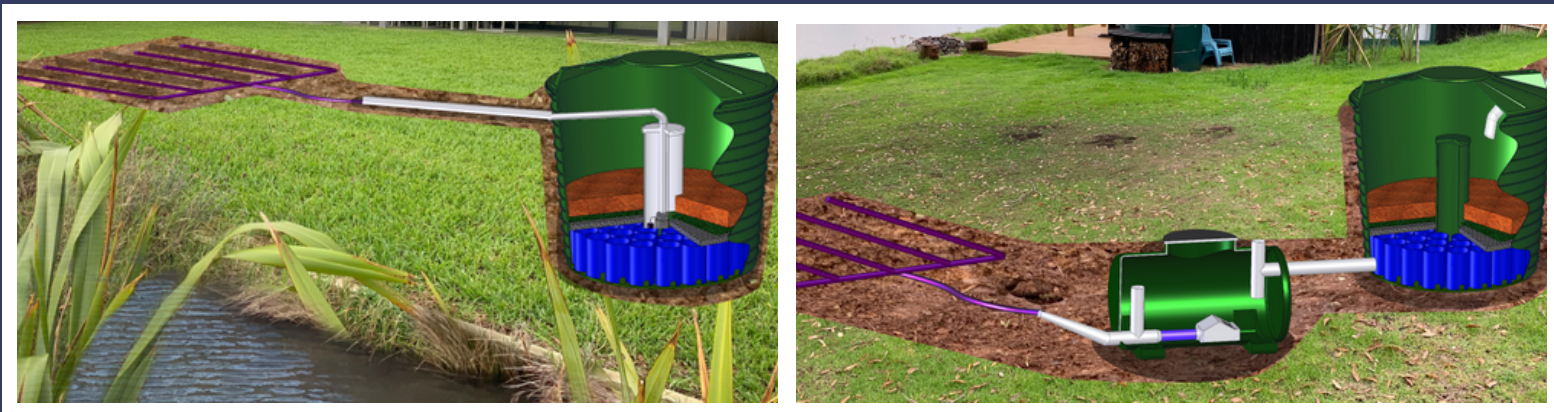




WORMSMART PRIMARY TECHNICAL SPECIFICATIONS

FOR PASSIVE & PUMPED SYSTEMS



ECO-FRIENDLY
CHEMICAL-FREE

LOW ONGOING COSTS
ROBUST & RELIABLE

HOW IT WORKS

The Wormsmart Primary is a package wastewater treatment suitable for homes with up to 6 bedrooms with a design flow of up to 1,800 litres per day. The plant comprises a single pipe which connects to a 3000L polypropylene tank where wastewater is filtered and worms and bacteria break down waste into organic humus.

It is available as a passive system (if the site is sufficiently sloping and suitably laid out that gravity alone can dose the discharge system) and as a pumped system.

It is an eco-friendly option for the treatment of onsite wastewater and comprises three stages:

1

Wastewater enters the system

All greywater and blackwater from the property is plumbed into the tank through one wastewater pipe. There's no need to separate them (unlike other systems).

2

Nature does its work

Wastewater filters through the bed leaving the solids behind. The solids are then broken down by worms who turn it into an organic humus. Aerobic bacteria then feed on the humus breaking it down further.

3

Water is recycled

A flout™ (floating outlet) for passive systems or a lightweight, low energy-use sump pump, for pumped systems, sends the treated water through a low-pressure effluent distribution (LPED) system to the discharge field. The water that leaves the system is relatively colourless and odourless, and is rich in nutrients. The irrigation pipes can be buried out of sight, or mounted on the surface if more practical (e.g. in the bush amongst tree roots).

SYSTEM COMPONENTS

WORMSMART PRIMARY PASSIVE

When the site slopes steeply enough, and is favourably laid out, Wormsmart systems can work without electricity ie. a pump is not required. Instead, a gravity pipe connects the Wormsmart to a small flout tank - a passive dosing system that reliably performs the same function as a bell siphon.

The plant comprises one 3,000L polypropylene tank which houses the vermicompost process. The vermicomposting area contains a 300mm diameter x 3m long coconut fibre log which is laid out in a snake-like fashion over a 0.5mm screen mesh on a 450mm high plastic support medium. The emergency storage, of 2,540L (including media submergence) is also located within the primary tank.

The Rissy FLOUT® dosing chamber (aka flout tank) accumulates up to 300L of wastewater as it trickles in, then doses it into the discharge field in a short period of time. Dosing like this is an important component of the wastewater system as it ensures equal distribution of the treated effluent into the discharge area.

The tanks must be connected and aligned as follows: The base of the 3000L treatment chamber (where the pipe exits) must be level with the top of the flout chamber (where the pipe enters). The bottom of the flout chamber where the pipe exits in turn must then be around 2m above the top of the discharge area.

WORMSMART PRIMARY PUMPED

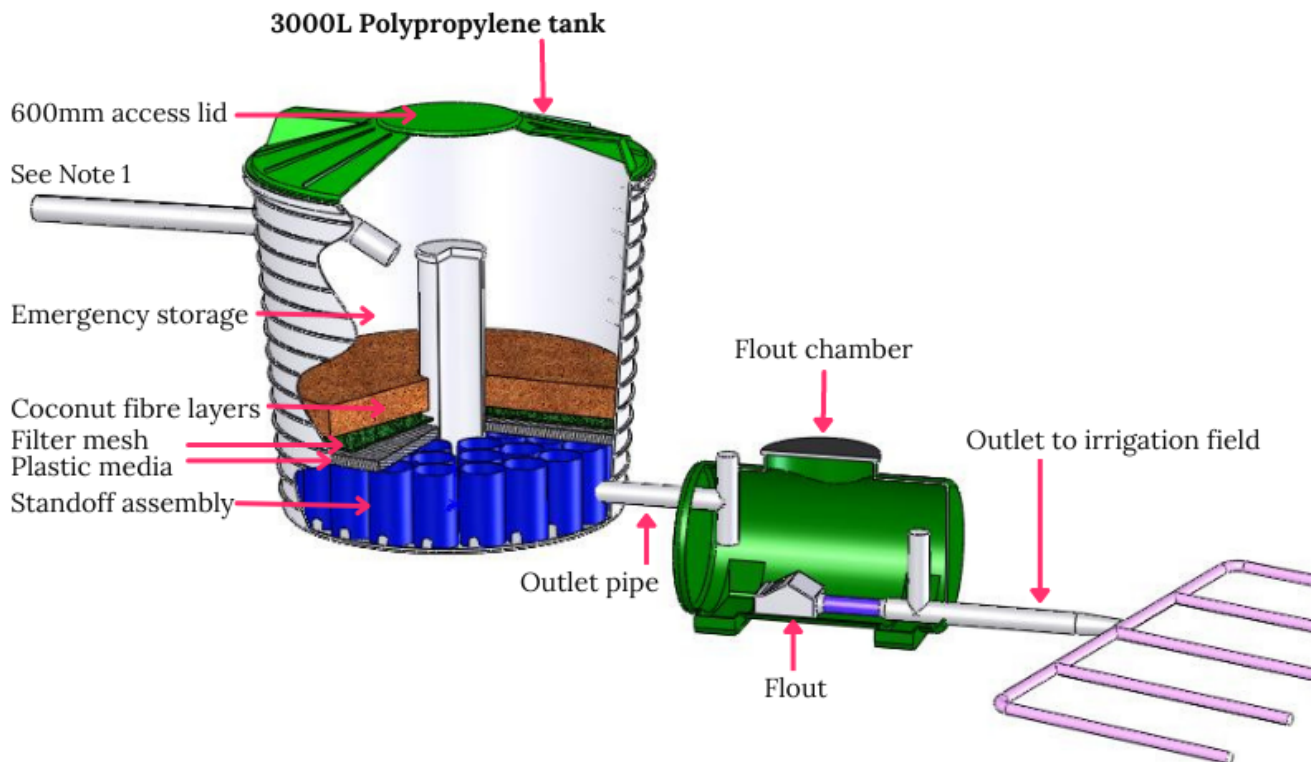
If the property has insufficient fall for the system to be passive, a Davey D23A/B lightweight submersible pump should be installed in the primary tank. This quietly disperses the treated wastewater once 300 litres has accumulated.

A Davies Pumps LS Alarm Panel is provided, mounted on the tank. It provides an audio and visual warning alarm when activated by a high level float. The alarm panel can be re-mounted elsewhere if preferred.

The pump replaces the flout dosing chamber and means that the discharge area can be level with or higher than the treatment chamber. In all other ways the components of the pumped version are the same as the passive version.

SCHEMATIC DIAGRAM

WORMSMART PRIMARY PASSIVE



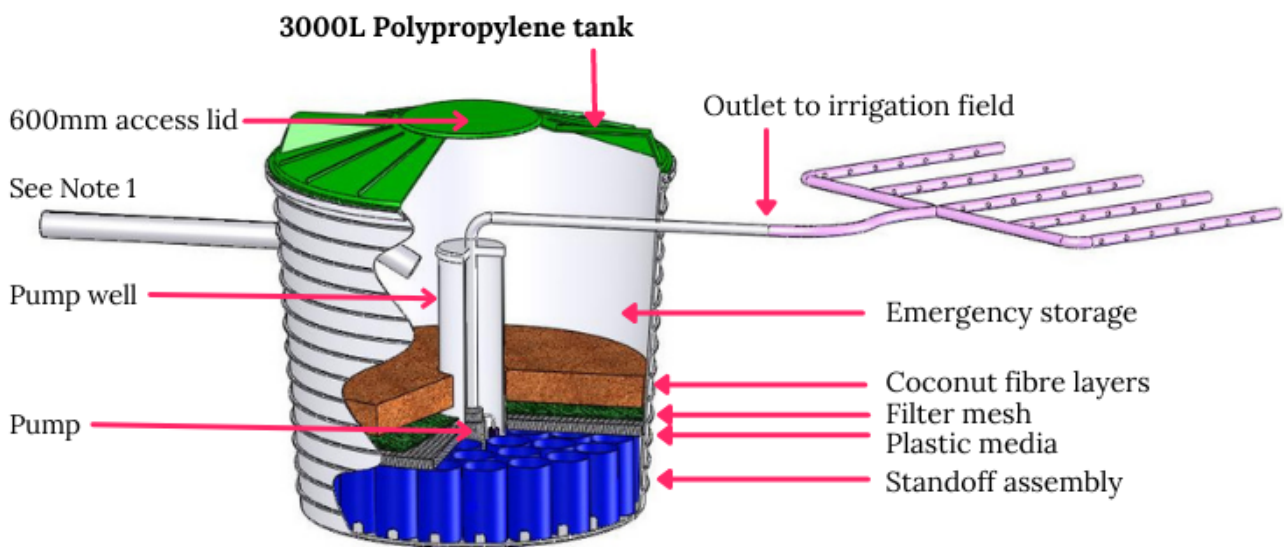
Note 1: 100mm inlet pipe. Standard plumbing (blackwater & greywater combined)

COMPONENT LIST

- 1 x 3,000L Everhard Industries polypropylene tank with vermicomposting unit and low exit pipe
- 1 x Rissy FLOUT® dosing chamber

SCHEMATIC DIAGRAM

WORMSMART PRIMARY PUMPED



Note 1: 100mm inlet pipe. Standard plumbing (blackwater & greywater combined)

COMPONENT LIST

- 1 x 3000L Everhard Industries Pipe with vermicomposting unit and high exit pipe
- 1 x Davey Submersible Drainage Pump D23A /B 0.2kW float-controlled pump (alternative pumps can be fitted by special order).
- 1 x High quality LS Alarm Panel

EFFLUENT DISPOSAL & IRRIGATION

The irrigation field can be buried out of sight in mini-trenches or mounted on the surface if more practical.

- Low-pressure effluent distribution systems (LPED) should be used.
- Flush taps must be provided for periodic maintenance.



Subsurface option

With good topsoil depth and subsoil drainage, drainage metal is not required, but it can be used to enhance in-ground storage.

Surface-mount option

Once the LPED (alkathene pipe nestled in draincoil) has been installed, mound mulch over it and hold in place by lengths of shade cloth and pins. It is best practice to add more mulch to cover the shade cloth.

CERTIFICATE OF REGISTRATION

PRODUCT CERTIFICATE OF REGISTRATION



Global Certification Pty Ltd
Number 339

In recognition of a Product Conforming to:

AS/NZS 1546.1:2008

Issued to

**Property Werx Pty Ltd t/a
Wormsmart**

PO Box 688 Port Macquarie NSW 2444
Certification Date: - 25/08/2016 Expiry Date: - 25/8/2021

Product Certified:

Model Name	Tank	Accreditation Number	Maximum Flow Litres/Day
AWSP1800PF 3000L	Everhard Industries Pty Ltd	SMK 1930	1800
AWSP1800PF 4000L	Everhard Industries Pty Ltd	SMK 1930	
AWSP2700CT – AWSG2700CT	Central Coast Septics	464	2700
AWSP3600CT – AWSG3600CT	Central Coast Septics	464	3600
AWSP3800CT – AWSG3800CT	Central Coast Septics	464	3800

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.



Date of Issue: 30th August 2019
Bruce Smith Director
Signed for and on behalf of Global Certification Pty Ltd
PO Box 195, Morayfield QLD 4506



www.jas-anz.com.au/register

© Global Certification Pty. Ltd. GC0050A R6 July 2015



WORMSMART NZ

Wormsmart was founded in Australia by Matthew Coddington, who designed the system to be simple and biological. Meanwhile in New Zealand, Wayne Gilinsky had been working for nearly 20 years with various worm-based systems from around the world. When Wayne heard about Wormsmart, he headed over to Australia to check it out and a trans-Tasman partnership began. Many New Zealand homes are built near bodies of water, and this has resulted in regulatory requirements which increasingly require a secondary level of wastewater treatment. Wayne developed the Wormsmart Plus to meet these needs, which has since set industry-leading standards at the OSET trials in Rotorua. Wormsmart NZ is an independent company, however Wayne & Matt continue to work closely together.

