TREATMENT PLANT APPROVAL 12/2023-1
Plumbing and Drainage Regulation 2019, part 4.

Approval

1. The **BioSeptic S-TEN NR** ("the System") described in the Specifications and Drawings in the attached Schedule and manufactured by **BioSeptic Pty Ltd** (ABN 95 056 461 226) ("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 system 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
*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

(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 69.41 mg/L to 52.78 mg/L which represents a **reduction of 23.96%.**
- Total P an average of 10.98 mg/L to 9.20 mg/L which represents a **reduction of 16.2%.**

7. Each system must be serviced in accordance with the accreditation certificate issued by Global Certification (certificate number 3563-2824-03) on 25 March 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 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.

TREATMENT PLANT APPROVAL 12/2023-1
Plumbing and Drainage Regulation 2019, part 4.

12. This approval expires on **20 April 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: 5 March 2024

TREATMENT PLANT APPROVAL 12/2023-1
Plumbing and Drainage Regulation 2019, part 4.

SCHEDULE

S-TEN NR

Attachment 1 – S-TEN NR – CAB Certificate number 3563-2824-03
Attachment 2 – S-TEN NR – Operators manual
Attachment 3 – S-TEN NR – Schematic diagrams

PRODUCT CERTIFICATE OF REGISTRATION

BioSeptic Pty Ltd

67 Smeaton Grange Road, Smeaton Grange, NSW 2567, Australia

Product Performance Testing

Advanced Secondary Quality at 1500 L/day (10EP level) with nutrient reduction in nitrogen (23.96%) and phosphorus (16.2%)

AS 1546.3:2017

Model	Disinfection	Average Results over the Test Period	Servicing Frequency	Discharge	Manufactured and assembled
BioSeptic S-TEN NR STS	Yes	TSS 3.54 mg/L BOD5 1.78 mg/L Nitrogen 52.7 mg/L Phosphorus 9.20 3mg/L E coli 1.75CFU/100mL	3 Monthly	Pumped via a disinfection/pump chamber with chlorine dispenser	Manufactured and Assembled: 49C Smeaton Grange Road, Smeaton Grange, NSW 2567, Australia
The system took 1 week to meet the advanced secondary standard. Chlorine was added during the test period for sterilisation.					

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:	DATE OF ISSUE:	EXPIRY DATE:	CERTIFICATE #:
18 March 2022	25 March 2022	18 March 2027	3563-2824-03

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

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

Attachment 2 – S-TEN NR – Operator's Manual

BIOSeptic

The Ultimate Sewage System

BIOSEPTIC S-TEN NR SINGLE TANK AWTS STS 2022

Owners Guide

67 Smeaton Grange Road, Smeaton Grange, NSW 2567

Service 02 4629 6633

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

Queensland Government

NOTICE OF **OCCUPANCY**

Name _____ Builder's Name _____

Moving-in date _____

House number _____ House name _____

Street name _____

Town _____

Postal address _____

Home tel _____ Mobile _____ Email _____

Council approval number _____ Date _____

We are required by Council to service your BioSeptic AWTS, and we need free access to carry out the service. If you own a dog that may pose a problem to our service personnel, please advise us so that suitable arrangements for access may be made.

Position of the alarm panel:

laundry ☐ kitchen ☐ garage ☐ other _____

Please nominate option 1 OR option 2 below

Option 1:

I hereby certify that free and clear access is available for the BioSeptic field staff to service my system.

_____ _____

Full Name Date

I enclose a gate key ☐ *(please tick if applicable)* Gate code provided _____

Option 2:

Due to the presence of *(please tick one or more of the following)*:

aggressive animals ☐ security system ☐ locked gates ☐

other _____ I require notification before each service visit.

☐ ***I also acknowledge that my annual service fee will increase by $20 to $370 after the initial free service period has expired.***

_____ _____

Full Name Date

Complete this Notice of Occupancy and submit to service@bioseptic.com.au SUBMIT

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

CONTENTS

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

AN INTRODUCTION TO THE BIOSEPTIC S-TEN NR

Congratulations on your purchase of a BioSeptic Aerated Wastewater Treatment System (AWTS) - the S-TEN NR.

This Owner's Guide explains how the system works and it will assist you in obtaining the best results from your BioSeptic AWTS. We urge you to read it and then keep it for future reference.

Your BioSeptic AWTS has been quietly operating from the day the power was switched on. Wastewater from your kitchen, bathroom, laundry and toilets is processed and recycled as clear, odourless water to irrigate your garden.

We ask you to complete and return the Notice of Occupation sheet in this folder as soon as possible or within six weeks after the system is first used. This will ensure we have your current details (such as the change from a lot number to a street number, your new contact telephone numbers, and preferred postal address) to arrange your subsequent quarterly service visits.

If you are at home when one of our service technicians arrives to service the system, he will be able to answer any questions you may have. If you are normally not at home during the day, please call the **Service Department on (02) 4629 6633** and they will be happy to answer any questions you may have.

If the alarm sounds, please refer to the Trouble Shooting section of this Owner's Guide for a few simple checks that you should make before calling the service number printed on the alarm plate. Always remember that the BioSeptic AWTS will not damage itself if it is still operating with the alarm on. Should the alarm sound, **DO NOT TURN OFF THE POWER** unless instructed by our Service Department.

We at BioSeptic like to make sure that our systems are working correctly and our customers are happy with their systems. Your BioSeptic AWTS will provide you with many years of reliable wastewater treatment. The BioSeptic team assures you that we will continue to give you the best possible service.

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Department of Energy & Public Works

THE BIOSEPTIC PROCESS

The BioSeptic AWTS is a compact sewage treatment plant that safely processes all household wastewater and recycles it as clear odourless water; to be disposed of in evapotranspiration beds (ETA beds), sub surface or surface irrigation.

For the environmentally responsible person this means that the waste is treated and disposed of on the property where it is produced rather than moving the waste problem to another location, such as a town sewage treatment plant.

The BioSeptic process begins when all household wastewater from the kitchen, toilets, bathroom and laundry flows into the tank. The solid waste settles in the primary chambers, where naturally occurring anaerobic bacteria slowly break it down.

The settled wastewater overflows by gravity into the aeration chambers where air is diffused into the two separate aeration chambers to create aerobic bacteria. These quick acting bacteria reduce the organic matter to carbon dioxide and water. Because aerobic bacteria breathe oxygen, there is little odour.

The two self-contained aeration chambers are in series to provide a positive surge control to slow down and ensure correct treatment of high wastewater flows from baths or washing machines.

After aeration the wastewater displaces to the clarifier where any remaining sediment settles out of the water to be recycled to the primary tank. A skimmer keeps the surface of the clarifier moving to prevent mosquitoes breeding.

In the final process the wastewater passes into the chlorine contact chamber/pump chamber, where a small amount of chlorine kills any remaining pathogens. The treated wastewater still retains some nutrients and can now be safely used to irrigate the garden. Plants are nature's best method to take up the nutrients that must be prevented from flowing into streams and rivers. It is important to have plenty of trees and shrubs to use up the treated wastewater.

BioSeptic owners are able to enjoy a beautiful garden that is kept green and fertile throughout the year at no extra cost. They are able to enjoy the beneficial reuse of a valuable resource rather than having to deal with an unpleasant problem.

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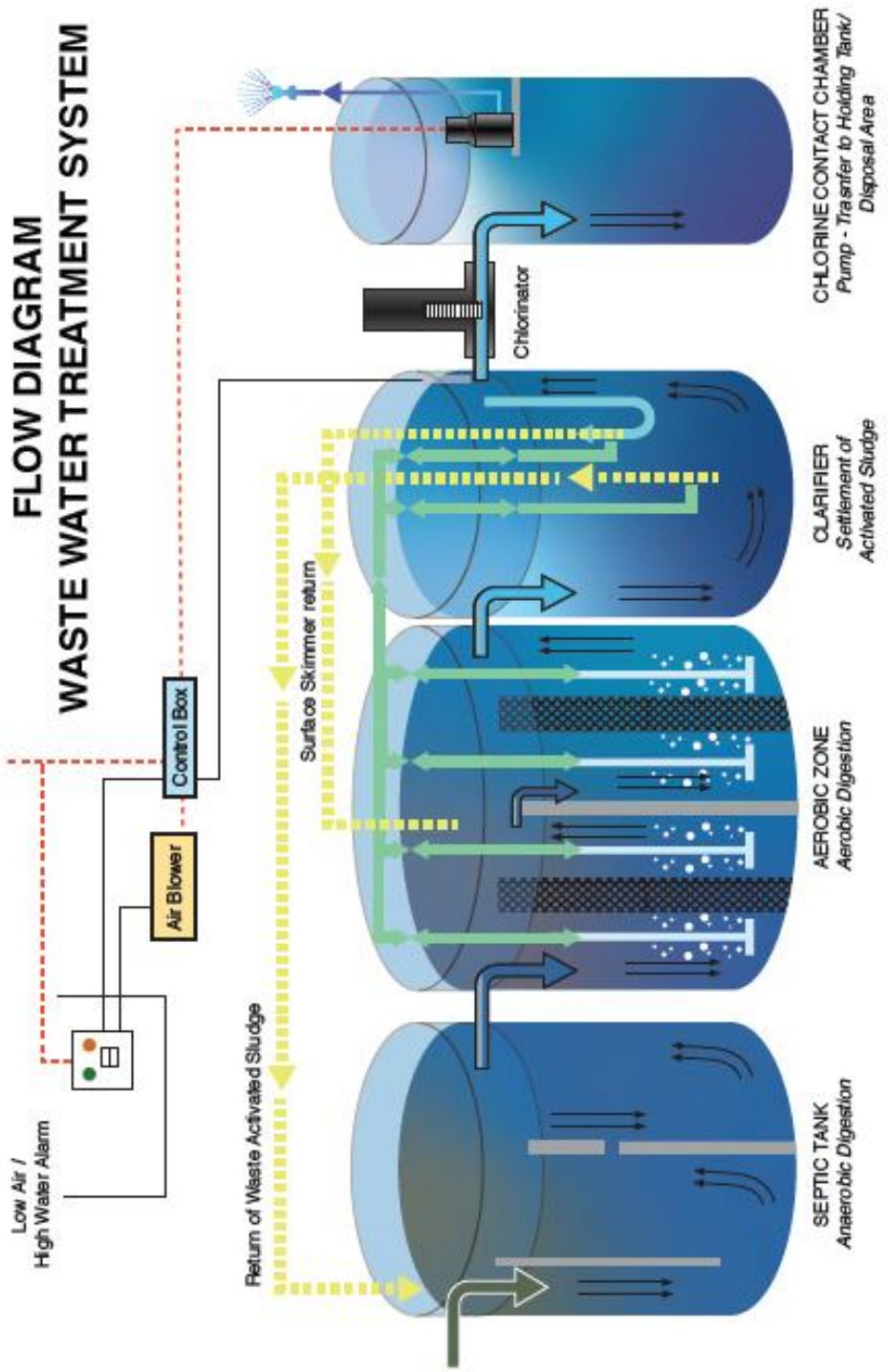
BIOSeptic
The Ultimate Sewage System

FLOW DIAGRAM
WASTE WATER TREATMENT SYSTEM



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Department of Energy & Public Works
Queensland Government

SYSTEM REQUIREMENTS

- **DO** ensure you install a 3/6 litre dual flush cistern.
- **DO** install AAA rated (or better) water fittings in your dwelling. Conserve water in the home to avoid overloading your AWTS.
- **DO** leave electrical power to the BioSeptic on at all times, even when you are away on holiday.
- **DO** check that the AIR BLOWER is running when the power supply is restored after it has been necessary to temporarily disconnect the power supply.
- **DO** endeavour to restrict or reduce water usage as much as possible during periods of extended power interruption.
- **DO** use only BIODEGRADABLE DETERGENTS that are labeled safe for use with septic tanks.
- **DO** use only toilet paper, as other types of paper do not degrade as readily—newsprint may have an adverse effect on the bacterial growth.
- **DO** use a sink strainer in the kitchen to avoid unnecessary solids entering the system.

- **DO NOT** install or use an IN-SINK GARBAGE GRINDER as this will impose a heavy organic and hydraulic load on the system, for which it has not been designed.
- **DO NOT** dispose of newspaper, disposable nappies, sanitary napkins, tampons, condoms, cotton buds etc in the BioSeptic AWTS—they may cause blockages in the sewer pipes. They also contain inorganic material, which will not degrade in the septic tank.
- **DO NOT** use strong caustics, acids, alkalies or detergents in your BioSeptic AWTS—they will kill bacterial organisms that break down the household wastes. Their use would result in strong offensive odours from the BioSeptic AWTS and the production of an effluent that would constitute a serious health hazard.
- **DO NOT** dispose of bleaches or products such as Domestos or NapiSan into the BioSeptic AWTS.
- **DO NOT** dispose of grease, fats, cooking oils or food scraps down the kitchen sink.
- **DO NOT** discard pesticides, herbicides, or unused medications especially antibiotics into the system. Such chemicals will kill beneficial bacteria, affecting the treatment process.
- **DO NOT** use cleaning materials or deodorisers/ fresheners that are normally suspended in the toilet bowl or cistern unless they are labeled septic safe.
- **DO NOT** leave your washing to be done on one day, as this practice will impose a high hydraulic load on the system and the irrigation area. If possible, limit the wash to one or two loads per day, spread over several days.
- **DO NOT** switch the power off to the system even while on holidays.
- **DO NOT** attempt to self-service your AWTS.

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Queensland Government

HANDY HINTS

To ensure you get the Best Results from your BioSeptic AWTS . . .

Use only biodegradable and septic-safe products.

When shopping for various cleaners, detergents, toilet paper etc, check the labels to determine their safety to BioSeptic AWTSs - using septic-safe products will make your BioSeptic operate most efficiently.

BioSeptic does not endorse the particular products and product manufacturers mentioned in these pages However to the best of our knowledge they are suitable for use with a BioSeptic AWTS.

The following website has information on other laundry products which may be useful - www.lanfaxlabs.com.au

Kitchen

• Sunlight	• Palmolive	• Kwitcare
• Kit	• Trix	• Topwash
• Green Apple	• Bushland	• Adds

Most dishwashing detergents are strongly alkaline and should be used in moderation, especially *Finish*.

Bathroom and Toilet

• Pine-O-Clean	• Toilet Duck	• Similar products

These products can be used in **very small** quantities, but care should be taken.

To clean the bath, *Ajax* or a *similar product* may be used in **small** quantities. *Spray and Wipe* may also be used for this purpose.

Laundry

• Care	• Lux	• Cuddly
• Top Wash	• Blue Sno	• Embassy
• Surf	• Sunlight	• Rinso
• Castle	• More	• Dynamo
• Softly	• Fab	• Fluffy
• Omo	• Purlite	• Hurricane
• Spree	• Love & Care	• Cold Power
• Woolmix	• Gow	• Ease

Use only gentle, biodegradable products.

Most *Amway* products are safe to use, **with the exception of**:

- *Dry chlorine bleach*
- *Persue Disinfectant*
- *Liquid Fabric Softener*
- *SA8 Liquid with Fabric Softener*

Nappies	**Do not use NapiSan or similar products**, as antibacterial solutions will kill the bacteria required to make the BioSeptic work. If nappies must be soaked, make sure the wash water does not enter the system.
Bleach	Do not use bleach unless the water can be disposed of without entering the system.
Wash Days	Avoid large washes where possible. Ideally you should do 1-2 loads per day over several days—this reduces the hydraulic shock loading on the system.

With all cleaning— Do Not Use an Excess of Cleaners or Detergents

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Delegated Authority
Department of Energy & Public Works

PLEASE!

ONLY THROW

TOILET PAPER

IN THE TOILET

EVERYTHING ELSE IN THE BIN

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Queensland Government

Please!
DO NOT Flush

Even though a product may be small enough to be flushed, **does not** mean it should be. Flushing items that are not meant to be flushed, including those labeled ***flushable***, can lead to problems in the your BioSeptic treatment system.

Sanitary Wipes

Feminine Hygiene Products

Metals & Pastics

Chemicals

Medications & Supplements

Fats, Oils & Grease

Rubbish

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Queensland Government

MAINTENANCE

Your BioSeptic AWTS is a compact sewage treatment plant that supports a biological process, and as such requires regular servicing and maintenance. A municipal sewage treatment plant is maintained on a daily basis - this is not necessary for your BioSeptic AWTS. When properly installed and maintained, a BioSeptic AWTS has a high level of performance and reliability.

After the local council approved the installation of your BioSeptic AWTS a Licence to Operate a Sewage Management Facility (the BioSeptic AWTS) should have been issued.

The Licence to Operate requires that the BioSeptic AWTS is serviced every three months. A condition of the Licence is that you have an annual service agreement with either BioSeptic Pty Limited, your local agent or another service provider authorised by your local council.

After each service a copy of the service report will be left in your letterbox and a copy will be sent to the council.

After the fourth quarterly service has been completed a renewal invoice will be posted for the next year's service. Payment can be made by cheque, credit card or Bpay. Direct deposit from your bank is also available provided you quote your BioSeptic site ID number. Without this number, no credits can be allocated to your site. If you do not have your site ID number, our office staff will be able to provide it.

The service telephone number is printed on the alarm panel. We recommend that you call between 8:00am and 4.00pm and your call will be answered by our Service Department.

WATER QUALITY

The treated wastewater from your BioSeptic AWTS is of a very high quality. It should be colourless and free from visible solids and objectionable odours. The quarterly servicing also maintains the chlorine supply in your BioSeptic so that there should be no harmful bacteria in the treated wastewater. Regular servicing will ensure that the wastewater is safe for disposal in the approved land application area.

Wastewater discharge quality

Your BioSeptic system has undergone an extensive 34 week test at an approved test plant and has been accredited as an Advanced Secondary sewage treatment system.

The treated water quality was:

Biochemical Oxygen Demand (BOD5)....<10mg/l

Suspended solids ..... <10mg/l

Faecal coliform ..... <10cfu/100ml

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Delegated Authority
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Queensland Government

MAINTAINING YOUR LAND APPLICATION AREA

The land application area will have been approved and inspected by an officer from the council after the completion of the BioSeptic installation. Although it will be inspected and its condition reported by our service technician at each service visit, its upkeep and maintenance are your responsibility.

Reading and implementing the following maintenance programme will ensure that you achieve the full benefit of owning and using a BioSeptic AWTS and that the land application area is effective for a long period of time.

Homeowner maintenance requirements

Ensure the effluent warning signs are clearly visible by maintaining your land application area free from weeds and debris.

Regular visual checking of your BioSeptic AWTS's exterior and irrigation system will ensure that problems are located and fixed early.

The visual signs of the land application area failing are:

- surface ponding or run-off of treated wastewater
- soil quality deterioration
- poor vegetation growth
- unusual odours

Volume of water

Land application areas and systems for onsite application are designed and constructed in anticipation of the volume of waste to be discharged. Uncontrolled use of water may lead to poorly treated effluent being released from the system.

If the land application area is waterlogged and soggy, the following are possible causes:

- overloading your treatment system with excessive wastewater
- your land application area has been poorly designed
- stormwater is running onto the area

Help protect your health and the environment

Poorly maintained land application areas are a serious source of water pollution and may present health risks, cause odours and attract vermin and insects.

By looking after your sewage management system, you can do your part in helping to protect the environment and the health of you and your family

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Delegated Authority
Department of Energy & Public Works

MAINTAINING YOUR LAND APPLICATION AREA

- **DO** construct and maintain diversion drains around the top sides of your land application area to divert surface water.
- **DO** ensure that your land application area is kept level by filling any depressions with good quality top soil (not clay).
- **DO** keep the grass regularly mowed and plant small trees around the perimeter to aid absorption and transpiration of the treated wastewater.
- **DO** visually check your irrigation system regularly to ensure the sprays are operating and free from blockages.
- **DO** ensure that any stormwater run-off from the roof, driveway and other impermeable surfaces is directed away from your land application area.
- **DO** ensure appropriate Warning signs are visible at all times in the vicinity of a spray irrigation area.
- **DO** maintain your disposal area. Do not alter it without the approval of your local council.
- **DO** periodically check the sprinklers, and remove sprinkler heads to check inside for possible blockages. It may be necessary to wash the sprinkler heads in a bucket of warm soapy water to remove small particles and grit.
- **DO** regularly move the location of surface spray irrigation systems around the designated irrigation areas, to avoid over saturation of the soil.
- **DO** ensure that the irrigation lines are not kinked or flattened (do not drive over the irrigation lines).
- **DO** keep irrigation lines pointing downhill (if possible) in frosty conditions to avoid water freezing in the lines.
- **DO** ensure subsurface irrigation systems are cycled to distribute wastewater evenly to all areas, and filters are kept clean.

- **DO NOT** erect any structures, construct paths, graze animals or drive over your land application area.
- **DO NOT** plant large trees or shrubs that shade your land application area, as the area needs sunlight to aid in the evaporation and transpiration of the treated wastewater.
- **DO NOT** plant trees or shrubs near or on house drains.
- **DO NOT** allow stormwater lines to discharge into or near your land application area.
- **DO NOT** irrigate edible fruit or vegetables with wastewater from the system.
- **DO NOT** extract treated wastewater for potable (drinkable) use.
- **DO NOT** flood your land application area through the use of hoses or sprinklers from potable water sources.
- **DO NOT** intentionally divert wastewater off your property into water bodies, street gutters or the stormwater system.
- **DO NOT** irrigate wastewater onto hard surfaces such as concrete or paving etc.
- **DO NOT** let children or pets come into contact with treated effluent water from the system.

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Department of Energy & Public Works

MAINTAINING YOUR LAND APPLICATION AREA

SOME PLANTS SUITABLE FOR USE ON IRRIGATION DISPOSAL AREAS

Botanical Name	Common Name	Approx Height
TREES		
Agonis flexuosa	Willow Myrtle	5-6m
Acacia baileyana	Cootamundra Wattle	3-5m
Banksia spp.		
Casuarina glauca	Swamp Oak	6-12m
Casuarina stricta	Drooping Sheoake	3-5m
Casuarina cunninghamiana	River Sheoake	6-10m
Callistemon viminalis	Red Bottlebrush	3-6m
Callistemon salignus	White Bottlebrush	3-6m
Eucalyptus grandis	Flooded Gum	10-15m
Eucalyptus camaldulenisis	River Red Gum	15-20m
Eucalyptus cosmophylla	Cup Gum	5-6m
Hakea spp.		
Hymenosporum flavem	Native Frangipani	3-6m
Leptosporum laevigatum	Coast Tea Tree	5-6m
Melaleuca armillaris	Bracelet Honey Myrtle	3-4m
Melaleuca quinquenervia	Broad Paperbark	5-7m
Melaleuca nesphila	Western Tea Myrtle	2-4m
Syzgium paniculatum	Bush Cherry	8-10m
Tristania laurina	Kanuka	3-5m
SHRUBS		
Abelia x grandiflora	Abelia	2-3m
Acacia floribunda	Gossamer Wattle	2-4m
Acacia longifolia	Sallow Wattle	2-4m
Acacia iteaphylla		
Cotoneaster spp.		
Cortaderia selloana	Pampas Grass	2-3m
Cyperus alternifolius	Umbrella Grass	0.5-1m
Cyperus papyrus	Papyrus	
Chamelaucium uncinatum	Geraldton Wax	2-4m
Hebe spp.	Veronia	0.5-1m
Iris pseudacorus	Yellow Flag Iris	0.5-1m
Nerium oleander	Oleander	2-3m
Melaleuca decussata	Cross Leaved Honey Myrtle	1-2m
Phormium tenax	New Zealand Flax	2-2.5m

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MAINTAINING YOUR LAND APPLICATION AREA

SOME PLANTS SUITABLE FOR USE ON IRRIGATION DISPOSAL AREAS

Botanical Name	Common Name
CLIMBERS	
Bougainvillea spp.	
Hardenbergia violacea	Purple Coral Pea
Hibbertia scandens	Snake Vine
Jasminum officinate	Common Jasmine
Kennedia rubicunda	Dusky Coral Pea
Lonicera japonica	Japanese Honeysuckle
Passiflora spp.	Passion Flower
Vitis coignetiae	Glory Vine
PERENNIALS	
Aster novi-belgii	Perennial Aster
Canna	Gossamer Wattle
Chrysanthemum frutescens	Marguerite Daisy
Chrysanthemumm maximum	Shasta Daisy
Gazania ringens	Blacked Eyed Susan
Salvia uliginosa	Bog Salvia

This list is intended only as a guide to provide a small selection of trees, shrubs and other plants that may be considered suitable for irrigation disposal areas. However, because of wide climatic and soil variations, it is essential that further investigations be made with your local plant nursery before finalising your plant choice to suit your particular locality and site conditions.

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Department of Energy & Public Works

COMPLIMENTARY SERVICING

Your local council requires that your BioSeptic AWTS is correctly serviced every three months.

The first 4 service calls are complimentary and will be performed after BioSeptic Pty Limited (BioSeptic) receives all monies set out in the Sales Agreement. Thereafter, BioSeptic will send an annual invoice for the next year's service. Having your BioSeptic AWTS serviced by BioSeptic, the manufacturer, means that you know it will be serviced correctly and we will only fit replacement original equipment, not after market components.

IT IS IMPORTANT THAT YOU SEND THE NOTICE OF OCCUPANCY FOUND AT THE BEGINNING OF THIS OWNER'S GUIDE.

We will begin the four complimentary services from the date of occupancy. The first service will be approximately three months after the house is occupied.

We at BioSeptic are committed to maintaining our good name and excellent service record, and we will ensure that your BioSeptic AWTS is correctly and efficiently operating after every service.

The following items will be checked at each 3-monthly service:

- the efficiency of the chlorinator
- the chlorine tablets - replenishing as required
- the irrigation pump
- the operation of the blower (including cleaning the blower filter)
- the efficiency of the sludge and skimmer return system
- the condition of all pipes and hoses
- the efficiency of the irrigation sprays

The following items will be tested at each 3-monthly service:

- the high level water alarm
- the low air alarm
- the clarity of the water
- the free residual chlorine level

The following annual check/test will be performed:

- observation of sludge accumulation in the septic tank

SERVICING YOUR BIOSEPTIC

Each quarterly service shall include a check on all mechanical, electrical and functioning parts of the BioSeptic AWTS, including:

- the chlorinator
- replenishment of the chlorine
- the pump
- the air blower
- the alarm system
- the effluent disposal area, including the spray irrigation outlets
- sludge accumulation in the septic tank (primary treatment tank), the aeration chambers and the clarifier
- the operation of the sludge and skimmer return system
- a field test carried out by the service contractor to measure - free residual chlorine

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COMPLIMENTARY SERVICING

Your local council requires that your BioSeptic AWTS is correctly serviced every three months.

The first 4 service calls are complimentary and will be performed after BioSeptic Pty Limited (BioSeptic) receives all monies set out in the Sales Agreement. Thereafter, BioSeptic will send an annual invoice for the next year's service. Having your BioSeptic AWTS serviced by BioSeptic, the manufacturer, means that you know it will be serviced correctly and we will only fit replacement original equipment, not after market components.

IT IS IMPORTANT THAT YOU SEND THE NOTICE OF OCCUPANCY FOUND AT THE BEGINNING OF THIS OWNER'S GUIDE.

We will begin the four complimentary services from the date of occupancy. The first service will be approximately three months after the house is occupied.

We at BioSeptic are committed to maintaining our good name and excellent service record, and we will ensure that your BioSeptic AWTS is correctly and efficiently operating after every service.

The following items will be checked at each 3-monthly service:

- the efficiency of the chlorinator
- the chlorine tablets - replenishing as required
- the irrigation pump
- the operation of the blower (including cleaning the blower filter)
- the efficiency of the sludge and skimmer return system
- the condition of all pipes and hoses
- the efficiency of the irrigation sprays

The following items will be tested at each 3-monthly service:

- the high level water alarm
- the low air alarm
- the clarity of the water
- the free residual chlorine level

The following annual check/test will be performed:

- observation of sludge accumulation in the septic tank

SERVICING YOUR BIOSEPTIC

Each quarterly service shall include a check on all mechanical, electrical and functioning parts of the BioSeptic AWTS, including:

- the chlorinator
- replenishment of the chlorine
- the pump
- the air blower
- the alarm system
- the effluent disposal area, including the spray irrigation outlets
- sludge accumulation in the septic tank (primary treatment tank), the aeration chambers and the clarifier
- the operation of the sludge and skimmer return system
- a field test carried out by the service contractor to measure - free residual chlorine

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Delegated Authority
Department of Energy & Public Works
Queensland Government

WARRANTY

All mechanical and electrical components have a 1 year warranty covering parts and labour. This is extended to 2 years if a service agreement is maintained with BioSeptic Pty Limited.

If the BioSeptic system has been purchased from a BioSeptic agent any additional warranty is offered under the same conditions by the BioSeptic agent.

Warranty is conditional upon a continuous Service Agreement being maintained with BioSeptic Pty Ltd.

However, this warranty excludes failure caused by negligence, abuse, natural damage such as flooding and lightning strike, subsidence, incorrect installation, ie any cause that could be considered not to be warrantable under the laws of New South Wales.

BioSeptic S-TEN NR Warranty

The BioSeptic AWTS has normal Statutory warranties as noted before, however while the AWTS is being serviced by BioSeptic the following additional warranties are applicable:

1. Concrete tank and structural components - up to 15 years.
2. Internal pipe work - up to 5 years.
3. Standard irrigation system (above ground poly pipe and sprays)- up to 2 years.
4. Irrigation pump - up to 2 years from the date the tank was delivered
5. Air blower - up to 2 years from the date the tank was delivered. system delivery date

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S-TEN NR CONTROL BOX INSTALLATION INFORMATION
MODEL AS-BS001/2

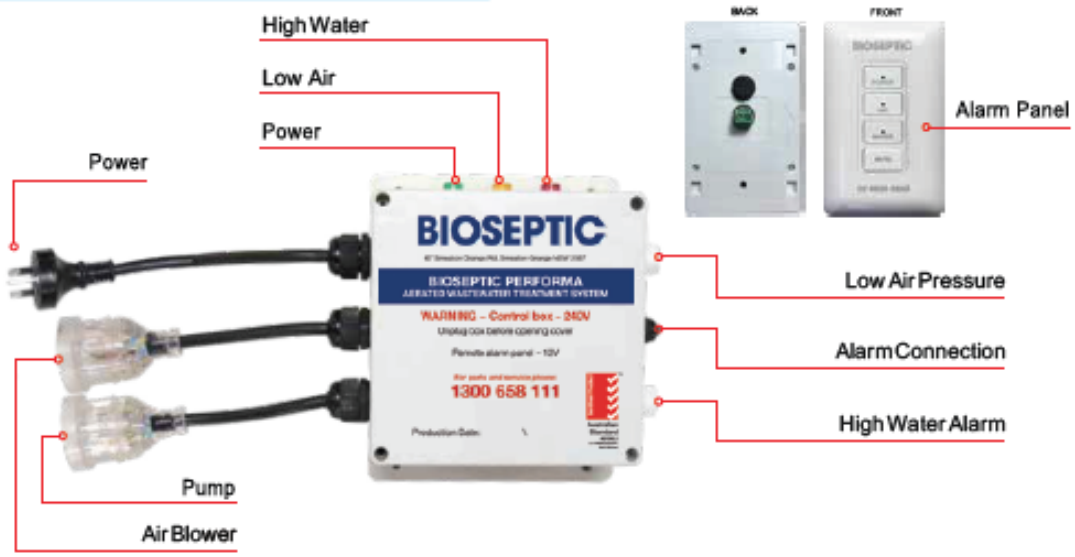
HOUSEHOLDER OVERVIEW

This operation and installation information should be provided by the purchaser to the builder and electrician, so that the control box and alarm panel can be correctly connected by the electrician. It can be downloaded from www.bioseptic.com.au/electrical connections. The electrician is provided by the purchaser.

NOTE
BioSeptic does not undertake any electrical work.

The BioSeptic control box is factory fitted inside the grey box on top of the treatment tank. Also inside the grey box is the 12v alarm panel that is to be installed by the client's electrician in the client's nominated position. Only the electrician needs to open the control box to connect the two alarm wires. It must be unplugged from the power point before being opened.

There are no owner serviceable components inside the box, and it is best left intact and only opened by the electrician.



DISPLAY LIGHTS

Control Box	Alarm Panel	Condition	Possible fault condition
Green	Green	Power is on	
Yellow	Yellow	Low air pressure	a) the air tube may be disconnected, b) the blower is not working or c) there may be a broken pipe inside the tank
Red	Red	High water level	a) If power has only recently been turned on the tank may be overfull. The pump (if installed) will pump the level down. Make sure the irrigation pipe is connected and not blocked. b) The pump is not working
	Mute button		Pressing the mute button for *2 seconds* silences the audio alarm – it will re alarm in 24 hours if the fault is still present. Quickly tapping the mute button will not silence the alarm

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ELECTRICIAN'S INFORMATION

ELECTRICAL SUPPLY

Supply and install a 10 amp ***waterproof*** socket in the position shown ***inside*** the grey box on top of the tank.

- Provide a 240vac 10 amp dedicated circuit to the waterproof socket.
- Provide 2 x 1.00mm cables between the alarm panel and the control box in a separate conduit.

ALARM PANEL

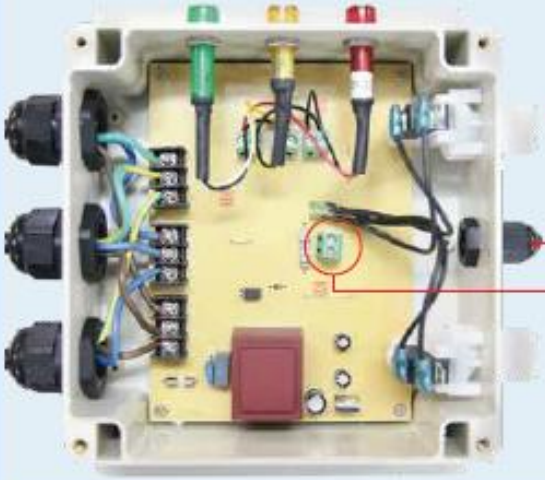
Install the alarm panel in the client's preferred location, usually inside the house

- Install in a clearly visible and audible position
- Do ***not*** install near bedrooms
- Connect the two alarm wires to the terminal block. They are not polarity sensitive

To mount the alarm:

Insert a screwdriver in the slots at the top or bottom of the faceplate to remove the faceplate.

CONTROL BOX CONNECTIONS



If the audio alarm is active press the mute button for ***two seconds*** to silence the audio alarm. Tapping the button will not mute the alarm. The alarm light will still be displayed.

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TROUBLE SHOOTING

Your BioSeptic Aerated Wastewater Treatment System is designed to operate quietly and efficiently, and requires only a 3-monthly service to provide you with the best possible onsite effluent disposal system.

Check Power Source

If the green light on the alarm panel is not illuminated check if the green light is illuminated on the control box located inside the cover box on top of the treatment tank. If the control box green light is illuminated and the panel light is not then there is a fault in the panel or the connecting wire is broken. The supply from the control box to the alarm panel is 12volts.

If the control box green light is not illuminated, nothing should be operating. Check the circuit breaker in the power box. If it is turned off, try and re set it once or twice. If it does not re set call an electrician. BioSeptic cannot undertake any licensed electrical work.

Otherwise, if all appears to be in order, telephone our Service Department on 4629 6633 (the number is located on the alarm panel).

In both circumstances reduce the water flowing into the system by restricting baths, limiting laundry and dishwasher use, etc until the fault has been rectified.

DISPLAY LIGHTS

Control Box	Alarm Panel	Condition	Possible fault condition
Green	Green	Power is on	
Yellow	Yellow	Low air pressure	a) the air tube may be disconnected, b) the blower is not working or c) there may be a broken pipe inside the tank
Red	Red	High water level	a) If power has only recently been turned on the tanks may be overfull. The pump (if installed) will pump the level down. Make sure the irrigation pipe is connected and not blocked. b) The pump is not working
	Mute button		Pressing the mute button for *2 seconds* silences the audio alarm – it will re alarm in 24 hours if the fault is still present. Quickly tapping the mute button will not silence the alarm

Remember—the alarm is designed to come on early, so don't panic.

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BIOSeptic
The Ultimate Sewage System

SERVICE SHEET

Date: .....

Tech: .....

Customer: ..... Site ID #: .....

Address: ..... Suburb/Town: .....

Chlorine mg/L ☐ Tablets Remaining ☐ Tablets Added ☐

Clarity ☐ *mm* Total Tablets ☐

	Working	Not working	Not Applicable
Irrigation Pump:	☐	☐	☐ .....
Air Blower:	☐	☐	☐ .....
Recirculation Pump:	☐	☐	☐ .....
	Cleaned	**Changed**	
Blower Filter:	☐	☐	
Transfer Cap:	☐	☐	

Alarms Operation:	**Visual**			**Audio**	
	Yes	No	Unable to check	Yes	No
Pump Alarm	☐	☐	☐	☐	☐ .....
Blower Alarm	☐	☐	☐	☐	☐ .....

Sludge Build-up:	*Satisfactory*	*Unsatisfactory*
in Septic Tank	☐	☐ .....
in Aeration Chambers	☐	☐ .....
in Clarification Chamber	☐	☐ .....

Outlet Filter: Present ☐ Cleaned ☐

Sludge Return Operation:	Checked ☐	Adj ☐ .....
Skimmer Operation:	Checked ☐	Adj ☐ .....
Pump Out Required	Yes ☐	No ☐ .....
Scum Depth	OK ☐	Not OK ☐ .....

Irrigation Area: Area satisfactory ☐ Area Requires Attention ☐

..... Number of sprays .....

Blower Make: ..... **Model:** ..... **Serial No.:** .....

Operation: Fair ☐ OK ☐ Good ☐ **Odour:** Nil ☐ Slight ☐ Strong ☐

Comments .....

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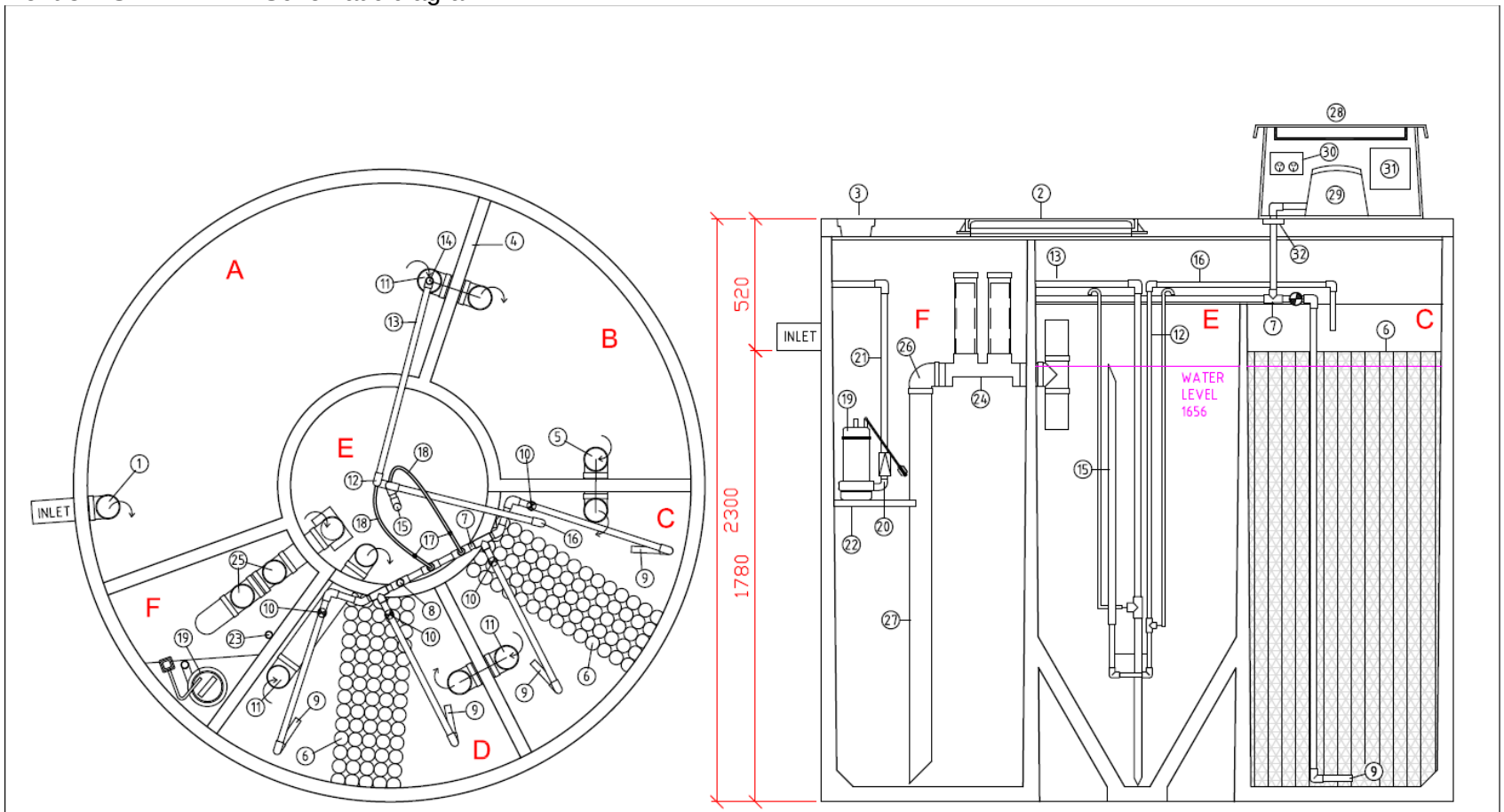
Attachment 3 – S-TEN NR – Schematic diagram



ISSUE	DATE	AMENDMENTS
A	28.03.22	ORIGINAL ISSUE

BIOSEPTIC S-TEN NR AWTS STS

DRAWN	O.Rios	APPROVED BY	DATE:
APPROVED	B.Martin		
ISSUED	28.03.22	NAME:	
RECORD OF ISSUE			
A			
SHEET 1 OF 1		SIGNATURE	

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BIO septic SEWAGE SYSTEMS

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BioSeptic model **S-TEN NR STS-AWTS** specification sheet February 2022			
Capacities determined from drawing D21004-TD-001_D by G F Murphy B.E. (Civil), RPEQ 7141			
		Litres	
A	Septic chamber 1	2289	
B	Septic chamber 2	1150	Septic chamber ratio (2289/1150) = 2:1
C	Aeration chamber 1	1244	
D	Aeration chamber 2	1244	
E	Clarifier	623	Surface area - 0.5m2
F	Pump chamber	477	
	Total working capacity	**7027**	
	Surcharge capacity >	2311	Surcharge capacity >1000L
	Total tank capacity	9338	

No	Description	Quantity	Material	Specification
1	Inlet square	1	PVC	100mm per manufacturer's spec.
2	Access cover	3	Composite resin	610mm diameter
3	Inspection opening	3	Concrete	150mm min diameter
4	Chamber walls	6	Concrete	Reinforced concrete
5	Outlet square with filter	1	Stainless steel	700 x 96 dia with 5mm holes
6	Bacterial support media	138m^3	Polypropylene	Surface area 200m2/m3
	Media dimensions			1.71 x .770 x .275 x 2 chambers
7	Air manifold	1	PVC	20mm pressure pipe Sche 40
8	Air inlet	1	PVC	20mm pressure pipe Sche 40
9	Air diffuser	4	Polyethylene	20mm diameter
10	Ball valve	4	PVC	20mm
11	Transfer square	2	PVC	100mm per manufacturer's spec.
12	Sludge return - airlift	1	PVC	25mm pressure pipe
13	Sludge discharge pipe	1	PVC	25mm pressure pipe
14	S R outlet square	1	PVC	25mm pressure pipe
15	Skimmer airlift inlet	1	PVC	25mm pressure pipe
16	Skimmer discharge pipe	1	PVC	20mm pressure pipe Sche 40
17	Air valve	2	PVC	13mm bore
18	Air line	2	Polyethylene	13mm low density pipe
19	Water pump	1	CI/SS	>.25Kw
20	Non return valve	1	PVC	25mm bore
21	Pump discharge pipe	1	PVC	25m pressure pipe
22	Pump shelf	1	Concrete	>20mm thick
23	High water sensor	1	PVC + PE	20mm pipe Sch 40 + 4mm PE tube
24	Chlorinator	1	PVC	Moulded one piece PVC
25	Chlorine canister	2	PVC	90mm stormwater pipe
26	Elbow	1	PVC	90mm stormwater pipe
27	Chlorinator outlet pipe	1	PVC	90mm stormwater pipe
28	Cover box	1	Composite resin	As per BioSeptic drawing Nov 11
29	Air blower	1		Nominal 80 litre/minute
30	Weather proof GPO	1	PVC	Proprietary brand
31	Control box	1	PVC	As per BioSeptic design
32	Sealing plate	1	PVC	90mm stormwater cap

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