

TREATMENT PLANT APPROVAL 16/2023 – Amendment 1

Plumbing and Drainage Regulation 2019, part 4.



Approval

1. The **CivilMart 1T-AST** (“the System”) described in the Specifications and Drawings in the attached Schedule and manufactured by **Precast Civil Industries Pty Ltd** (ABN 78 615 296 24) (“the manufacturer”) has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code).
2. Approval is granted for the system as an **advanced secondary** quality wastewater treatment system with **nutrient reduction**, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Regulation 2019*, 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

5. The manufacture, installation, operation, service, and maintenance of the systems must be in conformity with the conditions of this Treatment Plant Approval.
6. The system when tested by a certification accreditation body in accordance with AS1546.3:2017 was found to comply with the **advanced secondary** 10 EP/1500L level criteria and must continue to meet the following requirements:

(a) Advanced secondary treatment

Table 2.1 (Abrev) AS1546.3:2017 Advanced secondary effluent compliance criteria for an STS

Parameter	Advanced secondary effluent	
	90% of Samples	Maximum
BOD ⁵	≤ 10 mg/L	20 mg/L
TSS	≤ 10 mg/L	20 mg/L
<i>E. coli</i> [*]	≤ 10 cfu/100 mL	30 cfu/100 mL
FAC [‡]	Minimum 0.5 mg/L [†]	N/A
Turbidity [§]	N/A	10 NTU

* Where disinfection is required

‡ Where chlorine disinfection is required

† Minimum level, not 90% of samples

§ Where UV light is used for disinfection

TREATMENT PLANT APPROVAL 16/2023 – Amendment 1

Plumbing and Drainage Regulation 2019, part 4.

(b) Nutrient reduction

During the testing of the System, the treated effluent was tested for total Nitrogen (TN) and total Phosphorus (TP) concentrations. The treatment process has the capacity to reduce the TN and TP concentrations as follows:

- Total N an average of 70.4 mg/L to 51.1 mg/L which represents a **reduction of 27.42%**.
 - Total P an average of 12.4 mg/L to 11.6 mg/L which represents a **reduction of 6.45%**.
7. Each system must be serviced in accordance with the accreditation certificate issued by Global Certification Pty Ltd (certificate number 4283-2786-01) on 21 November 2022, and details supplied in the owner's operation and maintenance manual.
 8. 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.
 - e. detailed instructions for authorised service personal for its operation and maintenance.
 9. At each anniversary of the Treatment Plant Approval date, the supplier must submit to the Chief Executive a list of all systems installed in Queensland during the previous 12 months. Where the Chief Executive is notified of any system failures the Chief Executive may randomly select several installed systems for audit. The Chief Executive will notify the supplier's nominated NATA accredited laboratory which systems are to be audited for BOD⁵ and TSS. The sampling and testing of the selected systems, if required, is to be done at the supplier'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. BOD⁵ for influent and effluent.
 - e. TSS for influent and effluent.
 10. The Chief Executive may, by written notice, cancel this approval if the manufacturer/supplier 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.
 11. This approval may only be assigned with the prior written consent of the Chief Executive.

TREATMENT PLANT APPROVAL 16/2023 – Amendment 1
Plumbing and Drainage Regulation 2019, part 4.



12. This approval expires on 14 November 2028 unless cancelled earlier in accordance with paragraph 10 above.

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Director

Plumbing, Drainage and Special Projects

Date approved: 04 December 2023



TREATMENT PLANT APPROVAL 16/2023 – Amendment 1
Plumbing and Drainage Regulation 2019, part 4.



SCHEDULE

1T-AST

- Attachment 1 – Precast Civil Industries 1T-AST - CAB Certificate number 3579-2778-02
- Attachment 2 – Precast Civil Industries 1T-AST – Operators Manual
- Attachment 3 – Precast Civil Industries 1T-AST – Schematic diagrams





PRODUCT CERTIFICATE OF REGISTRATION

Precast Civil Industries Pty Ltd T/A CivilMart

32-34 Cumners Road, Toowoomba, QLD 4350, Australia

Product Performance Testing

AS1546.3:2017

Advanced Secondary 10EP Level

Model	Disinfection	Average Results over the Test Period	Servicing Frequency	Discharge	Manufactured and assembled
Super-Treat Qld 2020	Yes	TSS 9.2mg/l BOD ₅ <2mg/l Total Nitrogen 51.1mg/l Phosphorus 11.6mg/l Turbidity 8.8NTU Ecoli <1CFU/100ml	3 Monthly Service 3.5 yearly sedimentation pump out or as required	Pumped via disinfection/pump chamber with chlorine dispenser	Manufactured and Assembled: 32-34 Cumners Road, Toowoomba, QLD 4350, Australia
The system took 7 weeks to meet the advanced secondary standard.					

This Certificate of Conformance to the Product Certificate Scheme for "Domestic Wastewater Treatment Units (AWTS)" remains the property of Global Certification Pty. Ltd. and is granted subject to the terms and conditions of the Contract Application, in respect of the Product certified on this page and the attached schedule to the Certification of Conformance, bearing the same number as this certificate.


Managing Director



CERTIFICATION DATE:
23 May 2020

DATE OF ISSUE:
29 July 2022

EXPIRY DATE:
22 May 2025

CERTIFICATE #:
3957-2778-02

 GLOBAL CERTIFICATION

Global Certification Pty Ltd
Level 1, 135 Queen Street, Cleveland, 4163 QLD
1300 495 855 | www.globalcertification.com.au

Global Certification Pty Ltd is accredited by The Joint Accreditation System of Australia and New Zealand (www.jas-anz.org/register) – accreditation number: Z4480410AC







CONTENTS

YOUR SUPERTREAT QUEENSLAND SYSTEM	5
THE PRIMARY TREATMENT	9
CARING FOR THE PRIMARY CHAMBER	11
THE AERATION CHAMBER	13
PROTECTING YOUR SYSTEM	15
EMERGENCIES	16
GOING AWAY?	16
YOUR PERSONAL SERVICE AGENT	17
SUPERTREAT QUEENSLAND	18
WARRANTY	18



YOUR SUPERTREAT QUEENSLAND SYSTEM

How Does It Work?

Your SuperTreat Queensland System provides for the household wastewater from ALL sources to be treated to an advanced secondary level of wastewater treatment with the outgoing recycled water clean and clear without any odour delivered to garden areas.

Household wastewater from all plumbing in the house receives primary or anaerobic treatment in the primary chamber before passing into the secondary aeration chamber where aeration or 'aerobic' treatment occurs.

Before being delivered to the irrigation area the treatment provides clarification and disinfection.

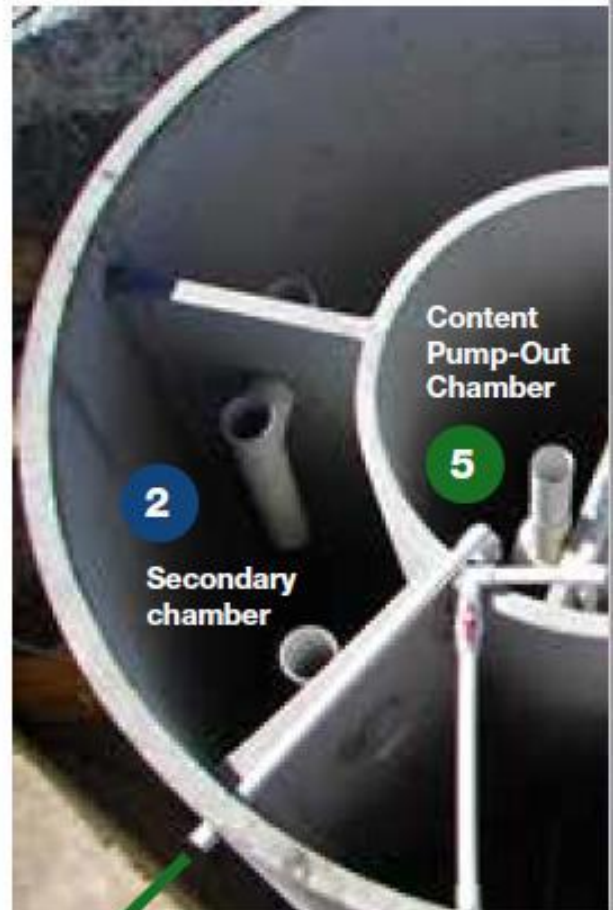
The entire process operates automatically providing as well as effective processing of household wastewater the availability of that treated water for reuse to your garden areas.

Very Simple, Very Effective.

The simple, smart design of the SuperTreat Queensland secondary wastewater treatment system makes it the easiest and most effective product on the market to install, run and service.

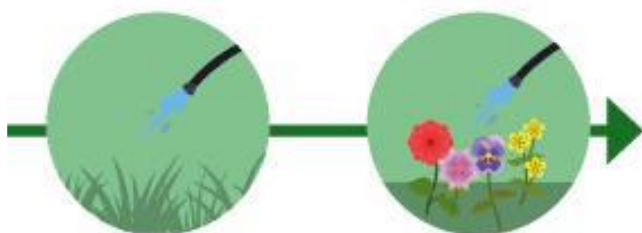
The five-chamber SuperTreat Queensland concrete tank is one piece, cast in a single mould - it's tough and totally leak free. The system collects and processes household wastewater from all sources, safely recycling it and delivering clean, odour-free water for gardens and lawns.

- ✓ Trusted technology
- ✓ Australian-made and owned
- ✓ Quality assured under ISO 9001
- ✓ Complies with current specifications

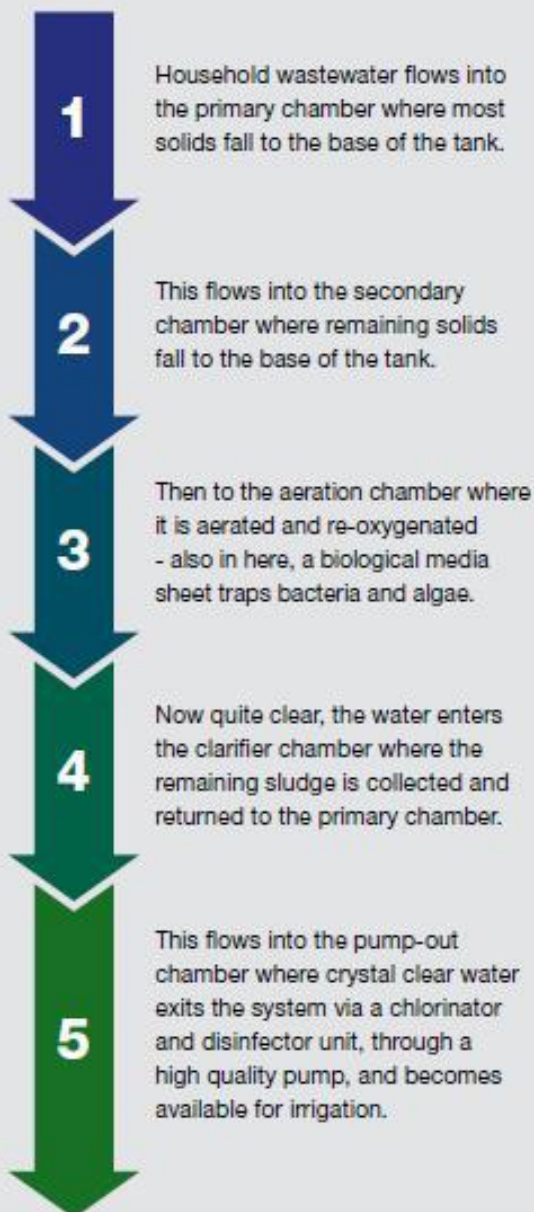


Clean water out

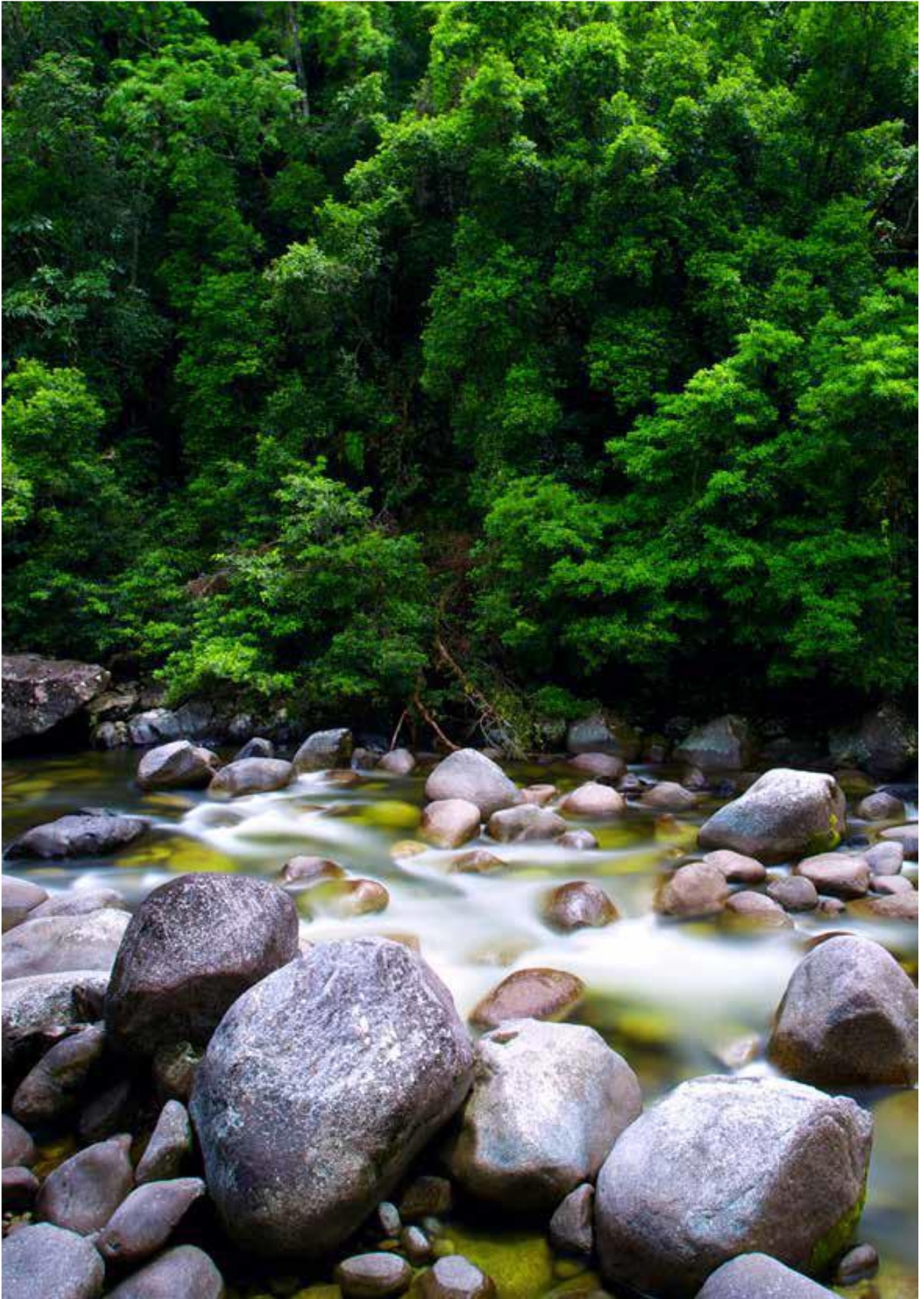




Smart. Safe. Clean.



- Processes ALL household wastewater
- Simple controller requires no maintenance
- The most effective advanced secondary treatment tank in Australia
- Proven performance over 25 years



THE PRIMARY TREATMENT

What Does it Do?

This is the initial process providing the primary treatment to the incoming wastewater.

The sizing of this chamber is critical for effective treatment and is sized so as to cater for up to 10 people (10 E.P) in residence in the home.

The primary treatment breaks down and partially treats incoming wastes while retaining the solids. The resulting liquid however still contains high levels of unhealthy bacteria.

Effectiveness of this process is best provided when a 'blanket' (scum layer) has formed on the surface and a sludge layer exists on the chamber floor.

After a number of years this chamber will have a build up of both scum and sludge and will reduce its capacity to around 50%. At this point it is necessary to pump out your SuperTreat Queensland to restore operational capacity.



CARING FOR THE PRIMARY CHAMBER

A Few Tips!

The septic tank chamber contains living organisms and is an essential part of the whole process. It will work efficiently provided normal care exists about what goes into the system from the home.

Toilets;

Materials like cardboard, newspaper., sanitary items, disposable nappies and similar such items can block sewer lines. Put them in the rubbish bin, not down the toilet. Any products containing chlorine can affect the system's primary chamber bacteria presence as can heavy loading of any anti-bacterial products.

Bathroom;

Many domestic bathroom cleaners contain ammonia and other caustic materials.

These can effect the operating bacteria living in the chamber and should be used in moderation.

Kitchen;

Many dishwater products contain high concentrations of alkaline salts which may effect the primary chamber. Liquids are usually gentler and equally efficient.

Laundry;

Use only the recommended quantity and preferably low in phosphate laundry powder. More is not better! Should you soak nappies or clothes in bleach type products, use a bucket and dispose of this separately.

The simple rule for using any questionable products is **MODERATION** and you should then not experience any difficulties. The incidences reported of problems encountered in this way are minimal.



THE AERATION CHAMBER

What Does it Do?

This is the secondary major chamber of the system. A weatherproof cover mounted on the tank lid contains the incoming power socket, with all electrical controls. Inside the chamber, wastes received from the primary chamber are in oxygen rich conditions completing the cleaning process.

-
- When near the system you will observe a low hum and a bubbling sound from within the chamber. This is the air blower operating supplying air into the aeration chamber.
 - Irrigation disposal occurs when treated and disinfected water reaches a predetermined level triggering the pump operation for disposal, the more water used in a given day will increase the number of disposals.
 - You may well notice that at given times the aeration cycle is not operating, this is normal as the aeration operates through a time clock control. Short periods occur twice a day when the system does not receive air, allowing for denitrification as part of the process.



PROTECTING YOUR SYSTEM

Regular Maintenance

On-Site Treatment Plants are regulated requiring State Approval through The Department of Infrastructure and Planning for Sale, and, Local Government Authority for installation approval as well as ensuring regulatory quarterly maintenance requirements are fulfilled.

SuperTreat Queensland Systems have locally available service personnel to fulfil quarterly preventative maintenance. Your system is covered for the 1st year of service and toward the expiry of that term an offer of ongoing annual maintenance for the coming year is presented.

The service provides a complete system check and a report of the condition of the system, and will submit a copy of that report to the Local Council.

The SuperTreat Queensland service representative knows your system better than anybody else, they are available to answer any questions you may have.

Irrigation Disposal

Local councils have different regulations regarding irrigation disposal. Your unit will have been installed according to these regulations.

The spray or dripper irrigation heads should be regularly examined for blockages and that there are no kinks or severe restricting bends in the disposal line.

The automatic daily disposal of the treated waste water will keep your garden happy and healthy. For best results use plants and shrubs that are best suited for your local conditions.

EMERGENCIES

What To Do?

The alarm system provided with your SuperTreat Queensland System is to alert you to two possible circumstances:

- Failure or blockage to the irrigation pump's operation.
- Failure or pressure reduction from the air blower to the system.

The warning light will come on when either of those conditions exists.

Firstly check that circuit breaker in mains box supplying the system has not triggered.

Call your local service agent! Do not wait days before making the call as costly damage may occur if the alert warning is ignored.

Your service agent will respond to your call within 24 hours. Do not attempt repairs yourself as you may void warranty.

When calling the service representative you will be asked the following questions:

- Is the Air Blower operating?
- Irrigation pump operating ?
- Any odour present?
- Sprays, drippers working?

GOING AWAY?

What To Do

Should you plan to be away for up to one month (4weeks) leave system running.

Should you be planning an extended holiday, contact you service agent for advice.

YOUR PERSONAL SERVICE AGENT



Your Warranty is for a period of 24 months from installation date

The only exclusions to your Warranty are for damage due to fire, flood, vandalism or owner interference to the systems controls, and or, damage due to supplementary irrigation systems attached for system disposal. The system is intended to be serviced by our authorised service agent and it is advisable to have that service provided to ensure complete protection particularly during the life of Warranty term.

Our desire is to have your system operating efficiently and to avoid any breakdowns or major repair costs. The simple procedures outlined in this booklet will greatly assist in achieving that objective.

Warranty is void if the SuperTreat Queensland Installation Manual is not followed.

Remember whatever you dispose of down drains, toilets etc remains in your system.

WARRANTY

Your SuperTreat Queensland Sewage Treatment System is guaranteed to be free of any defects in materials or workmanship at the time of installation.

Should any mechanical, electrical or manufactured part/s fail as a result of defect within 24 months of installation, the part/s will be replaced free of charge.

During the 12 months following installation, a cost free quarterly maintenance programme is provided including replenishment of required chlorine tablets.

This Warranty is governed in total by your conditions of sale

For information on warranty, please contact your Service Agent.

SUPERTREAT QUEENSLAND

OWNERS REGISTRATION CARD

PLEASE COMPLETE THIS CARD AND RETURN TO SERVICE AGENT FOR WARRANTY

INSTALLATION DATE MODEL no

OWNERS NAME

ADDRESS

PHONE (H) PHONE (H)

COUNCIL

Usual Number Occupants

Adults Children

WARNING - CHLORINE

Your "SuperTreat Queensland System" uses CHLORINE TABLETS in the pump out chamber as a final disinfectant prior to disposal.

The disinfected water from the system has less disinfectant than that applied to normal town water and with no detrimental effect on plants or garden products.

As part of quarterly servicing, your serviceman will replenish the supply of tablets so there is no necessity for them to ever be handled by you.

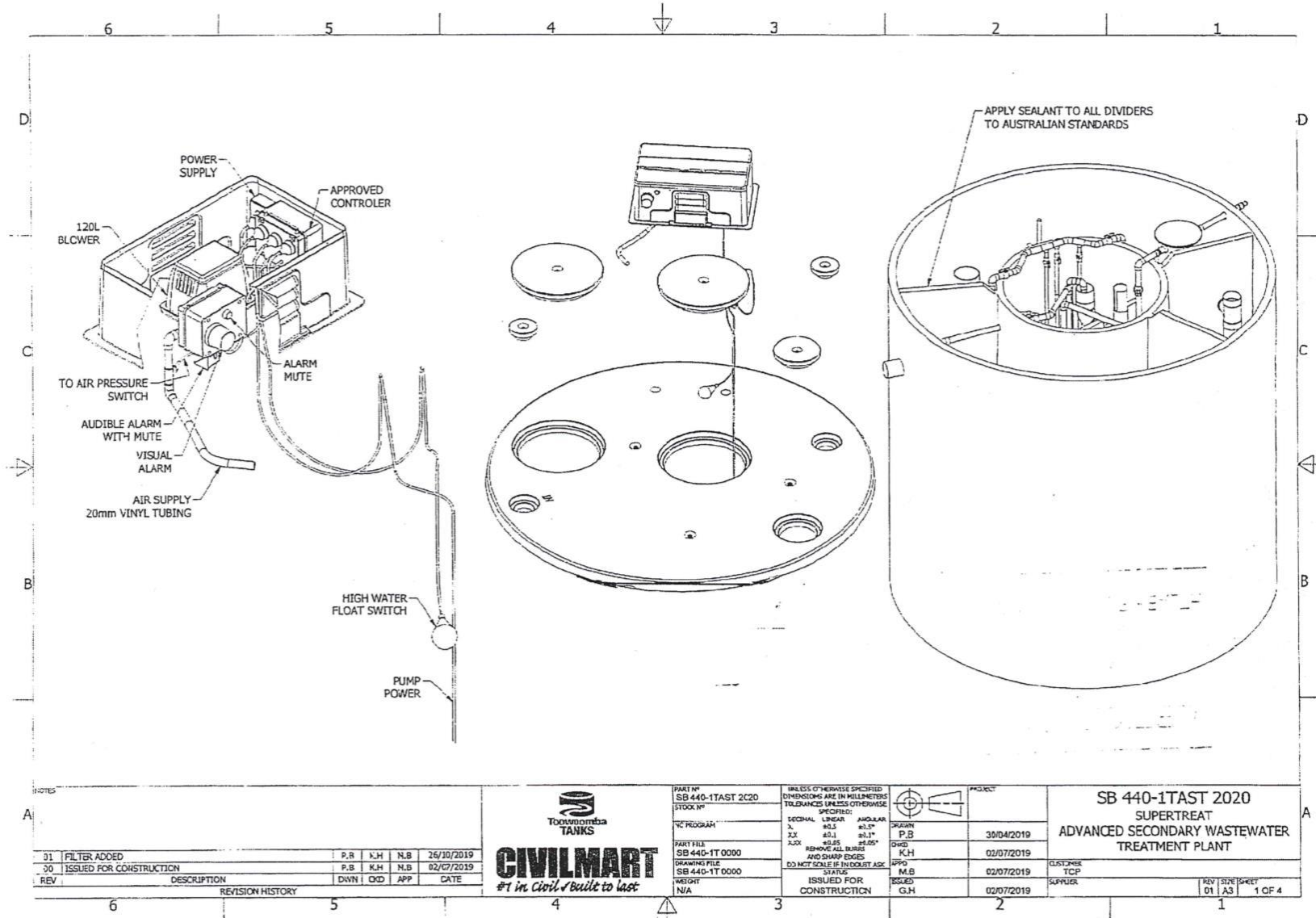
The CHLORINE USED IS CALLED TRICHLOROISOCYANURIC ACID and is in 200 gram tablets. Referred to as TRI-CHLOR TABLETS and in common use in the disinfection of swimming pools.

The use of any other type of chemical or chlorine could cause physical harm and affect the proper operation of the system. No two chlorine type products should ever be used together.

Manufactured by

Civilmart Toowoomba Tanks

Attachment 3 – Precast Civil Industries 1T-AST Schematic



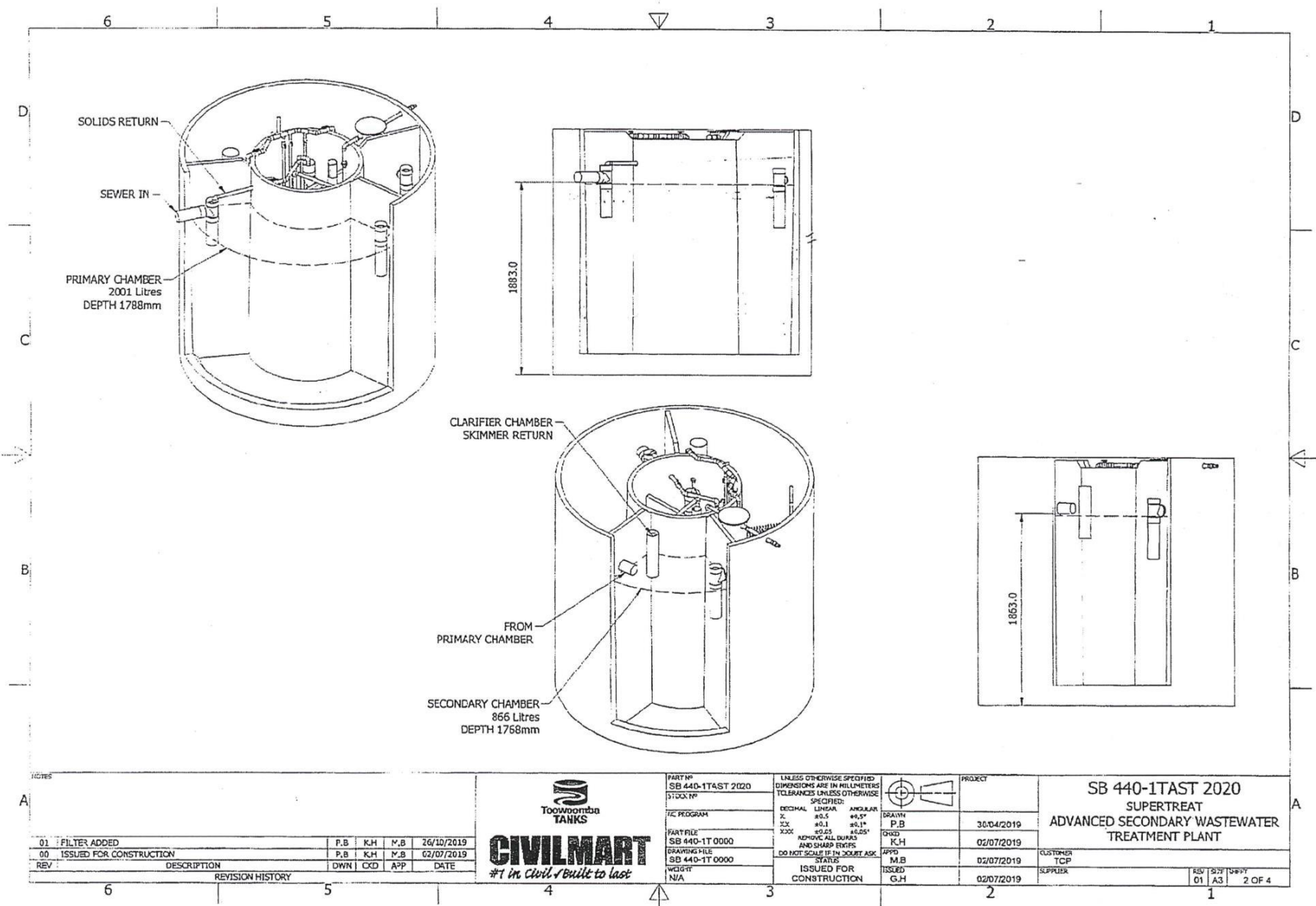
Treatment Plant Approval

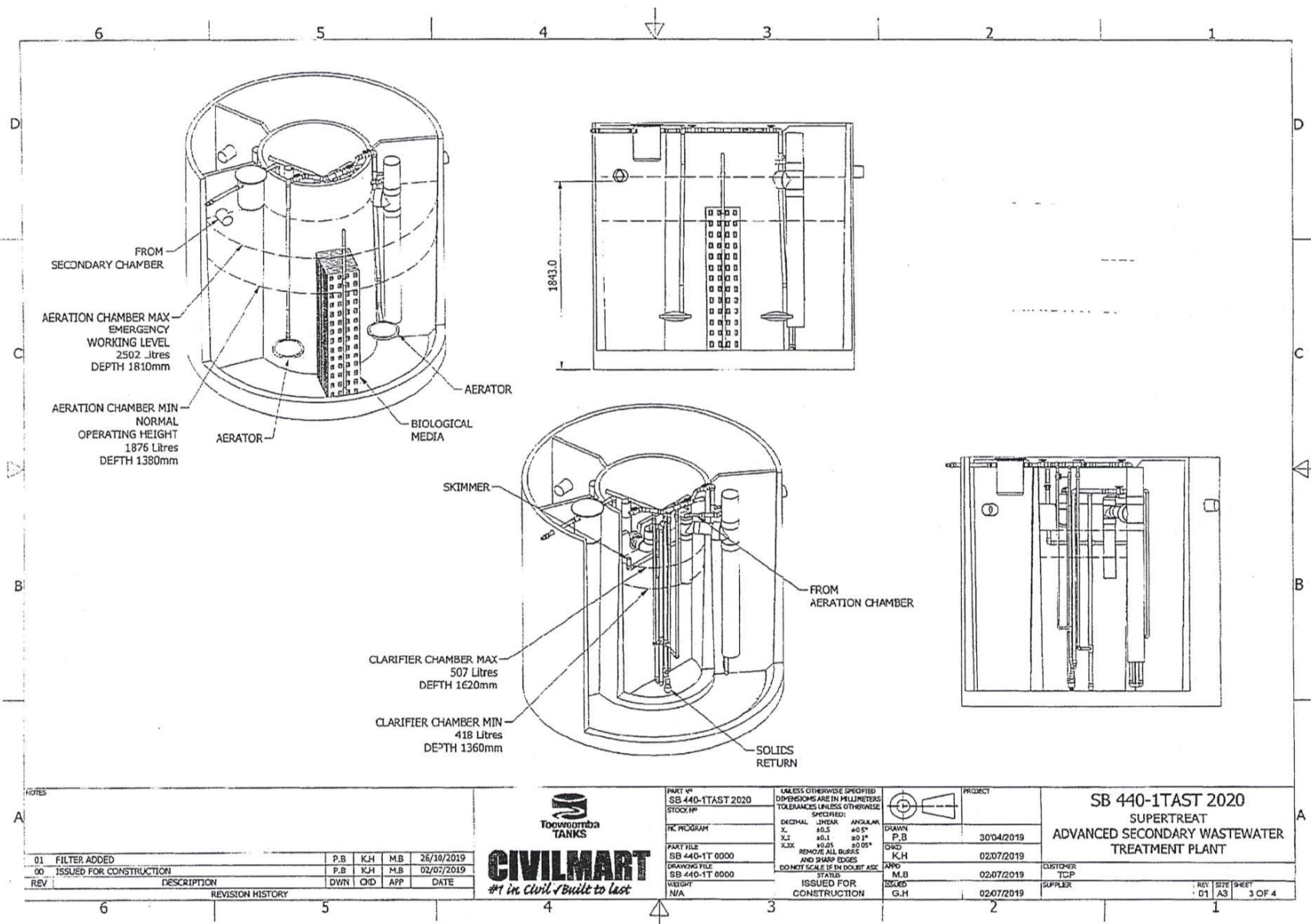
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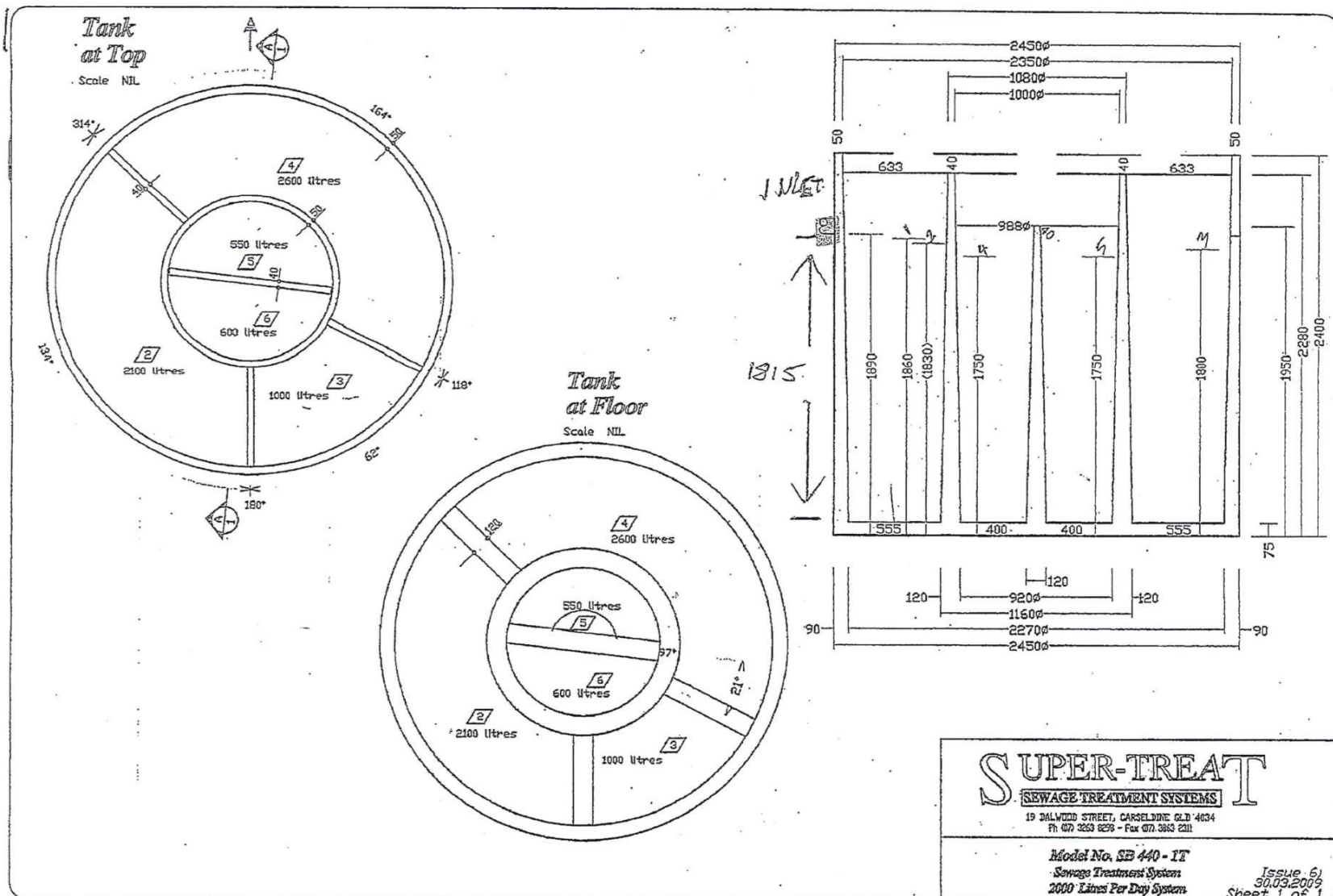
Delegated Authority

Department of Energy & Public Works









Treatment Plant Approval

Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works

