

TREATMENT PLANT APPROVAL 17/2023
Plumbing and Drainage Regulation 2019, part 4.



Approval

1. The **Alphatreat ATDP10AS** (“the System”) described in the Specifications and Drawings in the attached Schedule and manufactured by **Alphatreat Pty Ltd** (ABN 64 143 207 658) (“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 effluent criteria and must continue to meet the following requirements:

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 ^p	Minimum 0.5 mg/L [†]	N/A
Turbidity [§]	N/A	10 NTU

* Where disinfection is required

p Where chlorine disinfection is required

† Minimum level, not 90% of samples

§ Where UV light is used for disinfection



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

Lindsay Walker

Director
Plumbing, Drainage and Special Projects
Date approved: 08 November 2023

Level 15,
53 Albert Street Brisbane
GPO Box 2457, Brisbane Qld 4001
Telephone +61 7 3008 2557
Website www.hpw.qld.gov.au
ABN 61 331 950 314





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SCHEDULE

Specification & drawings for the

Alphatreat ATDP10AS

- Attachment 1 – Alphatreat ATDP10AS - CAB Certificate number 4283-2786-01
- Attachment 2 – Alphatreat ATDP10AS – Operators Manual
- Attachment 3 – Alphatreat ATDP10AS – Schematic diagrams

Treatment Plant Approval

Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works





PRODUCT CERTIFICATE OF REGISTRATION

Alpha Treat Pty Ltd

9 Mackie Way, Brendale, QLD 4500, Australia

Product Performance Testing

AS 1546.3:2017

Alphatreat ATDP10AS has achieved
Advanced Secondary Quality Effluent at 1500 L/day (10EP level)

Model	Disinfection	Average Results over the Test Period	Servicing Frequency	Discharge	Manufactured and assembled
Alpha Treat ATDP10AS	Yes	TSS 7.83mg/L BOD5 3.37mg/L E coli 2.05 CFU/100mL	3 Monthly Service	Pumped via disinfection/pump chamber with chlorine dispenser	Manufactured and Assembled: 9 Mackie Way, Brendale, QLD 4500, Australia 14B Williamson Road, Ingleburn, NSW 2565, Australia
Chlorine was added during the test period for sterilisation. Servicing is conducted 3 monthly					

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:
3 November 2022

DATE OF ISSUE:
21 November 2022

EXPIRY DATE:
3 November 2027

CERTIFICATE #:
4283-2786-01

 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: 24480410AC

Treatment Plant Approval
Approved by: Lindsay Walker
Delegated Authority
Department of Energy & Public Works



AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant



OWNERS MANUAL



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The AlphaTreat™ Wastewater Recycling System



AlphaTreat

ATDP10AS Advanced Secondary Treatment Plant

Introduction

About 20% of Australian homes are not connected to central sewers i.e. treatment of waste water occurs on-site. It is important to realise that on-site waste water systems require regular inspection and maintenance to ensure that they function effectively.

Your AlphaTreat™ has been tested and accredited by Global Certification to Australian Standard AS1546.3:2017 and is approved by various state health and EPA departments across Australia and New Zealand. The system must be operating correctly to ensure that the health of your family and the community are protected at all times.

AlphaTreat™ can arrange maintenance service for your peace of mind. It is important that you have signed a contract for the ongoing maintenance of your system. This will ensure that your system continues to operate as designed, warranties are protected and the unit will continue to function correctly in the long term. Generally speaking the AlphaTreat™ is automatic in operation and requires very little owner intervention. It is useful however for you to familiarise yourself with the system so that you understand the general operation of the unit.



Packaged System Weight: 380kg

Packaged Height: 2450mm

For your nearest SERVICE PERSON please call 1800 607 695

Operation

The AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant treats waste water on-site to secondary levels far in advance of older style septic tanks. In technical terms the AlphaTreat™ has been designed to process waste water to achieve typically 95% reduction in both suspended solids (TSS) and biological oxygen demand (BOD₅). The treated effluent is clear, odourless and can be reused on site (subject to council approval). A household drainage system terminating at an AlphaTreat™ Advanced Secondary Treatment Plant does NOT require a grease trap on the kitchen line.

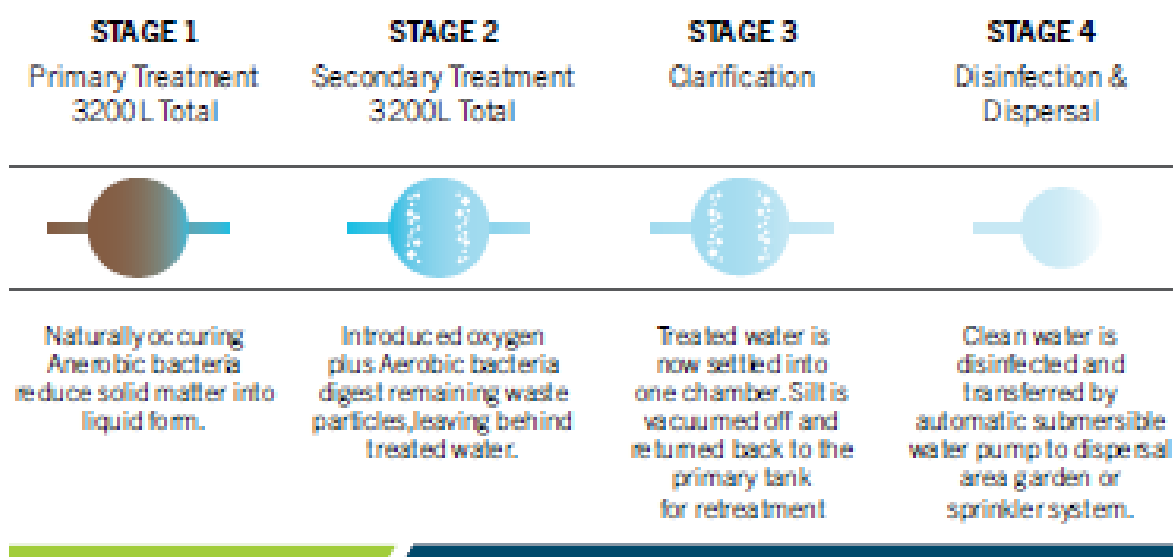
Treated Water Quality

AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant

BOD ₅	10 mg/litre
Suspended Solids	10 mg/litre
E.coli	10 cfu/100ml
Free residual chlorine	min 0.5 mg/L

The AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant is a compact sewage treatment system housed in two polymer tanks. It is intended to treat domestic waste water from single households with adequate capacity to treat waste water for up to 10 people. The tank is connected to the household plumbing system and requires electrical power to be supplied for the air blower, electronic alarm control unit and the irrigation pump.

The Process



Owners/Tenant Responsibilities

The home owner is responsible to the local authority for ensuring that their waste treatment process is operated correctly and produces a good quality discharge.

- The unit should NEVER be turned off, even during holiday periods. To cope with extended periods of absence, contact your service agent.
- The treatment system is engineered to meet normal household water discharge levels. If large amounts of water are discharged to the system it can affect the amount of process time and result in lower quality treatment. Please ensure that washing machine loads are spread over several days if possible.
- Do not dispose of fats, greases or large amounts of household food scraps down the drain as this can overload the system's process of digestion.
- Do not dispose of solvents, paints, strong cleaning agents (chlorines, bleaches, disinfectants etc.) or other chemicals down household drains. These are toxic to the microbiological process working inside the system. Try to use natural cleaning products and use disinfectants sparingly. Try to utilise cleaning products that are low in phosphorous as it is far better long-term for the environment.

All AlphaTreat™ systems are fitted with a visual warning strobe light on top of the electrical control box and a mutable alarm panel that is located inside the house (Laundry suggested when required by local authorities).

If this light is activated, it indicates either:

1. The aeration system is not operating correctly.
2. The system water level is too high.

Before contacting your service agent, please check:

1. That the irrigation outlet from your system is not kinked or blocked.
2. That there has been no disruption to power that could have caused the electrical breaker within the control box to trip (electrical storms, etc.).

If there is no obvious cause for the alarm, contact your service agent.

See section 30 of service manual procedures

<http://www.wastewaterequipment.com.au/treatment-plant/domestic-systems>

For your nearest SERVICE PERSON please call 1800 607 695

Owners/Tenant Responsibilities(Continued)

- It is important that you have signed a contract for the ongoing maintenance of your system.
- AlphaTreat™ can suggest a maintenance person in your area if required, or contact your local council for a full list of licensed personnel.
- The owner/tenant of the property should ensure safe passage for the Service Technician. Any animals that may pose a danger to the service technician should be locked up or penned during servicing.
- The owner/tenant should provide a key for the Service Technician if there are any locked gates which prevent entry to your property.
- The owner/tenant should ensure that the area around the AlphaTreat™ System is kept neat and tidy at all times.
- The owner/tenant should monitor the irrigation sprinkler system to ensure all spray jets are working properly. (The owner/tenant will be required to replace or clear any blocked or broken sprinklers). This work can also be arranged to be completed by a maintenance technician.
- The owner/tenant should ensure that any inline filters on the irrigation sprinkler system are checked and cleaned on a regular basis if required. The service technician will clean the filter every three months.
- The owner/tenant should ensure prompt payment of any service or repair accounts.
- The owner/tenant should not allow painters/cleaners etc. to dump paint chemicals etc. into the drains whilst working on site.
- If you have any questions in regards to servicing your system please contact us during business hours on 1800 607 695.

A full Operation, Installation and Service manual can be downloaded from:
<http://www.wastwaterequipment.com.au/treatment-plant/domestic-systems>

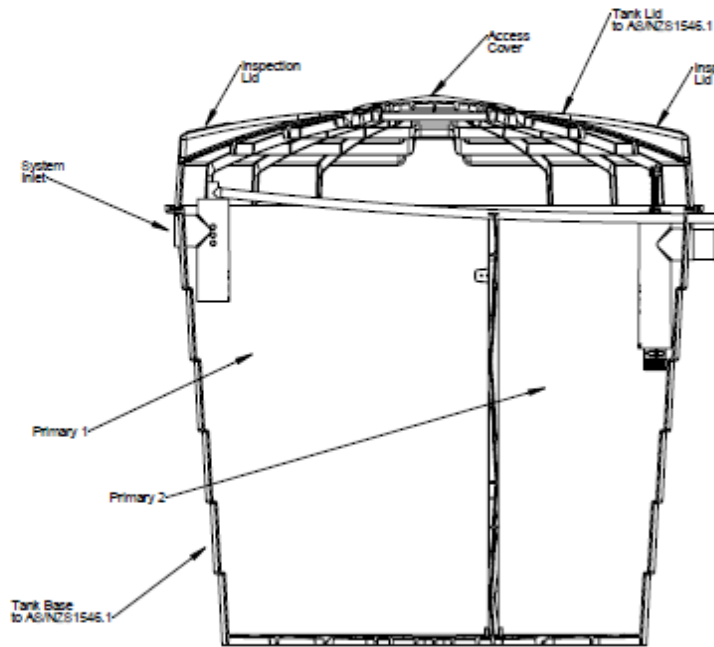
AlphaTreat™ Primary Treatment Tank 3200L

Partition Optional pending state regulations

Excavation Dimensions

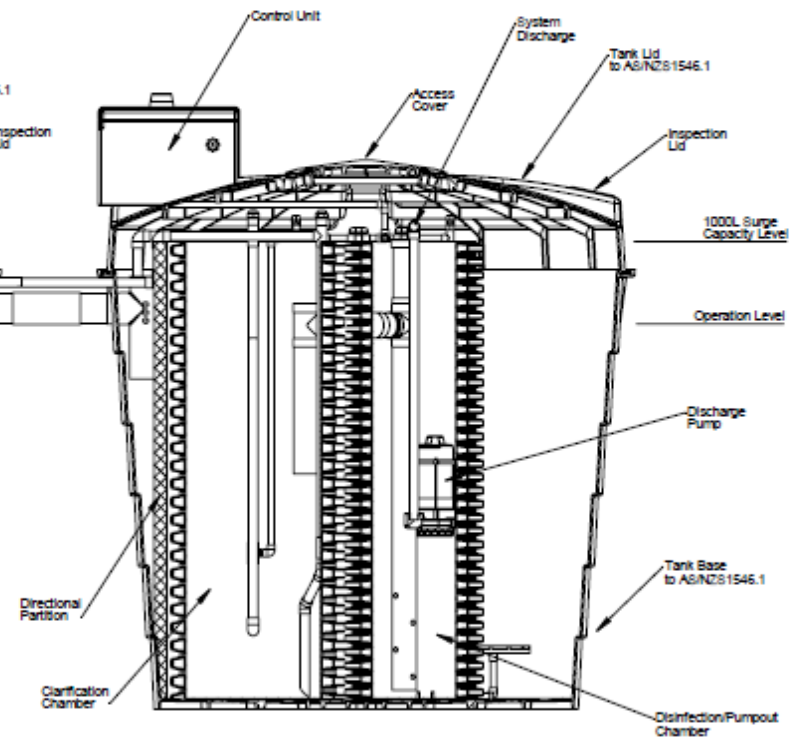
Depth Approx.	1980mm	Length Approx.	4900mm
Width Approx.	2600mm	Weight	380kg

(Measure tank at base level)



Primary Treatment Tank

AlphaTreat™ Advanced Secondary Treatment Tank 3200L



Advanced Secondary Treatment Tank

For your nearest SERVICE PERSON please call 1800 607 695

Treatment Plant Approval

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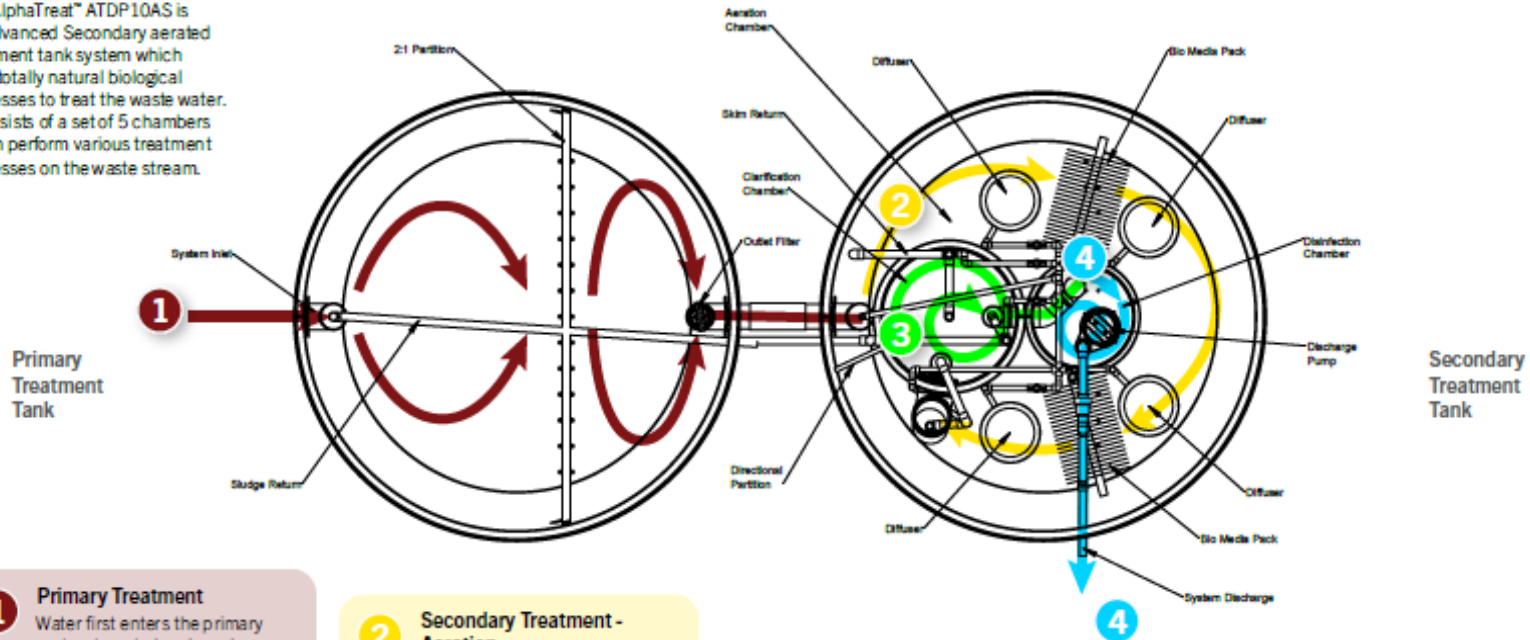
Delegated Authority

Department of Energy & Public Works



AlphaTreat™ Treatment Process

The AlphaTreat™ ATDP10AS is an Advanced Secondary aerated treatment tank system which uses totally natural biological processes to treat the waste water. It consists of a set of 5 chambers which perform various treatment processes on the waste stream.



1 Primary Treatment
Water first enters the primary pretreatment chamber where organic and inorganic solids settle to the bottom and fats and other floating matter forms a scum layer on top of the liquid in the chamber. A sludge layer builds up in the chamber and a biological process takes place i.e. anaerobic bacteria digest the sludge and break down some of the organic matter. Fluid is decanted from the pre-treatment chamber through a baffle to eliminate the passage of grease and floating matter. Whenever liquid enters the pre-treatment chamber, waste water flows by hydraulic displacement into the 2nd Primary treatment chamber.

2 Secondary Treatment - Aeration
In the aeration chamber air is introduced through fine diffusers which serve to stir the contents of the tank whilst some air dissolves to provide oxygen for aerobic bacteria to thrive. These bacteria form a bio-film on the submerged media and float in the solution. Aerobic bacteria are far more efficient than their anaerobic counterparts and the effluent is converted into clean, clear water through aerobic digestion and oxidation. This process is odour-free.

3 Clarification
Liquid from the aeration chamber flows into the clarifier where the solution slows to enable any suspended particles to settle to the bottom. Periodically the accumulated sludge is returned to the primary treatment chamber to ensure more complete digestion. This return process is automatic.

4 Disinfection & Dispersal
Treated water now flows through a lower chamber where it is chlorinated and disinfected before passing into the final irrigation area. At this point clean waste water is automatically and silently discharged into the land application system. Land application systems vary according to individual situations and can be in the form of surface sprinklers, subsurface irrigation, sand filters or other innovative systems. Your local council will decide this.

AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant Warranty

Congratulations! You have made an excellent choice of this quality product. Our commitment to quality also includes our service. Should you, contrary to expectations, experience defects due to manufacturing faults, AlphaTreat™ will provide you with a warranty against defects as follows:

Warranty

The AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant is guaranteed to be free from defects in workmanship and parts for a period of:

- 15 years on tank casings
- 2 years on electrical components (including air pump, submersible pump)
- 3 years on other system components from the date of installation.

Defects that occur within this warranty period, under normal use and care, will be repaired, replaced or refunded at our discretion.

The benefits conferred by this warranty are in addition to all rights and remedies in respect of the product that the consumer has under the Competition and Consumer Act 2010 and similar state and territory laws. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Proof of Purchase & Registration

This warranty is valid for the original purchase and is not transferable. Please keep your installer tax invoice or receipt as proof of purchase, and as proof of date on which the installation was made. Under local state health department requirements, the homeowner must register with AlphaTreat™, the AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant installation by sending the required details to:

AlphaTreat™ PTY LTD
9 Mackie Way, Brendale QLD 4500
Phone 1800 607 695 | Fax 07 3205 7155
Email info@wastewaterequipment.com.au

Extent of Warranty

This warranty is limited to defects in workmanship or parts only. All defective products or parts will be repaired or replaced, at the discretion of AlphaTreat™.

Exclusions

This warranty does not cover:

- Normal wear and tear to the product or parts.
- Any defects caused by an accident, misuse, abuse, improper installation or operation, lack of reasonable care, contamination of the system by the entry of prohibited chemicals and substances into the system, unauthorised modification, loss of parts, tampering or attempted repair by a person not authorised to service the treatment plant.
- The sewerage supply pipework or the electrical supply to the ATDP10AS, nor the above ground or sub surface irrigation/land application system.
- Any product that has not been installed correctly. Installation is not covered by this warranty. Please contact your installer if installation issues arise.
- Product not operated or maintained in accordance with the manufacturer's operating instructions provided with the product.
- Any product that has non-specified replacement parts used.
- Any product that has been used for purposes other than domestic use.
- Regular maintenance and system tuning, service, and consumables.
- The cost of transportation of the product from customer to distributor or from distributor to the customer

To Make a Claim

To obtain service under this warranty or to have the product repaired please contact the AlphaTreat™ Helpline 1800 607 695 with your treatment plant serial number (proof of installation tax invoice) and the completed Registration Details Certificate. If you require assistance regarding the warranty conditions or have technical enquiries about your product, please contact our customer service helpline 1800 607 695

Registration – AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant

IMPORTANT To validate your warranty; fill out the following information and sending a copy to AlphaTreat™.

Under local state environmental health authority requirements, the homeowner must register the AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant installation with AlphaTreat™.

The owner/tenant must have a signed contract for the ongoing maintenance of the system.

Send the following required details to:

AlphaTreat™ Pty Ltd

9 Mackie Way, Brendale QLD 4500

Phone 1800 607 695 | Fax 07 3205 7155 | Email info@wastewaterequipment.com.au

AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant

AlphaTreat™ ATDP10AS Advanced Secondary Treatment Plant Serial #

Owner Name:

Site Address:

State:

Email:

Phone Number:

Date of Purchase:

Plumber/Installer:

Plumber Lic No:

Installer Tax Inv No:

Installation Date:

Local Authority / Council:

Service Technician:

Service Tech Ph No:

We recommend that you attach a photocopy of your receipt, showing the date of purchase, to this Registration Certificate and keep for your reference. In the event of a product fault, please call your service technician for immediate assistance. Please ensure that you have the product details (as shown on this card) at hand so that we are able to respond as quickly and efficiently as possible.



All information contained within this manual is the property of AlphaTreat.
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permission of AlphaTreat.

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Treatment Plant Approval

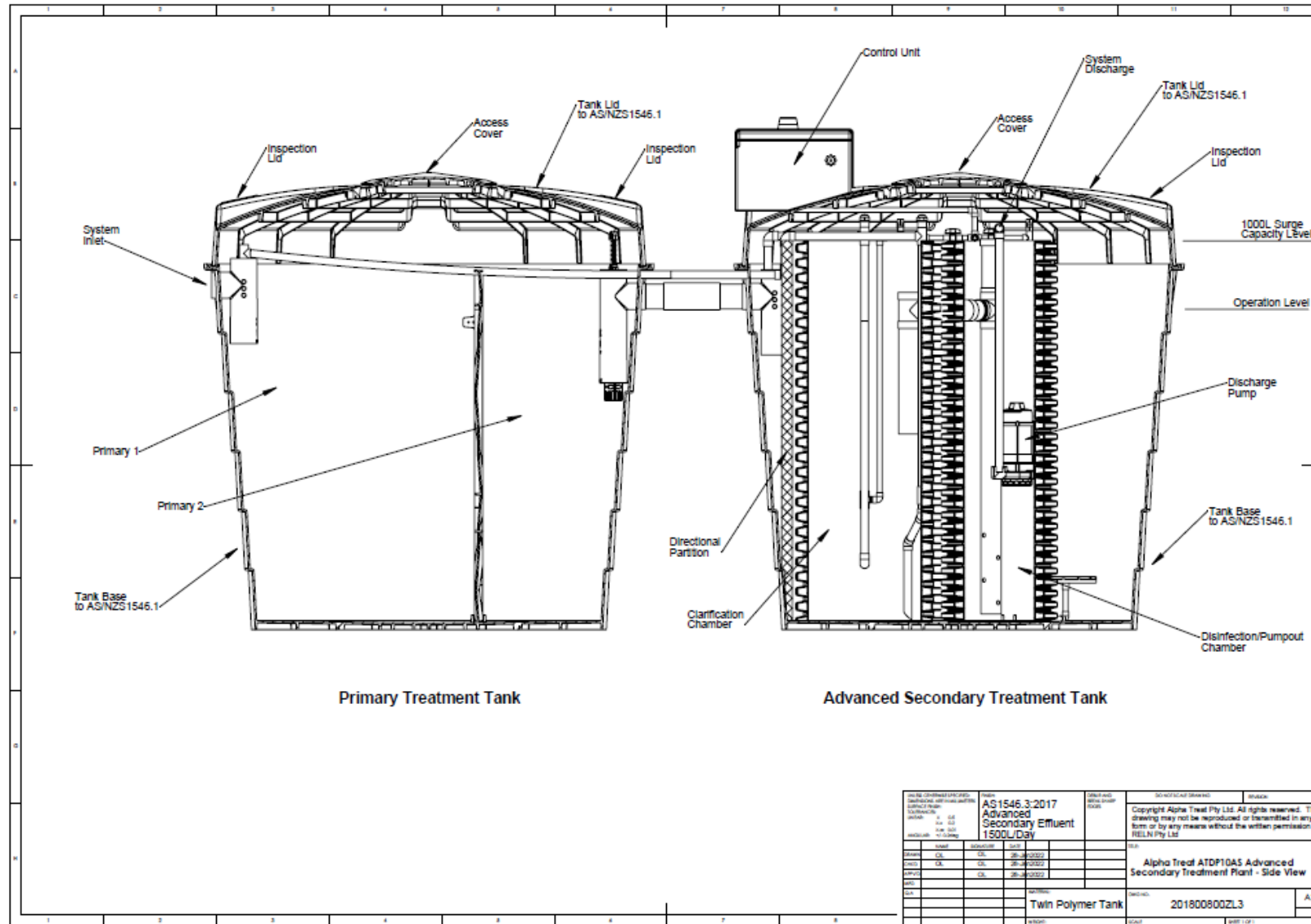
Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works



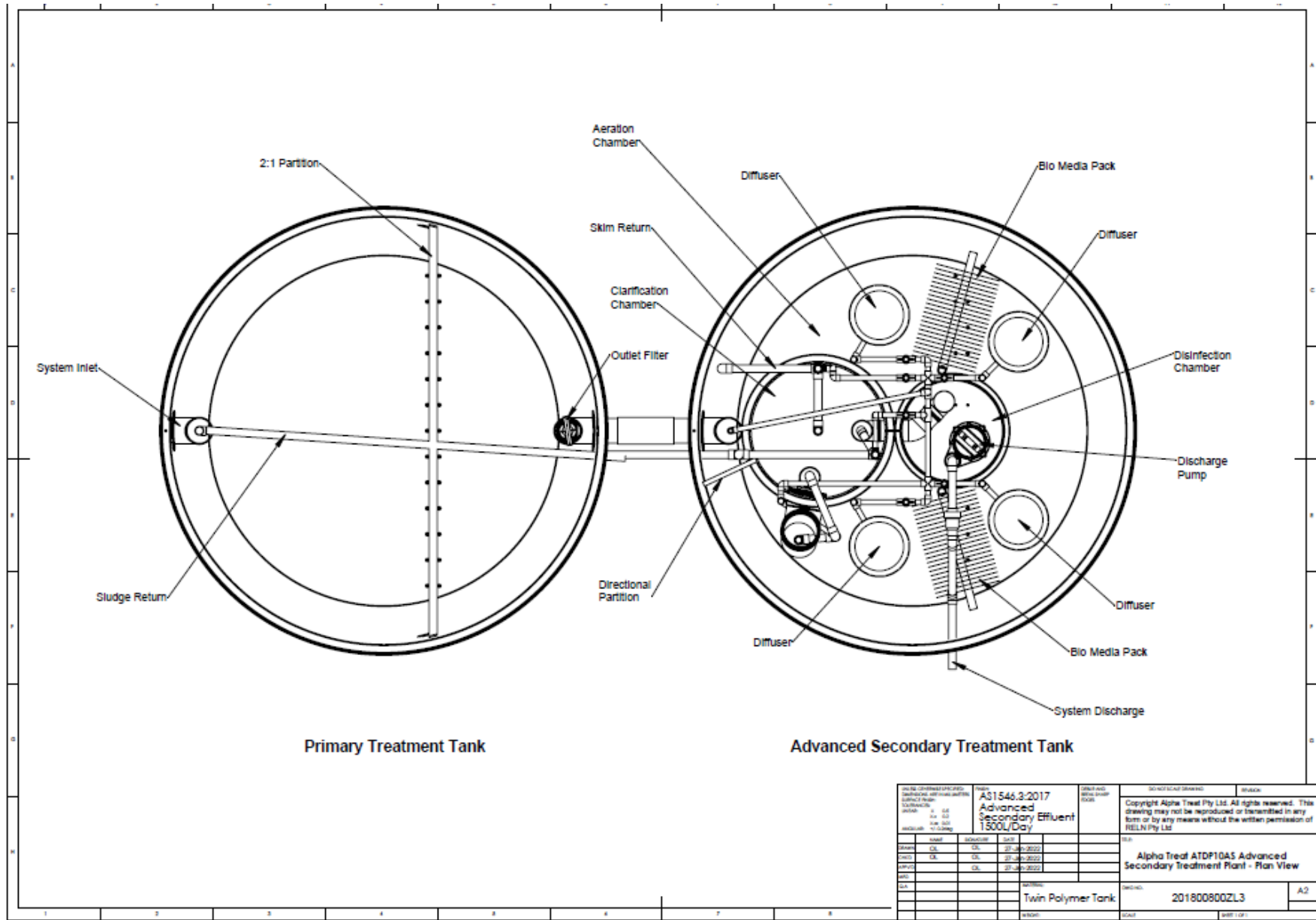
Attachment 3 – Alphatreat ATDP10AS Schematic



DATE CREATED/REVISED: DRAWN BY: CHECKED BY: DATE: SCALE: PROJECT NO.:	TITLE: AS1546.3:2017 Advanced Secondary Effluent 1500L/DAY	SHEET NO.: OF SHEETS: PROJECT NO.:	DRAWING NO.: 2018008002L3
PROJECT NAME: Alpha Treat ATDP10AS Advanced Secondary Treatment Plant - Side View		SHEET TITLE: Alpha Treat ATDP10AS Advanced Secondary Treatment Plant - Side View	
PROJECT NO.: 2018008002L3		SHEET NO.: A2	

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