TREATMENT PLANT APPROVAL 26/2023
Plumbing and Drainage Regulation 2019, part 4.

Approval

1. The **EcoSeptic** Eco **Pro 1500 Poly** ("the System") described in the Specifications and Drawings in the attached Schedule and manufactured by **ECO - Septic Pty Ltd (Trading as Econocyle)** (ABN 80 086 310 474) ("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, 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:

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
*E. coli**	≤ 10 cfu/100 mL	30 cfu/100 mL
FAC[Þ]	Minimum 0.5 mg/L[†]	N/A
Turbidity [§]	N/A	10 NTU

* Where disinfection is required
Þ Where chlorine disinfection is required
† Minimum level, not 90% of samples
§ Where UV light is used for disinfection

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

TREATMENT PLANT APPROVAL 26/2023
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7. Each system must be serviced in accordance with the accreditation certificate issued by Global Certification (certificate number 462/2) on 09 June 2023, 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 BOD^5 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. BOD^5 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 18 December 2028 unless cancelled earlier in accordance with paragraph 10 above.

Lindsay Walker

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

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

Director
Plumbing, Drainage and Special Projects
Date approved: 18 December 2023

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

TREATMENT PLANT APPROVAL 26/2023
Plumbing and Drainage Regulation 2019, part 4.

SCHEDULE

EcoSeptic Eco Pro Poly 1500

Attachment 1 – EcoSeptic Eco Pro Poly 1500- CAB Certificate 462/2
Attachment 2 – EcoSeptic AWTS Owners Manual poly
Attachment 3 – EcoSeptic Eco Pro Poly 1500– Schematic diagrams

Attachment 1 – EcoSeptic Eco Pro 1500 Poly - CAB Certificate 462/2

PRODUCT CERTIFICATE OF REGISTRATION

Global Certification Pty Ltd

Number 462/2

Product Performance Testing

AS 1546.3:2017

Advanced Secondary 1500 L/day 10EP Level without Nutrient Reduction

Issued to

ECO – Septic Pty Ltd T/as Econocycle

65 – 67 Warradale Road, Warragamba, NSW 2752

Certification Date: - 3/11/2019 **Expiry Date: - 3/11/2024**

Product Certified:

Model	Disinfection	Average Results over the Test Period	Servicing Frequency	Discharge	Manufactured and assembled
Ecoseptic model Eco Pro Poly 1500	Yes	TSS 7.14mg/l BOD_5 <2mg/l Turbidity 16.39NTU E coli <1CFU/100ml	3 Monthly Service 3.2 yearly sedimentation pump out or as required	Pumped via disinfection/pump chamber with chlorine dispenser	Manufactured and Assembled: 65 Warradale Road, Warragamba NSW 2752
BioCycle Pro Poly 1500	Yes	TSS 7.14mg/l BOD_5 <2mg/l Turbidity 16.39NTU E coli <1CFU/100ml	3 Monthly Service 3.2 yearly sedimentation pump out or as required	Pumped via disinfection/pump chamber with chlorine dispenser	Manufactured and Assembled: 65 Warradale Road, Warragamba NSW 2752
The system took 5 weeks to meet the advanced secondary standard.					

NACE CODES: 3700

This Certificate of Conformance to the Product Certificate Scheme for "Domestic Wastewater Treatment Units (Septic Tanks) and Rainwater Tanks" 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.

Dave Steer – Product Certification Manager

Date of Issue: 9th June 2023

www.jas-anz.com.au/register

Signed for and on behalf of Global Certification Pty Ltd

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

Attachment 2 – EcoSeptic - AWTS Owners Manual

OWNERS MANUAL

POLY

1

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

CONTENTS

PRE-INSTALLATION INFORMATION

AFTER INSTALLATION CARE

OWNERS MANUAL & DETAILS

- Name .....
- Address .....
  .....
- Model .....
- Installation Date .....

Congratulations for purchasing the EcoSeptic system, which is the genuine product, and we believe is the best available. The local environment will also show its appreciation.

Your EcoSeptic Wastewater Treatment System is designed to treat domestic wastewater to a very high standard. All that is needed are some commonsense household approaches.
It is not only hygienically safe but also ideal to discharge above ground with no offensive odours.

It saves water usage (and water rates) by recycling through an automatic irrigation system, water that would under normal circumstance go to waste, adds value to your property and promotes garden growth. The system does all this quietly and is fully automatic.
The EcoSeptic system is a biological filtration treatment system and does not rely on strainer type filters to process household water.

IRRIGATION REQUIREMENTS

Irrigation requirements differ from council to council so please ensure that you refer to your site assessment report and/or council approval.

If your requirements are greater than the standard irrigation package supplied by us (ie. 50m ply pipe laid above ground and 4 sprinklers), please contact your bioCycle representative or local irrigation specialist. This may avoid potential hold ups of your final council inspection.

INSTALLATION INSTRUCTIONS (Plumbing)

The following instructions are to enable the proper installation of the EcoSeptic unit. It is necessary the follow these instructions, so you don't void any warranties. Please ensure you have council permits/ approvals before installation of tank.

Please give minimum of one weeks' notice for your EcoSeptic unit, more notice is appreciated to ensure truck availability.

Risers, if required, should be ordered with EcoSeptic before delivery of the unit. If ordered separately, delays and additional delivery charges will be incurred. (Risers raise top of tank if there are drainage issues).

All deliveries are C.O.D payments and are to be given to the driver before unloading, unless other arrangements have been made.

When excavating the hole for the tank/s please ensure the excavation size is correct (if you have any doubt please contact your EcoSeptic representative). Absolutely free access to the excavation and the area for the truck is critical. The truck must be able to get within 1 metre of the tank excavation and the area for the truck to unload must be firm ground and less than 5% grade. The driver's judgement of the safe unloading and accessibility is final. Failure to comply will incur additional installation costs at your expense.

Ensure that the excavation has a level base. The base of the hole is determined by the height of the inlet pipe (this will also determine the overall height of the tanks/s). The base must be firm and be on a 50mm bed of sand or similar material. Failure to do so will void any tank warranty.

Backfill the tank/s with clean backfill free of large roads, sharp objects and rubbish, then fill tank/s with clean water immediately. This is best done with a hose. For plastic tanks fill pump out chamber first.

All plumbing and electrical connections must be carried out by licensed contractors in accordance with any government guidelines or council requirements.

INSTALLATION INSTRUCTIONS (CONT)

CANCELLATION

If you wish to cancel a delivery, you must do so by 1:00pm the day preceding the delivery.

CANCELLATION DUE TO OVERNIGHT RAIN

If a site contact person and phone number has been provided by you we will try to contact that person/s between 5:30 – 8:00 am to ensure the delivery is still required. EcoSeptic cannot accept any responsibility for failure to contact your site person/s nominated.
Late notice of cancellation will incur an UNLOADING FEE or return to site cost or crane costs to your account.

WHEN YOU ARE READY TO USE YOUR ECOSEPTIC

When the EcoSeptic is ready to be used, contact your representative and notify them that you are ready for the unit to be commissioned. Please give at least one weeks' notice. Please ensure that the plumbing and electrical have been connected and are operational. This commissioning involves the fitting of the irrigation and aeration pumps and the laying out of the irrigation line. It is advisable that the owner / occupier is onsite at this stage to ask any questions you may have on operations of the EcoSeptic unit.
It is now your quarterly service will begin. These services will occur automatically from this date. If prior arrangements must be made to gain access, please notify BioCycle of all your details including work numbers.

PLEASE NOTE – Follow instructions carefully so you do not void your warranty.

ECO-SEPTIC
WORLDWIDE TECHNOLOGIES – LOCAL SERVICE

ECO-PRO Poly Installation Guide

Read Me First

Our Poly Tanks ARE NOT like concrete tanks and shouldn't be treated the same as a below ground concrete tank.

A stop sign with text

Description automatically generated

Detailed instructions are attached

Australian Owned
Australian Made

Of Note

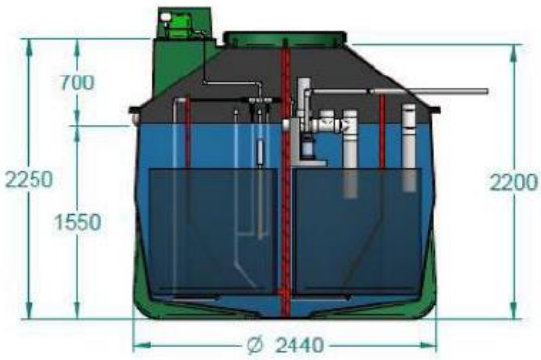
Eco-Septic Poly tanks are made from plastic and MUST be backfilled in 300mm equal layers. The tanks need to be treated differently to concrete tanks and cannot take the weight of an excavator or truck driving over the top. Any variation to these directions may void your warranty. If unsure please call the Eco-Septic head office.

EXCAVATION DIMENSIONS
SINGLE TANK POLY ECOSEPTIC ECOPRO AWTS

Approximate Weight 500Kg

EXCAVATE

- Excavate a hole 3metres by 3 metres square and 2.2 metres deep.
- Add a layer of crusher dust (5mm) or sand – (no large shape rock)
- Ensure there is adequate fall to the system
- ensure bottom of the hole is level
- Backfill with soil from the excavation area and ensure its no more than 500 mm and equally distributed in layers around the tank
- Avoid backfilling with particles larger than 50 mm



ELECTRICAL WORK

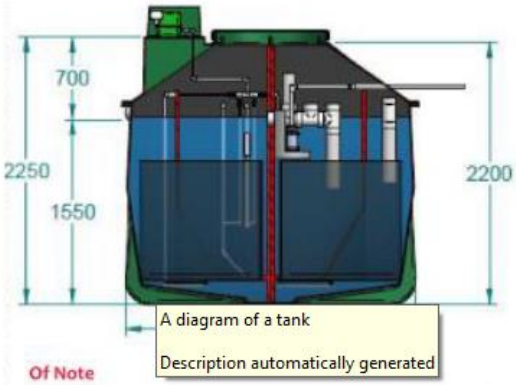
- Connect through the conduit connection on the side of the poly box.
- Run Wire (Min 2.5 mm) through the conduit and up to the switch in the blower box

LIFTING

- To lift tank into excavation, use the 4 lifting lugs located on the top of the tank.
- Use four straps for even lifting.
- Tank weighs approx. 500kg and may
- have additional water adding weight.
- Use a machine or excavator to lift and
- position tank in place

Australian Owned
Australian Made

FILLING AND BACKFILL



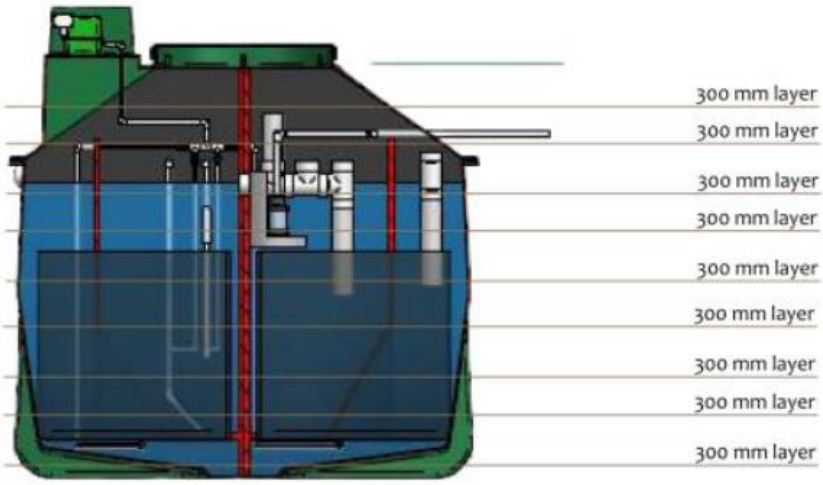
A diagram of a tank

Description automatically generated

- Open the manhole access cover and place hose in the centre chamber (the final effluent chamber with the
- pump). Approximately 6,000L to 7,000L of clean water.
- 2. Fill tank with water as backfilling around the tank equally in 300mm layers of clean soft backfill (no larger particles greater than 50mm).

Of Note

Eco-Septic Poly tanks are made from plastic and MUST be backfilled in 300mm equal layers. The tanks need to be treated differently to concrete tanks and cannot take the weight of an excavator or truck driving over the top. Any variation to these directions may void your warranty. If unsure please call the Eco-Septic head office.



MY NAME IS POLY

I am a plastic tank and NOT CONCRETE so I need a little TLC

I DONT LIKE.....

- Any clay backfill
- Cars or Excavators driving me as part of the installation or heavy objects being placed on my lid
- Do not use the excavator to compact the soil in and around me during installation
- Uneven backfill to one side of the tank
- Empty of water when being backfilled
- Mud Buckets of clay being dropped on me as part of the backfill

I DO LIKE.....

- Soft soil or sand as a backfill
- 300 mm Layers in equal intervals as my backfill
- Sand on top of the tank
- Being full of water to make my structure more solid and less likely to distort
- You to take care as I am not as robust as a concrete tank.
- To be used on narrow and restricted access sites

A diagram of a tank

Description automatically generated

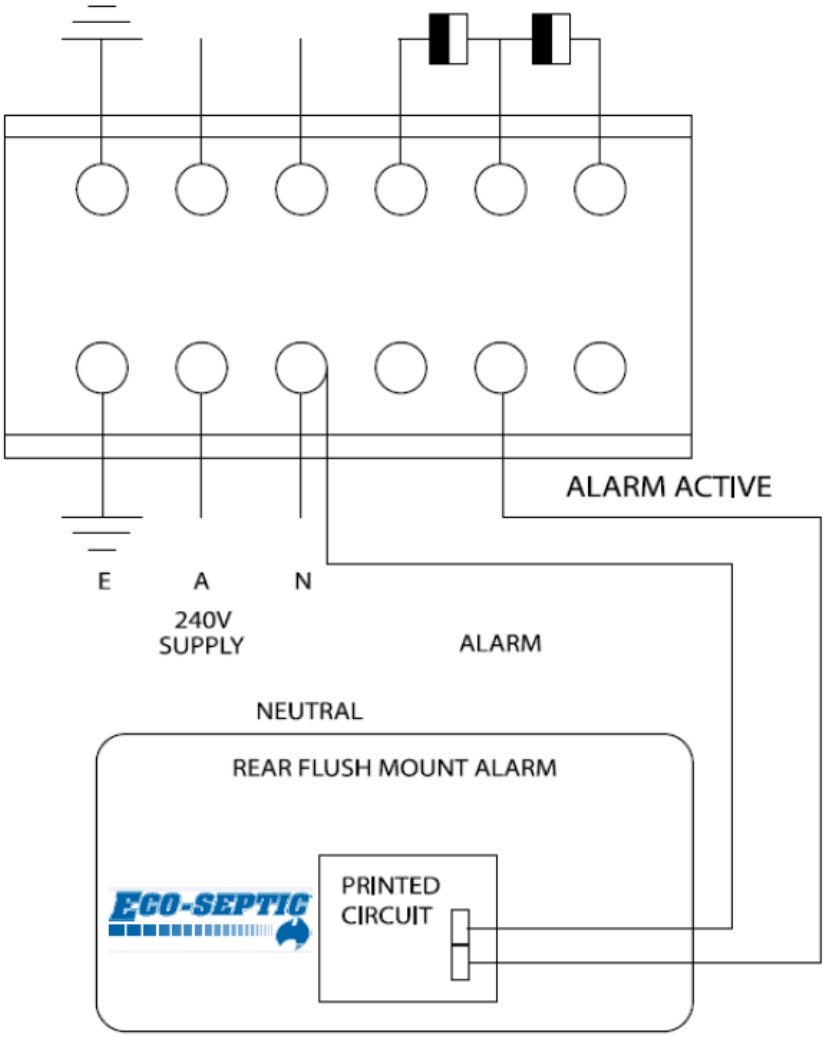
Of Note

Eco-Septic Poly tanks are made from plastic and MUST be backfilled in 300mm equal layers. The tanks need to be treated differently to concrete tanks and cannot take the weight of an excavator or truck driving over the top. Any variation to these directions may void your warranty. If unsure please call the Eco-Septic head office.

ECO-SEPTIC

ELECTRICAL CIRCUIT DETAILS

All electrical work must be performed by a licensed electrical contractor in accordance with the S.A.A. wiring rules, (A.S 3000) and the relevant local supply authority's rules.



TROUBLE SHOOTING

The Ecosepic AWTS is supplied with a warning panel that alerts of malfunctions in its operations. The alarm panel must be left in the NORMAL position. Should the alarm be activated, switching to MUTE can turn off the buzzer. The alarm indicates high water level or loss of air. Each has a separate light, which will remain on until the fault has been rectified. It is most likely that the system will operate quite satisfactorily for several days even if a problem arises. However, if the warning is activated and none of the following solves the problem, please contact EcoSeptic as soon as possible.

PROBLEM	***WHAT TO DO***
Water Lights	Check the irrigations line and outlets are clear and not kinked or restricted. Clear filter (if fitted) Check power supply. Allow 30 Minutes for system to catch up after power interruption
Air Light On	Check power supply. Check that system is still making humming sound / blower working.
Offensive Smell	Check that smell is not coming from another source e.g., dry waste traps, damaged or low vents. Check aeration pump operation
Irrigation not working	Clear outlets & or filters (if fitter) Check irrigation Pipework for damage.

ALARM (Strobe on Tank)

ALARM (Optional panel in house)

Both alarms have 24-hour push button Mute facility

EQUIPMENT DESCRIPTION

The air blower is located under the cover on top of the tank. It provides fresh air to help the purifying microorganisms to carry out their job. The blower runs all the time. Although it is very quiet, a light humming noise can still be heard next to the blower.

Under the cover are the power sockets for the air blower and the submersible pump, as well as a two-pin socket for the high-level float switch.

An automatic submersible pump delivers the treated water to the irrigation system. It is located within the pump-out zone of the tank.

POWER

The power should be always left on. Even if you are going on holidays or vacating the premises. If you encounter a blackout or have to switch the power off for a short period of time, always check the blower is running again when the power is restored.
If the blower does not re-start, switch the power off again for 10 minutes before turning on again.

If the power is off for an extended period, say 8 hours, you should keep water usage to a minimum. You can still flush toilets and wash dishes but keep the shower short.
An alarm condition may occur after an extended blackout as the system may fill to high levels.
It should return to normal sometime after power is restored.
If the power is off for too long, the biological activity will die off and the system will need pump out.

DO'S AND DON'T'S

Do advise us if the system won't be used for more than a month and always leave a contact name.

Do use low / no-phosphorus or biodegradable products in their recommended quantities. Overuse is expensive and unnecessary.

Do endeavour to spread the washing loads over the week to obtain maximum efficiency.

Do contact your accredited service agent or BioCycle head office if your warning device is activated after referring to trouble shooting manual.

Do plant suitable flowers and shrubs in the irrigation / disposal area. (see page 13)

Don't turn power supple off. If a power failure occurs, limit your water usage until power returns.

Don't use or dispose of strong anti-bacterial products, insecticides, herbicides, pesticides or unused medicines into the system. These could damage the system or kill the bacteria that are required to purify the water and bad odours.

Don't dispose of disposable nappies, condoms, tampons, sanitary napkins, cotton buds, any plastics, papers, cooking oils or fatty wastes into your system.

Don't use any sanitizing agents other than those recommended by the manufacturer. Dangerous chemical reactions can occur.

Don't allow unauthorized persons to tamper with your system.

TECHNIAL PROCESS DESCRIPTION

The EcoSeptic Wastewater Unit works on the combined principles of primary settling plus aerobic and secondary treatment. The treatment process is followed by nutrient removal through the irrigation system.

All the wastewater flows first into the septic zone where solids are settled out and the anaerobic microorganisms carry out the initial part of the purification process.

Once organic impurities have been absorbed within the aerobic culture of the microorganisms, the water passes to the secondary sedimentation zones.

Clear water flows over into the clarification zone and the occasional film of microorganisms are automatically transferred back to the primary zone to improve its performance. In the disinfection zone, mild controlled chlorinating is applied to complete the treatment process. The treated water is automatically pumped onto areas of your lawn or garden.

EcoSeptic uses a special grade of chlorine-based compounds so that when pumped onto the garden, any residual chlorine breaks down rapidly and allows for excellent plant growth.

Treated water quality is better than standards set by relevant health authorities on wastewater re-use for irrigation purposes.

PRIMARY CHAMBER

Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This tank will also act as a Storage Chamber for sludge returned via the Clarification Chamber.

AERATION CHAMBER

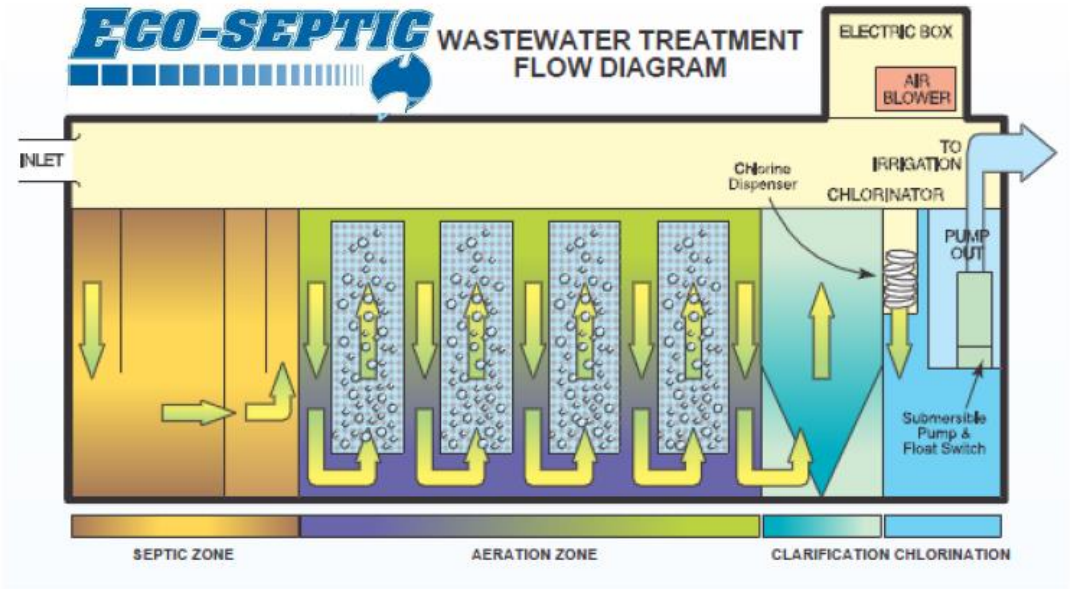
Water enters via the Primary Chamber. Air is introduced into this chamber via an air blower to create an environment for aerobic bacteria and other helpful organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended aeration. Media is also present in the tank to support the growth of bacteria.

CLARIFICATION CHAMBER

The Clarification Chamber is essentially a quiescent zone where suspended particles/solids are settled out of the water. These particles are returned to either the septic or aeration chambers via a sludge return which aids in further biological reduction, de-nitrification and providing a constant food supply rich in microbes supporting the system through periods of limited flows.

DISINFECTION

Disinfection is achieved via low doses of Chlorine to kill off any remaining harmful organisms. This process is achieved through an automatic chlorinator with sufficient doses to last between maintenance visits.



PUMP OUT (Septic Tank)

Depending on the individual usage of your septic system, a slow but gradual accumulation of non-biodegradable matter may lead to the need for pump-out.

This applies to any septic tank and our service technician will advise you if a pump out will be required.

EcoSeptic will be happy to advise and assist in this matter. Pump-out of the system is not a standard service procedure and incurs an additional cost.

PLEASE NOTE
NEVER ALLOW PUMP OUT IN WET WEATHER OR SOON AFTER DUE TO THE RISK OF TANK FLOATATION.

IRRIGATION AREA

Your irrigation / disposal area will operate more efficiently and have less wet areas if covered with vegetation. The following is a list of some of the plants and shrubs that are suitable for planting in wet conditions. Consults your local nursery for the particular species that will suit your area and soil conditions.

PERENNIALS
Agapanthas
Canna
Gazania
Umbrella Grass
Helleborus (Christmas rose)
Hosta (Plantain Lilly)
Shasta Daisy
Marguerite Daisy
Mazus

SHRUBS
Aucuba
Bauera
Callistemon
Bottlebrush
Coprosma
Cordyline
Flax
Strelitzia
Photinia
Viburnum

GROUND COVERS
Grevillea
Bougainvillea

GRASSES & CLIMBERS
Kikuyu
Buffalo
Kennedya
Hardenbergia

The treated effluent from domestic wastewater treatment systems should not be used for human consumption or to irrigate vegetables or fruit. The irrigation area should not be used for recreational purposes.

IRRIGATION AREA

Your irrigation / disposal area will operate more efficiently and have less wet areas if covered with vegetation. The following is a list of some of the plants and shrubs that are suitable for planting in wet conditions. Consults your local nursery for the particular species that will suit your area and soil conditions.

PERENNIALS
Agapanthas
Canna
Gazania
Umbrella Grass
Helleborus (Christmas rose)
Hosta (Plantain Lilly)
Shasta Daisy
Marguerite Daisy
Mazus

SHRUBS
Aucuba
Bauera
Callistemon
Bottlebrush
Coprosma
Cordyline
Flax
Strelitzia
Photinia
Viburnum

GROUND COVERS
Grevillea
Bougainvillea

GRASSES & CLIMBERS
Kikuyu
Buffalo
Kennedya
Hardenbergia

The treated effluent from domestic wastewater treatment systems should not be used for human consumption or to irrigate vegetables or fruit. The irrigation area should not be used for recreational purposes.

SERVICE & MAINTENANCE

It is a requirement of State and Local Government Authorities that the EcoSeptic domestic wastewater treatment system receive quarterly maintenance, by an authorised service contractor.

The owner or tenant of the property will be obliged to enter a service contract with EcoSeptic, your agent or another authorised service company.

During the initial service period and subsequent service contract, our service technician will perform the following and the company will forward a written service report to the household and the local council authority.

- Sample water through the system for quality testing
- Measure residual chlorine & replenish chlorine supply.
- Record water usage
- Inspect the septic tank.
- Inspect the pump & blower operations.
- Make any necessary adjustment, inspect the treatment tank including scum & sludge return, water & airflow.
- Inspect operations and conditions if irrigation system.
- Replenish the supply of disinfectant.

Warranty

ECO-SEPTIC

To certify that each and every Econocycle water treatment system is manufactured to strict guidelines and uses only quality components to ensure a product that is safe, reliable, effective and environmentally friendly.

Tanks *15 years* from date of purchase
Pump and Electrics *2 years* from date of purchase

Signed by

_____

Date of Purchase

_____

Econocycle guarantees to repair or replace

Signed by

_____

Date of Purchase

_____

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

CONTACT DETAILS

Office & Factory

65 Warradale Road,
Warragamba NSW 2752

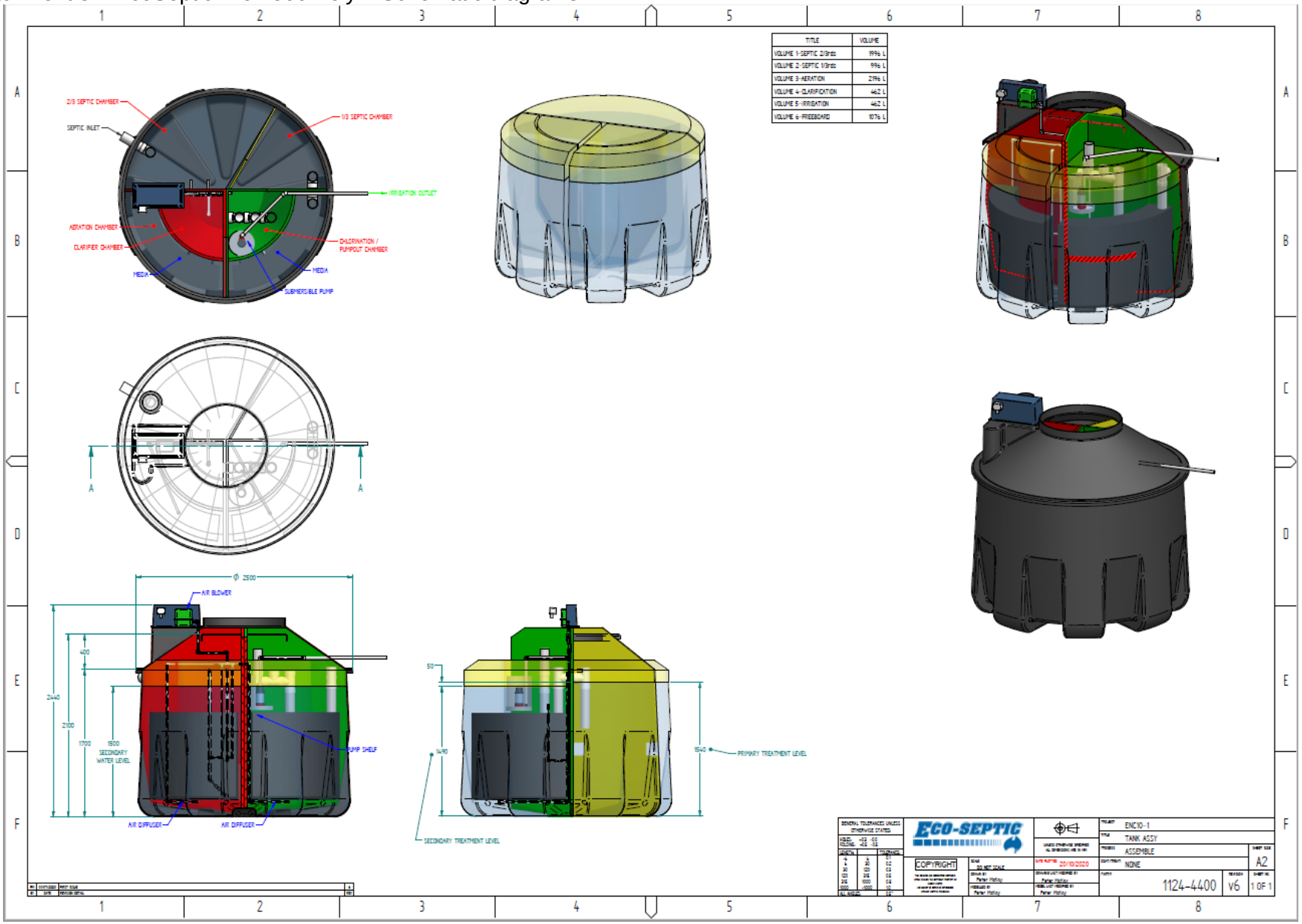
Phone: 1800 006 338

Email: sales@econocycle.com

mailto:sales@econocycle.com

www.ecoseptic.com.au

Attachment 3 – EcoSeptic Pro 1500 Poly – Schematic diagrams



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