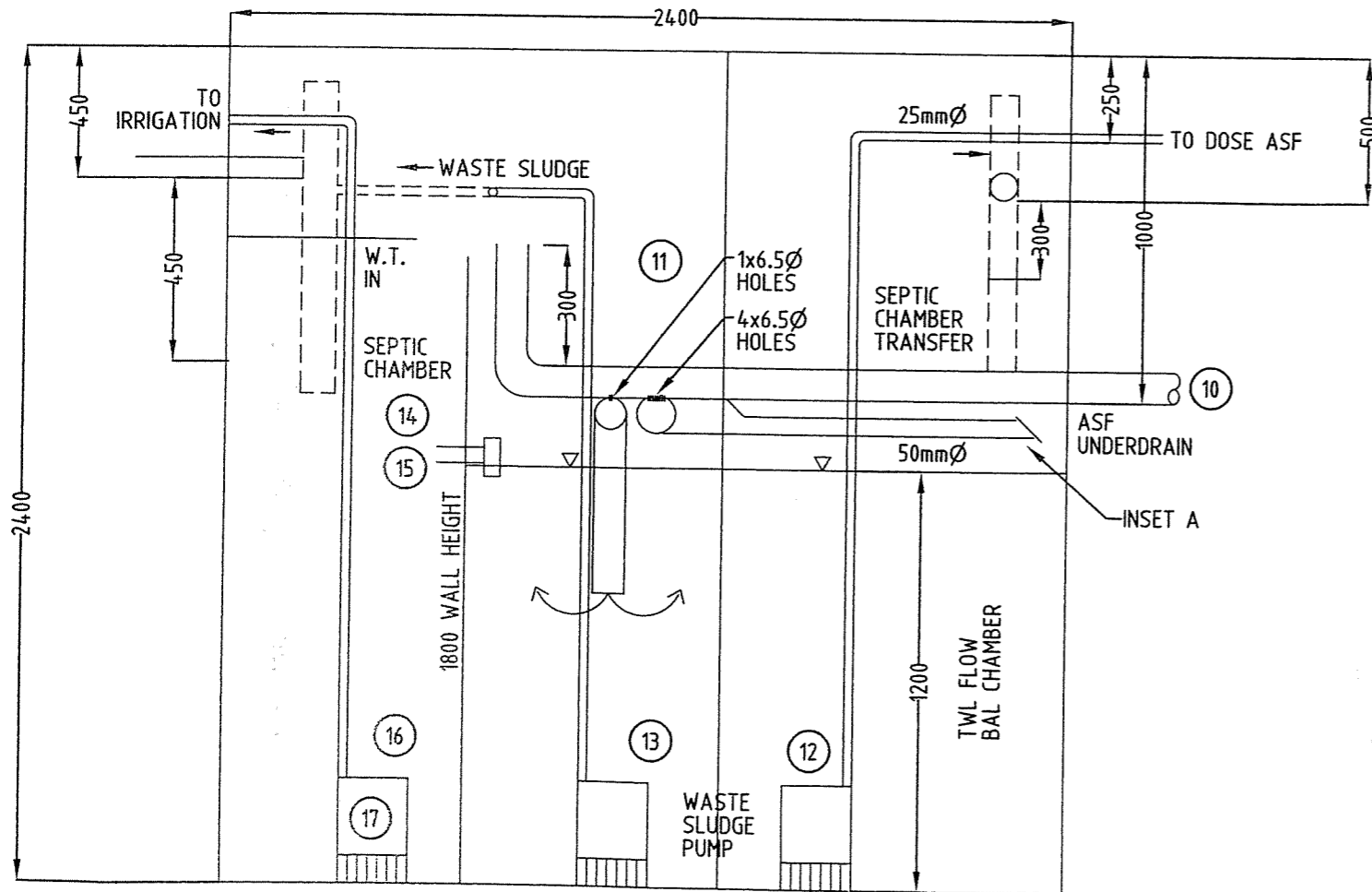
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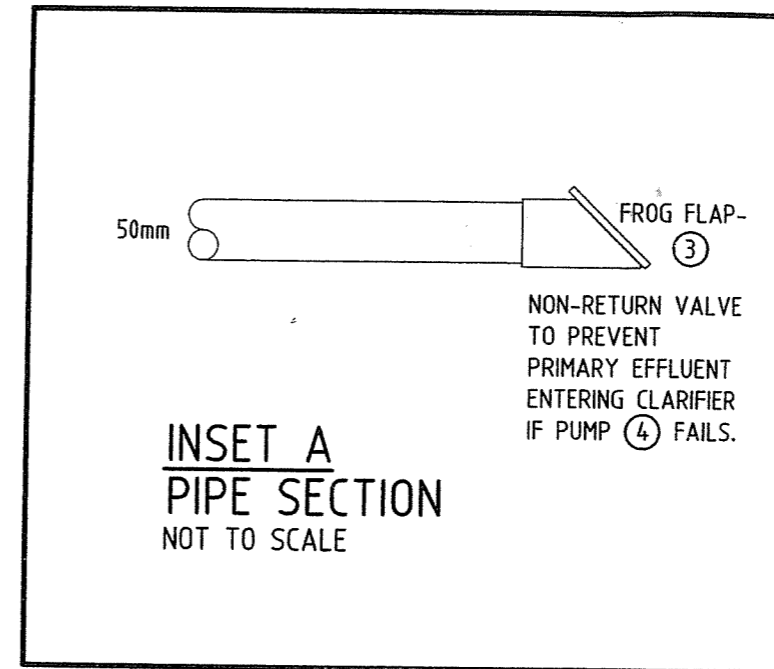
# CONCRETE SINGLE TANK



PLAN VIEW



SECTIONAL ELEVATION



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B	ADDITIONAL INFORMATION	03.09.09
A	ORIGINAL ISSUE	06.09.07
issue	amendment	date

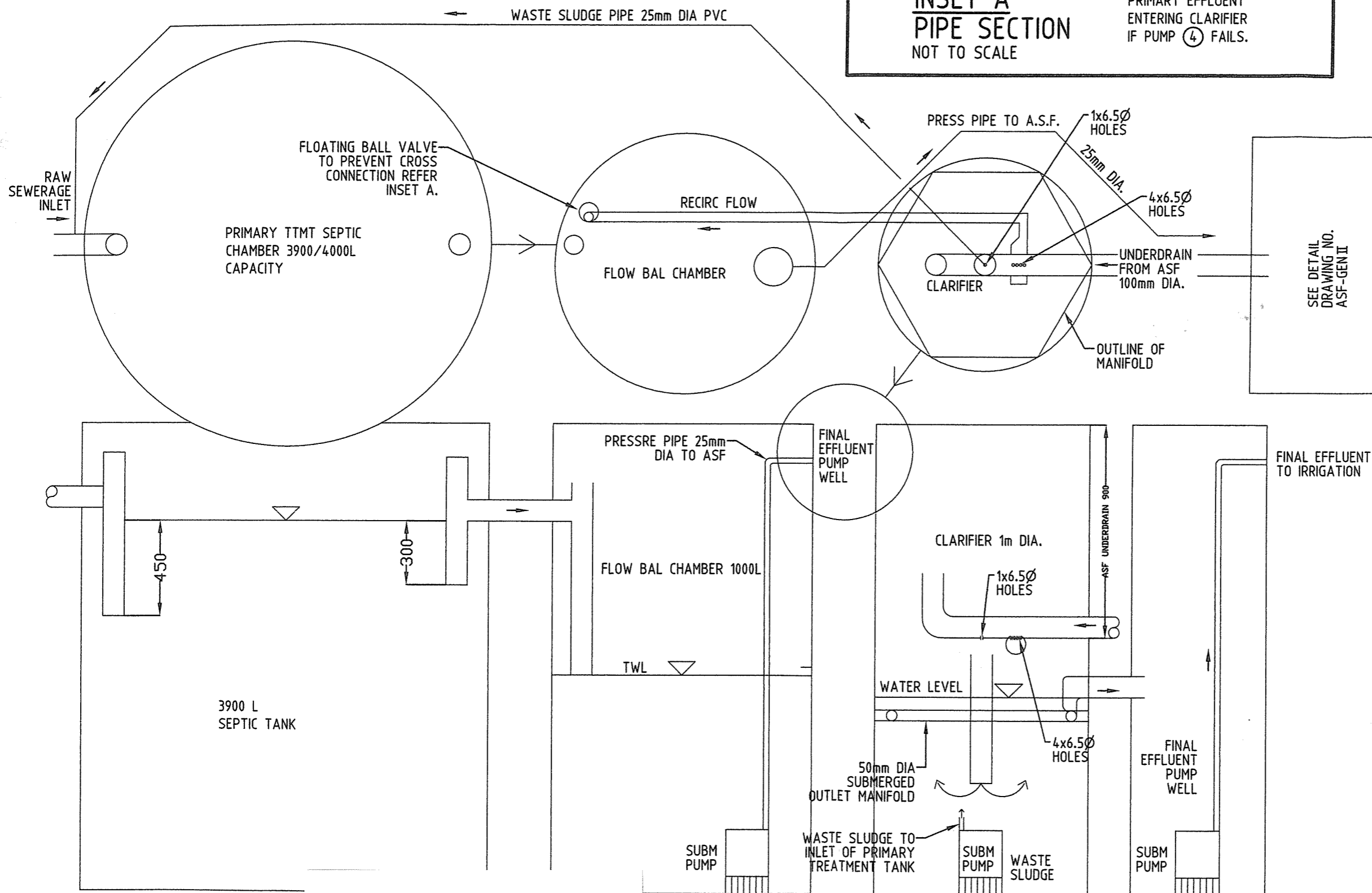
**ENVIROTECH TREATMENT SYSTEMS**  
 PO BOX 763  
 ASHGROVE, BRISBANE QLD 4060  
 PH: (07) 3366 2954  
 FAX: (07) 3366 1050

project  
**ASF™ GEN II DRAWINGS**  
**NEW ON-SITE DOMESTIC WASTEWATER TREATMENT PLANT**  
**10 PERSON CAPACITY**

drawing title  
**SINGLE CONCRETE TANK**  
**DETAIL DRAWING**

drawn AJ	designed by CHRIS PALMER	date SEP 2007
scale 1:20 @ A3		sheet 1 of 5
job no. <b>4881</b>	drawing no. <b>1</b>	revision <b>B</b>

# CONCRETE SEPERATE TANKS



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B	ADDITIONAL INFORMATION	03.09.09
A	ORIGINAL ISSUE	06.09.07
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**ENVIROTECH  
TREATMENT SYSTEMS**

PO BOX 763  
 ASHGROVE, BRISBANE QLD 4060  
 PH: (07) 3366 2954  
 FAX: (07) 3366 1050

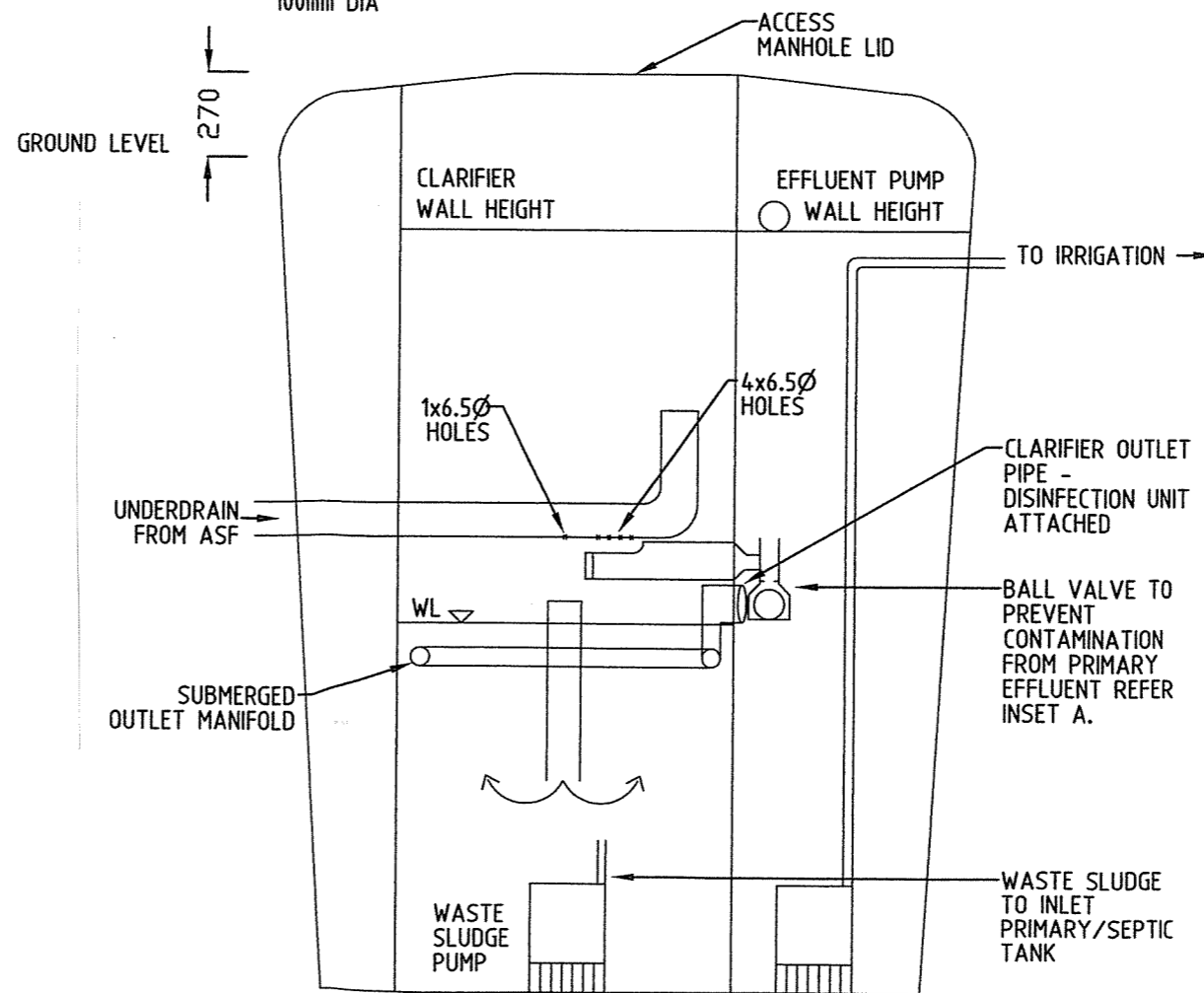
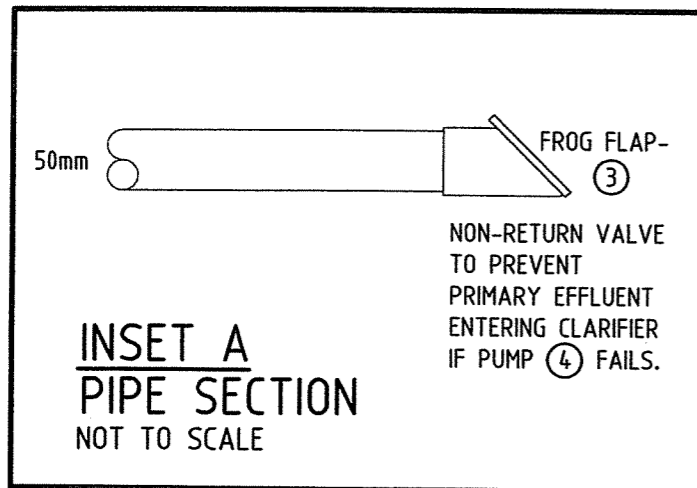
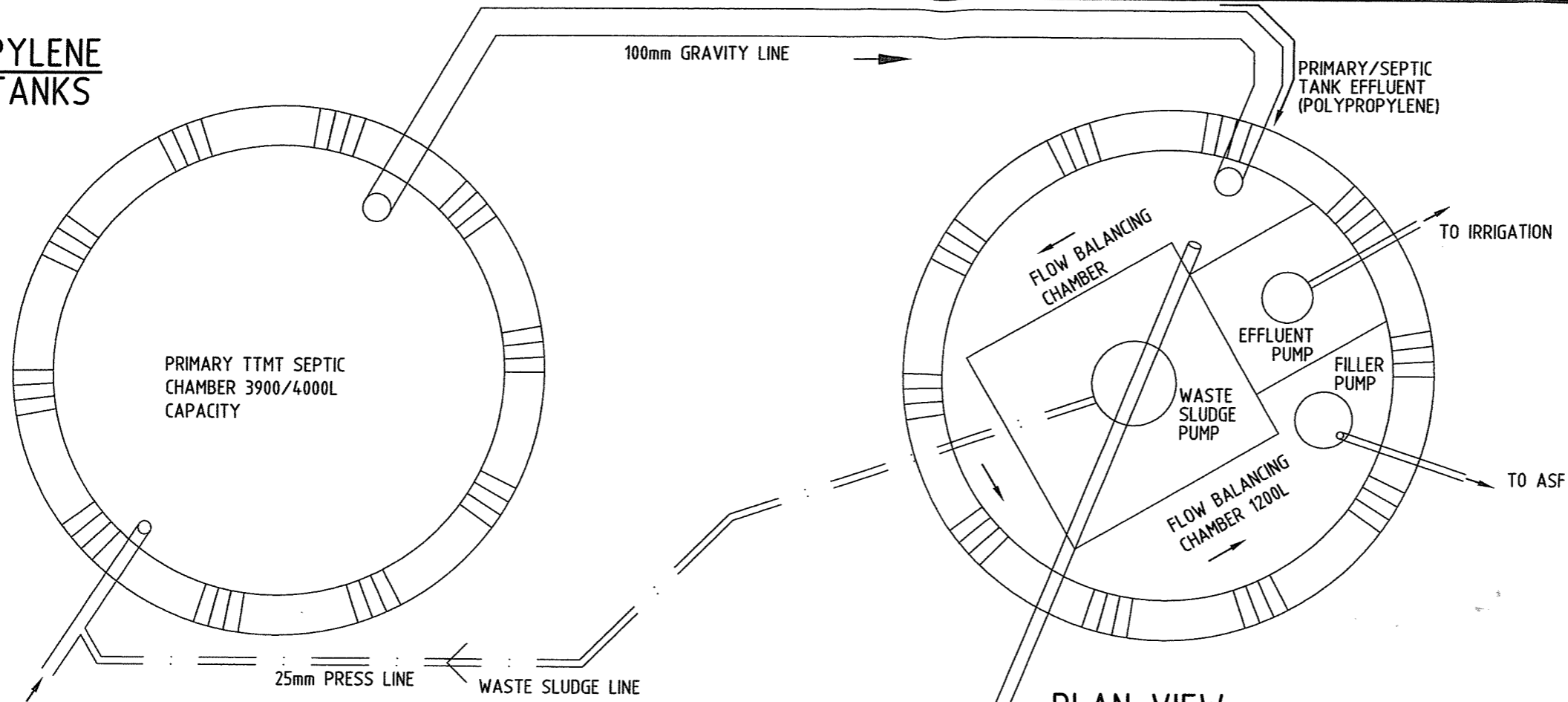
project  
**ASF™ GEN II DRAWINGS  
 NEW ON-SITE DOMESTIC  
 WASTEWATER TREATMENT PLANT  
 10 PERSON CAPACITY**

drawing title  
**SEPERATE CONCRETE TANKS  
 DETAIL DRAWING**

drawn	designed by	date
AJ	CHRIS PALMER	SEP 2007
scale		sheet
1:20 @ A3		2 of 5
job no.	drawing no.	revision
<b>4881</b>	<b>2</b>	<b>B</b>

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**POLYPROPYLENE  
PLASTIC TANKS**



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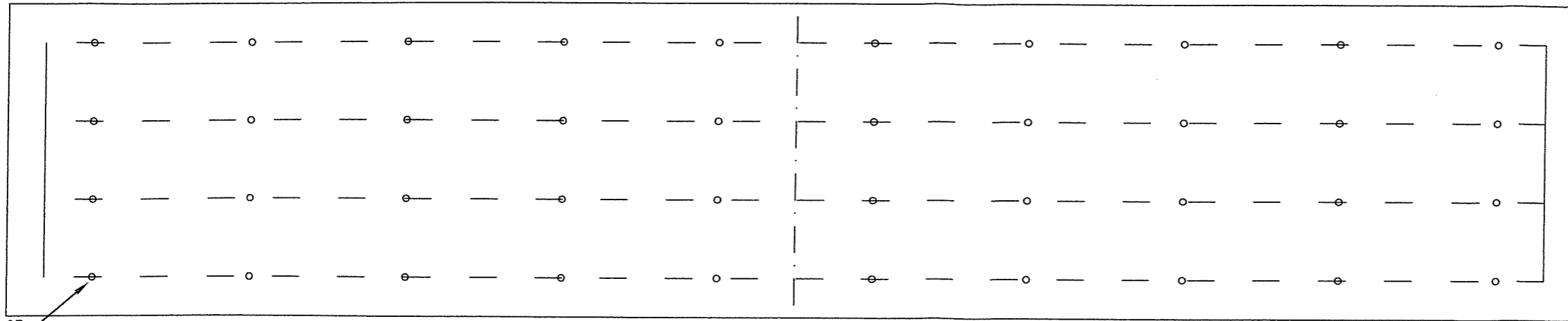
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drawing title  
**PLASTIC TANKS  
 DETAIL DRAWING**

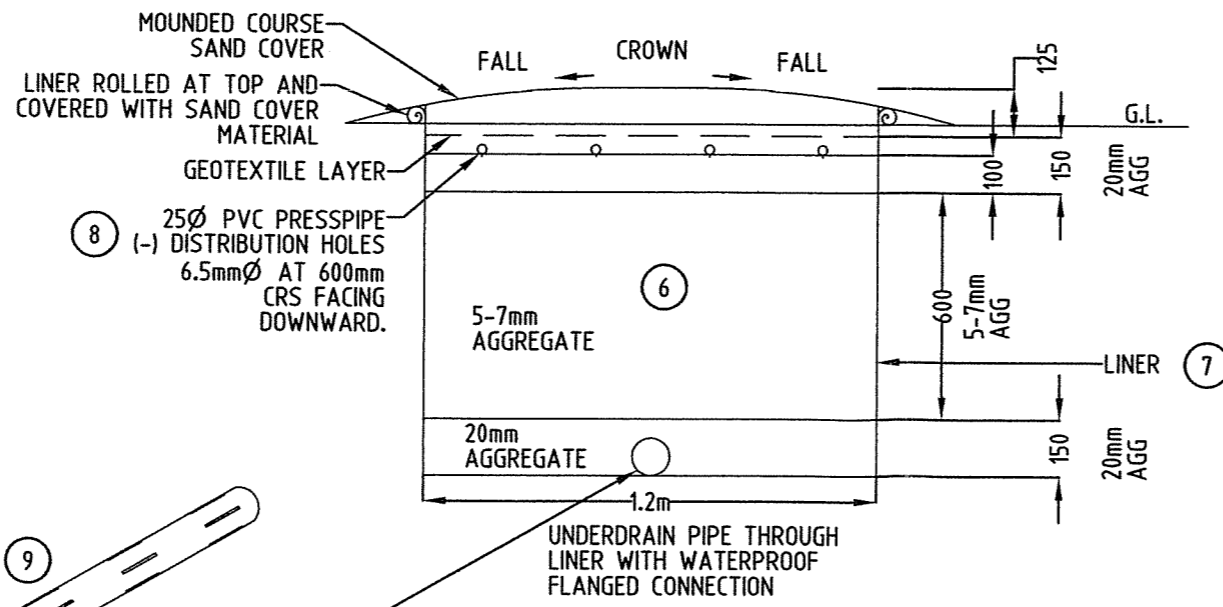
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# ASF GEN-II FILTER DETAILS



TOTAL No. OF HOLES - 40



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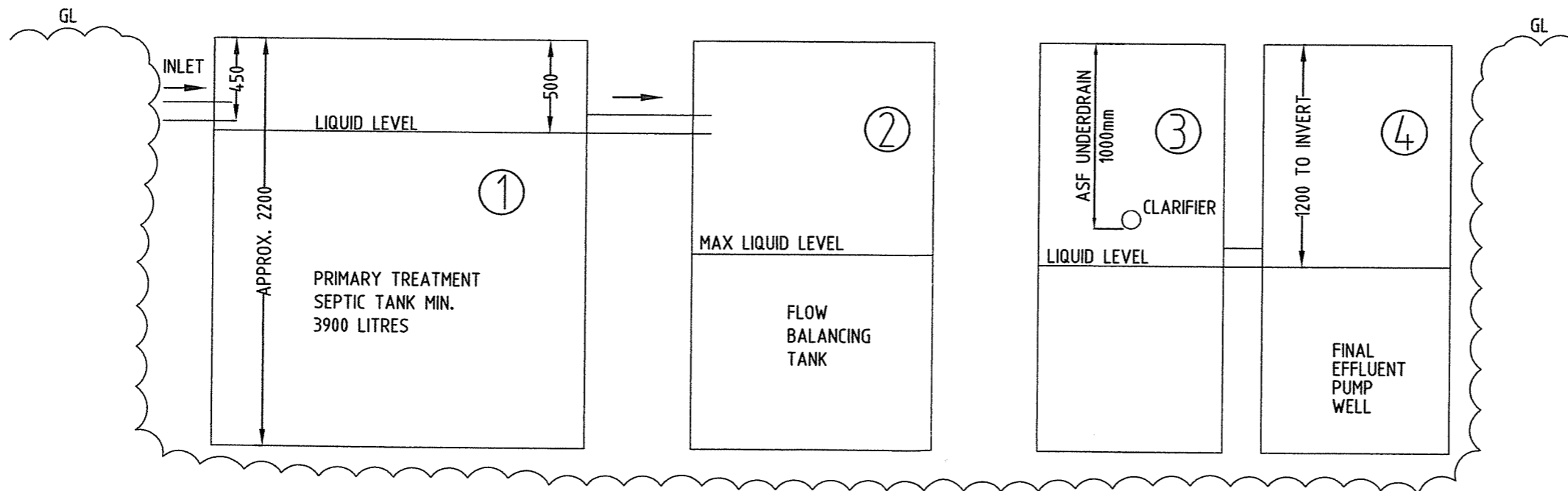
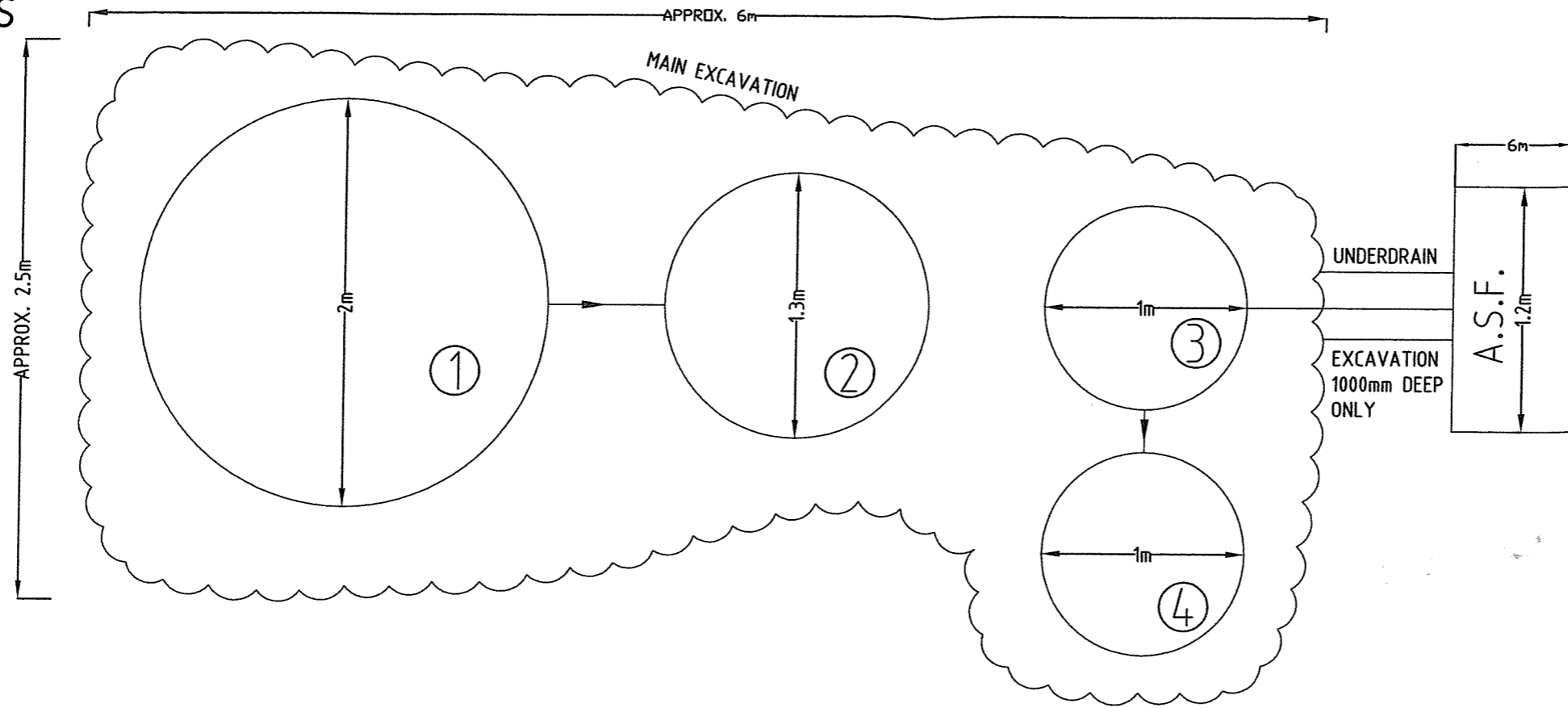
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**NEW ON-SITE DOMESTIC**  
**WASTEWATER TREATMENT PLANT**  
**10 PERSON CAPACITY**

drawing title  
**ASF™ GEN II**  
**FILTER DETAILS**

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scale 1:20 @ A3		sheet 4 of 5
job no. <b>4881</b>	drawing no. <b>4</b>	revision <b>B</b>

**CONCRETE**

**SEPERATE TANKS LAYOUT FOR EXCAVATION**



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drawing title  
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**DETAIL DRAWING**

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scale 1:30 @ A3		sheet 5 of 5
job no. <b>4881</b>	drawing no. <b>5</b>	revision <b>B</b>