



Certificate of Accreditation

Sewage Management Facility

Aerated Wastewater Treatment System

This Certificate of Accreditation is issued by the Secretary of the NSW Ministry of Health pursuant to Clause 41(1) of the Local Government (General) Regulation 2021.

System: *Super Treat ST10P AWTS*

Manufacturer: *Super Treat Systems Pty Ltd*

Of: *286 Princess Highway, South Nowra, NSW, 2541*

The Super Treat ST10P AWTS as described in Schedule 1 has been accredited as a sewage management facility for use in single domestic premises in NSW. This accreditation is subject to the conditions of accreditation and permitted uses specified in Schedule 2.

*Director, Environmental Health
for Secretary (delegation PH335)*

Issued: *11 / 8 / 22*

Certificate No: *STS-AWTS060*

Expires: *31 December 2026*

Schedule 1: Specification

Super Treat ST10P STS Aerated Wastewater Treatment System

The Super Treat ST10P STS AWTS is designed for onsite treatment of domestic sewage from a residential dwelling occupied by a maximum of ten people. The Super Treat ST10P STS AWTS is contained in two Bennetts Concrete Products concrete septic tank / collection well vessels each with a design capacity of 3200 L. The NSW Health Accreditation Number is STCW009.

Chamber	Design capacities
Total System	6400 L
Primary treatment Total	3200 L
• Partition	Yes 2:1 ratio
• Primary 1	2133 L
• Primary 2	1066 L
Secondary treatment	3200 L
• Aeration chamber	2087 L
• Clarifier	285 L
• Disinfection / Irrigation chamber	55 L
Operating Volume	5627 L
Emergency storage	1000 L
Operational water level (depth)	
• primary	1385 mm
• secondary	1385 mm

The emergency storage capacity is achieved by the air gap inside the septic chamber above the working level of treatment.

The Super Treat ST10P has the following components:

Primary Treatment: Sewage from the dwelling flows into the primary treatment tank where a physical separation of foreign materials such as solids, fat, grease and scum occurs and allows for a reduction in the Biochemical Oxygen Demand and Total Suspended Solid concentrations. The primary treatment tank is split into 2 chambers using a partition at a 2:1 ratio.

Aeration Chamber: Primary treated wastewater gravity flows into the aeration chamber which is fitted with three media form assemblies. The media in the chamber provides a surface area for the growth of bacteria to allow for the aerobic bio-degradation of organic material in the wastewater.

Clarification: Treated wastewater is transferred into the clarifier allowing for the removal of settled solids. The solids are transferred to the primary treatment tank by an airlift device.

Disinfection: Two chlorine disinfection units are installed on the outlet of the clarifier.

Filtration: The treated and disinfected effluent is filtered through a disc filter.

Air Supply: Air is supplied to the aeration contact chamber by a Thomas Gardiner air blower or equivalent, producing an air flow of a nominal 1200 Litres per minute at 1.3 m water depth. The air is distributed by four aeration diffusers located at the bottom of the aeration chamber. The airlift device continually returns partially treated wastewater and settled solids to the inlet of the primary treatment tank.

Irrigation Chamber: An Orange pump model SP213 submersible irrigation pump or equivalent is installed in the irrigation chamber.

Alarm System: The Super Treat ST10C is provided with an audio-visual alarm with high water level switch in the final effluent pump out chamber and blower failure (low air pressure).

Service Intervals: Three monthly.

Schedule 2: Conditions of Accreditation

1. General

- 1.1 Prior to installation the owner/occupier of the premises shall make an application, in accordance with Clause 26 of the *Local Government (General) Regulation 2021*, to the local authority for approval to install and operate the Super Treat ST10P STS AWTS as a Sewage Management Facility in accordance with Section 68, Part C of the *Local Government Act 1993*.
- 1.2 The local authority shall apply those Conditions of Accreditation, appropriate to the owner / occupier, to any approval to operate the Super Treat ST10P STS AWTS issued under Clause 45(4), *Local Government (General) Regulation 2021*.
- 1.3 In accordance with Clause 36 of the *Local Government (General) Regulation 2005*, the Super Treat ST10P STS AWTS shall have an expected service life of 5 years in the case of mechanical and electrical components and 15 years in the case of other components.
- 1.4 The owner / occupier shall ensure that the Super Treat ST10P STS AWTS is installed or constructed:
 - in accordance with the accredited specifications of the type tested unit and in accordance with good trade practice, and
 - to allow ease of access for maintenance, and
 - regarding the health and safety of users, operators and persons maintaining the facility, and
 - must be installed or constructed to make appropriate provision for access to, and removal of, contents in a safe and sanitary manner, and
 - must, if it is intended to be a permanent fixture, be anchored to prevent movement.
- 1.5 The manufacturer / supplier shall ensure that the Super Treat ST10P STS AWTS is supplied, constructed, and installed in accordance with the design (including the disinfection unit) as submitted and accredited by the NSW Ministry of Health. The Super Treat ST10P STS AWTS shall not be modified or altered except that alternate individual mechanical and electrical components such as pumps, PLCs, etc, may be substituted provided that the component meets the accredited design specification.
- 1.6 Any permanent modification or variations to the accredited design of the Super Treat ST10P STS AWTS shall not be permitted.
- 1.7 Each Super Treat ST10P STS AWTS shall be permanently and legibly marked by the manufacturer in accordance with section 3 of AS1546.3:2017.
- 1.8 The manufacturer shall supply with each Super Treat ST10P STS AWTS an owner's manual, which sets out the care, operation, maintenance, and on-going management requirements of the system. The owner's manual prepared by the manufacturer shall specifically contain a plan for the on-going management of the Super Treat ST10P STS 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 any on-going monitoring program developed by the local authority.

1.9 The manufacturer shall provide the following information to each local authority where it is intended to install a Super Treat ST10P STS AWTS in their area once Ministry Accreditation has been obtained:

- Statement of warranty
- Statement of service life
- Quality Assurance Certification
- Installation Manual
- Service Manual
- Owner's Manual
- Manufacturer's Service Report Form
- Engineering Drawings
- Specifications
- A4 Plans
- Certificate of Accreditation documentation from NSW Health.

The manufacturer need not provide the above information to the local council where the information or document is contained on the manufacturer's web site.

2. Installation and Commissioning

2.1 The owner / occupier shall have the Super Treat ST10P STS AWTS 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 local authority.

2.2 The owner / occupier shall ensure that all electrical work is carried out on the Super Treat ST10P STS AWTS by a licensed electrician and in accordance with the relevant provisions of AS/NZS 3000.

2.3 The owner / occupier shall not commission the Super Treat ST10P STS AWTS unless the land application system has been completed.

3. Maintenance

3.1 The owner / occupier of the premises shall enter into a minimum 12-month contract or agreement with a service agent and ensure that the Super Treat ST10P STS AWTS is serviced:

- in accordance with the manufacturer's / supplier's service manual and using the manufacturer's / supplier's service sheet; and
- by a service agent who
 - has completed a course on the servicing and maintenance of STS; and has some supervised servicing experience or extensive un-supervised experience;
 - is employed or authorised by the manufacturer / supplier of the Super Treat ST10P STS AWTS;
 - uses replacement parts which meet the minimum specification of the Super Treat ST10P STS AWTS;
 - has advised of their name, contact details and credentials to the local authority;
 - submits a completed NSW Health "Local Council Service Report" (template attached) to the local authority immediately after every service;
 - shall report to the local authority any instances where the owner / occupier refuses to authorise repairs, replacement of parts or maintenance; and
 - does not perform electrical work or enter confined spaces unless trained and is suitably qualified to do so.

3.2 The owner/occupier shall not service the Super Treat ST10P STS AWTS unless they are an authorised agent of the manufacturer.

3.3 The Super Treat ST10P STS AWTS once installed and commissioned shall be serviced at three (3) monthly intervals.

- 3.4 The manufacturer / supplier of the Super Treat ST10P STS AWTS shall place on its web site a copy of the service manual, service sheet or form and specifications for the Super Treat ST10P STS AWTS to facilitate servicing, maintenance and repairs. Commercial-in-confidence documents may be provided directly to the service agent without uploading to the web site.
- 3.5 Each three-monthly service shall, as a minimum where provided, include a check on all mechanical, electrical and functioning parts of the system including:
- The chlorinator and replenishment of the disinfectant,
 - Pump and air blower,
 - The alarm system,
 - 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 at the appropriate check points.

4. Verification

- 4.1 Effluent from the Super Treat ST10P STS AWTS taken in any random grab sample shall comply with the following standard:
- BOD⁵ less than 30 mg/L
 - TSS less than 45 mg/L
 - E. coli less than 100 cfu/100 ml
 - Free residual chlorine greater than 0.2 and less than 2.0 mg/L

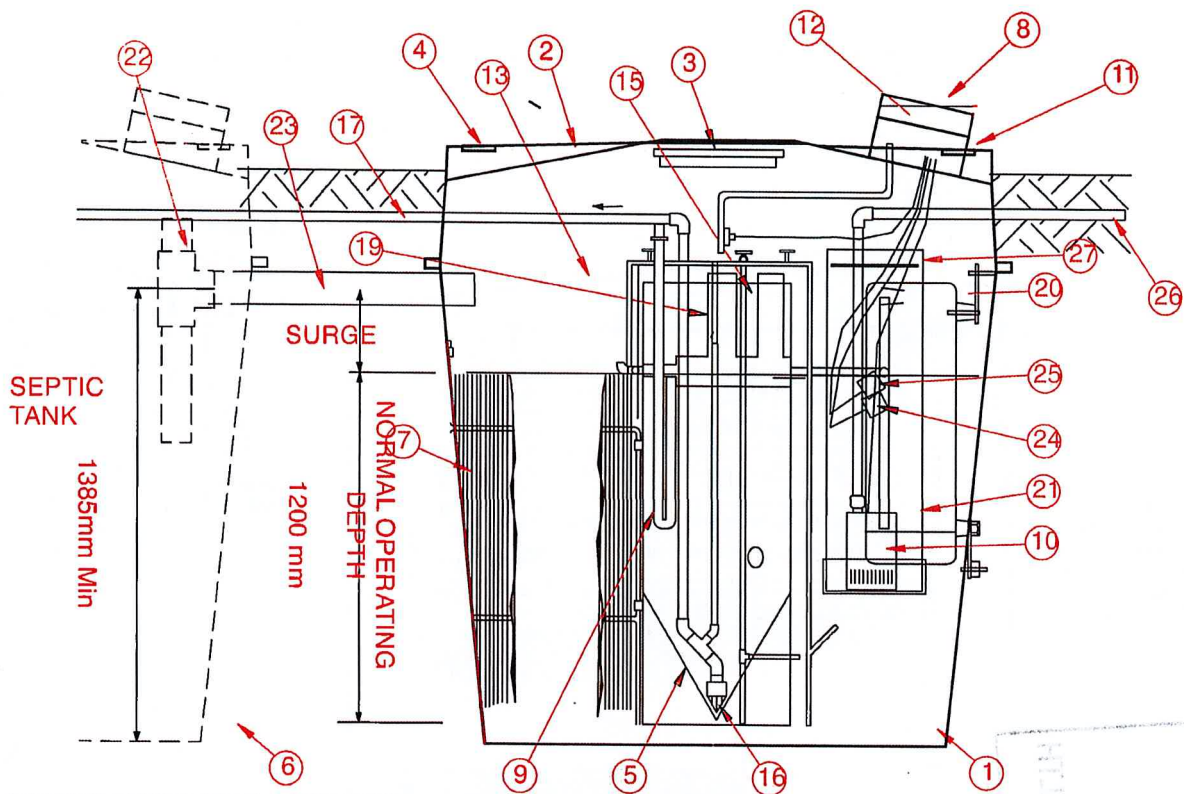
5. Permitted uses

- 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 1547:2012:
- above ground spray irrigation; and/or
 - surface drip irrigation covered by mulch; and/or
 - sub-surface drip irrigation installed at around 100 mm depth; and or
 - any form of sub-soil application.
- Each of the forms of irrigation or application is subject to the approval of the local authority.



Local Council STS (DGTS) Service Report: February 2018		
Owner's Name:	Local Council:	
Installation Address:		
System Brand & Model:	<input type="checkbox"/> Domestic	<input type="checkbox"/> Commercial
Date of this service: / /	Date of last Service: / /	Next service due: / /
Has the STS/DGTS been serviced in accordance with the manufacturer's / supplier's requirements and using the service sheet? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why not?		
STS/DGTS functioning correctly? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" why not?		
According to sludge-judge or other methodology is de-sludging needed? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended?		
Offensive odours? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" what action is recommended?		
Alarms tested and functional? <input type="checkbox"/> Yes <input type="checkbox"/> No If not "functional" what action is recommended?		
Final Effluent Quality Tested? <input type="checkbox"/> Yes <input type="checkbox"/> No Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No Chlorine tablets remaining? <input type="checkbox"/> Yes <input type="checkbox"/> No Quality? <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory On what evidence is this judgement made? If "Unsatisfactory" what action was recommended?		
Land Application Area Surface ponding? <input type="checkbox"/> Yes <input type="checkbox"/> No Run off? <input type="checkbox"/> Yes <input type="checkbox"/> No Excess plant growth? <input type="checkbox"/> Yes <input type="checkbox"/> No Effluent leaving premises. <input type="checkbox"/> Yes <input type="checkbox"/> No High risk areas contaminated? * <input type="checkbox"/> Yes <input type="checkbox"/> No * Patio, play areas, BBQ, etc Operating satisfactorily? <input type="checkbox"/> Yes <input type="checkbox"/> No If "Not operating satisfactorily" what action was recommended?		
Overall Condition of STS? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Comments / Action Recommended / Repairs Needed / Repairs Performed: Has the owner / occupier taken recommended actions? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Service Agent:	Contact Details:	
Signature:	Date:	

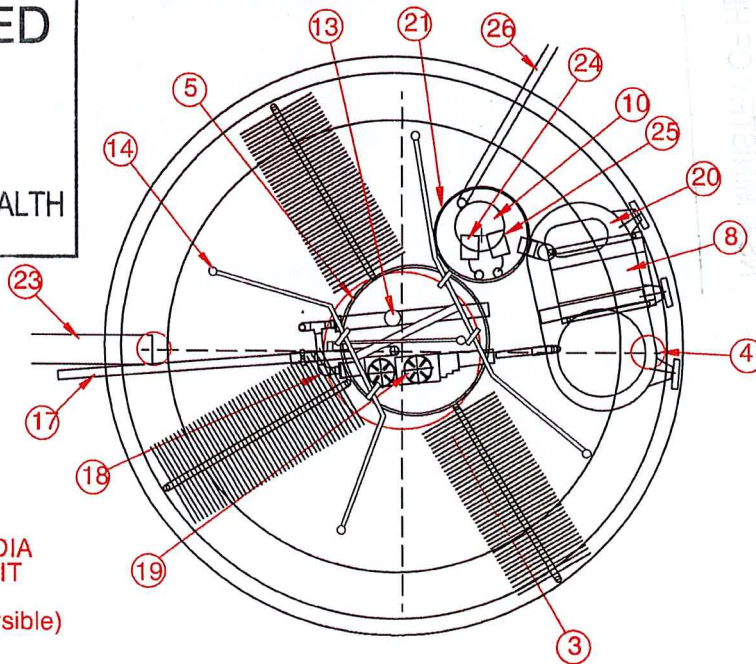
Source: Adapted from "Checklist 4.2: Operational AWTS inspection report for use by service providers and Council inspectors" in *Designing and Installing On-Site Wastewater Systems*, Sydney Catchment Authority, May 2012



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11 AUG 2022
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LEGEND

1. HOLDING WELL - 3200 L
2. TANK LID
3. MANHOLE AND COVER
4. INSPECTION OPENING
5. CONE BASE CLARIFIER
6. SEPTIC TANK - 3200L
7. BIOLOGICAL GROWTH MEDIA
8. ELECTRICAL CONTROL UNIT
9. SKIMMER
10. IRRIGATION PUMP (Submersible)
11. INCOMING POWER
12. AIR BLOWER
13. WEIR INTAKE
14. AIR DIFFUSER PIPEWORK
15. SLUDGE RETURN AIR CONTROL
16. SLUDGE RETURN SUCTION HEAD
17. SLUDGE RETURN TO SEPTIC TANK
18. CHLORINATOR INLET
19. CHLORINE DISPENSOR
20. CHLORINE CONTACT TANK
21. PUMP-OUT CHAMBER
22. SEPTIC OUTLET JUNCTION
23. EFFLUENT FROM SEPTIC TANK
24. PUMP-OUT CONTROL FLOAT SWITCH
25. HIGH LEVEL WARNING FLOAT SWITCH
26. IRRIGATION LINE TO SPRAYS/EMITTERS
27. 160mm EMERGENCY STORAGE COLLAR



SUPER · TREAT
SEWAGE TREATMENT SYSTEMS

Unit 1 / 286 Princes Hwy
SOUTH NOWRA N.S.W 2541
PH. (02) 4421 7287

MODEL No. ST 10P
SEWAGE TREATMENT SYSTEM
10 PERSONS Rev.2. 06-07-22

NOT TO SCALE

SHEET No. 1 of 1

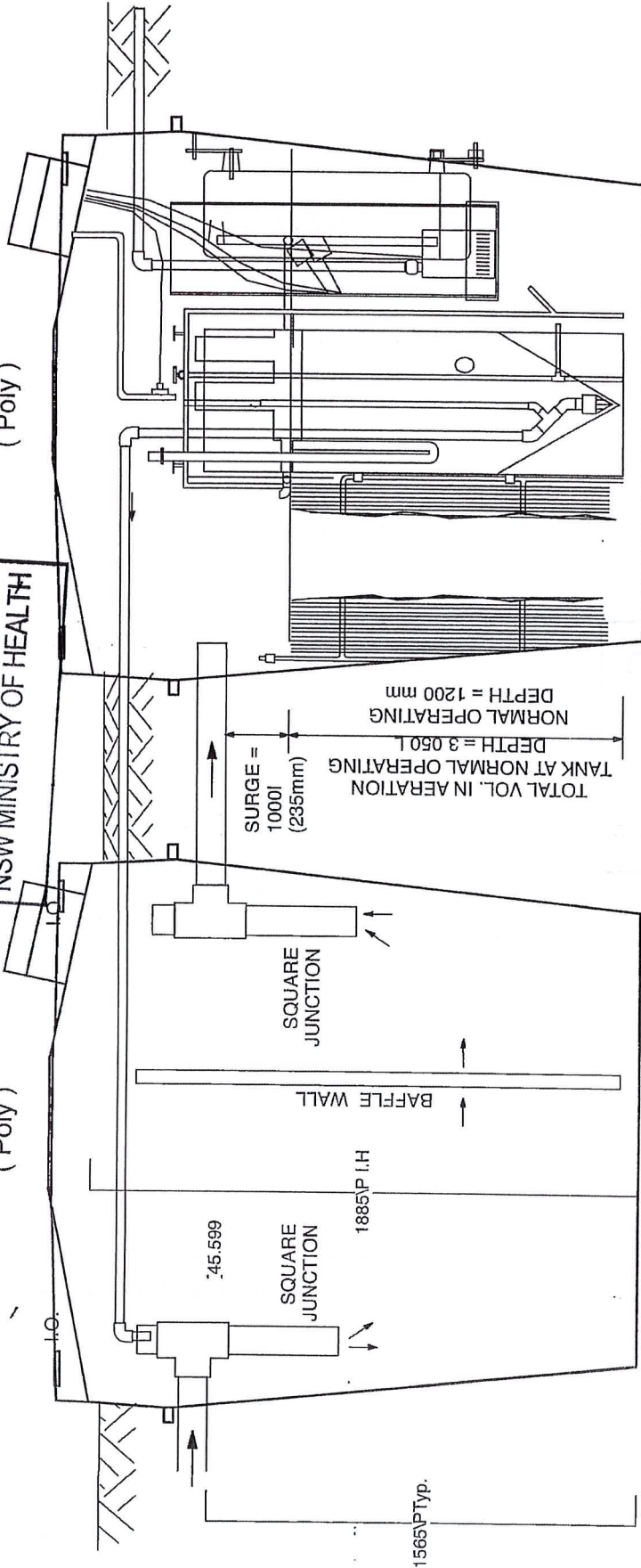
SEPTIC TANK
3200 L
(Poly)

ACCREDITED

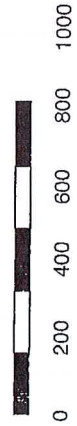
11 AUG 2022

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TREATMENT TANK
3200 L
(Poly)



SCALE



MILLIMETRES

REFER TO SPECIFICATION SHEET, No. 1 OF 1 FOR EQUIPMENT DESCRIPTION OF TREATMENT TANK.

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SEWAGE TREATMENT SYSTEMS

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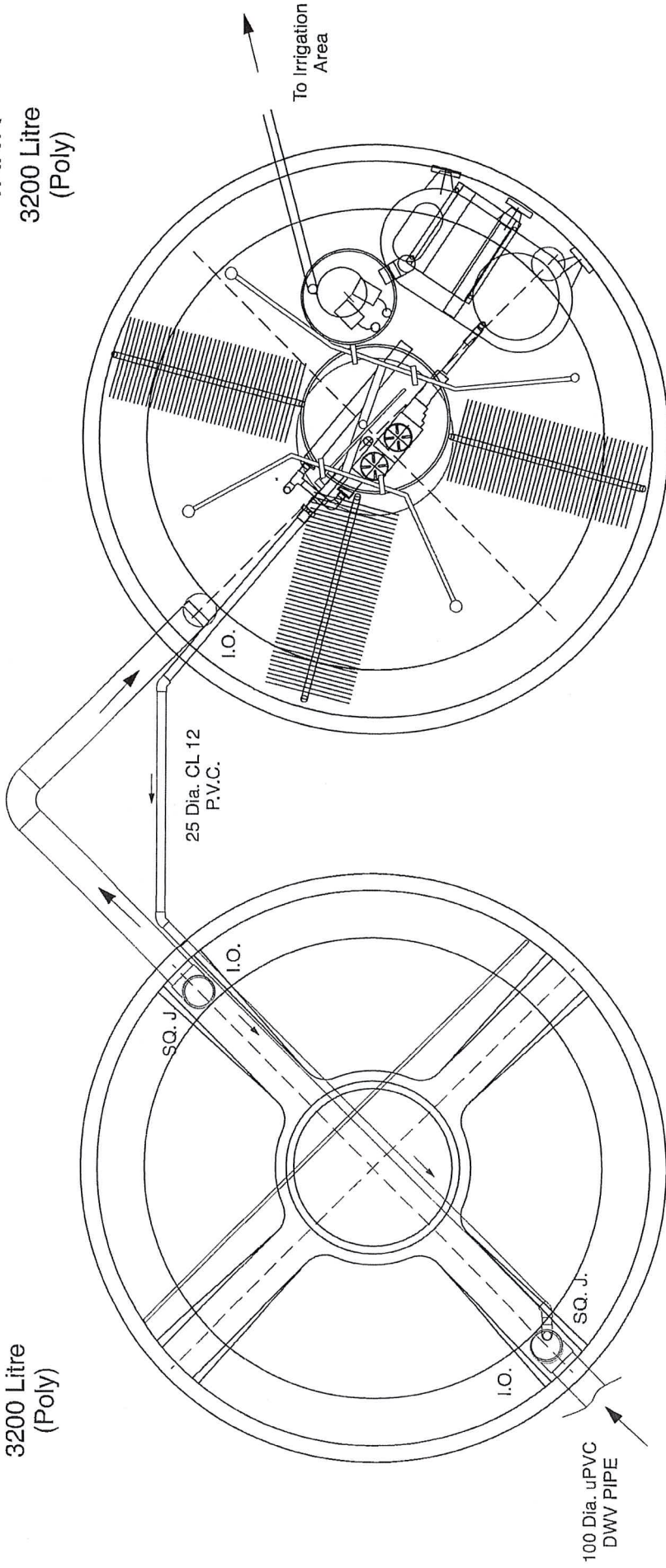
MODEL NO. ST 10P
SEWAGE TREATMENT SYSTEM
10 PERSONS

Rev.2. 06-07-22

GENERAL ARRANGEMENT - ELEVATION SHEET No. 1 of 2

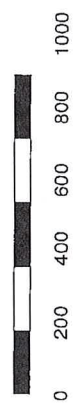
SEPTIC TANK
3200 Litre
(Poly)

TREATMENT TANK
3200 Litre
(Poly)



REFER TO SPECIFICATION SHEET, No. 1 OF 1 FOR EQUIPMENT DESCRIPTION OF TREATMENT TANK.

SCALE



MILLIMETRES

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GENERAL ARRANGEMENT - PLAN

SHEET No. 2 of 2