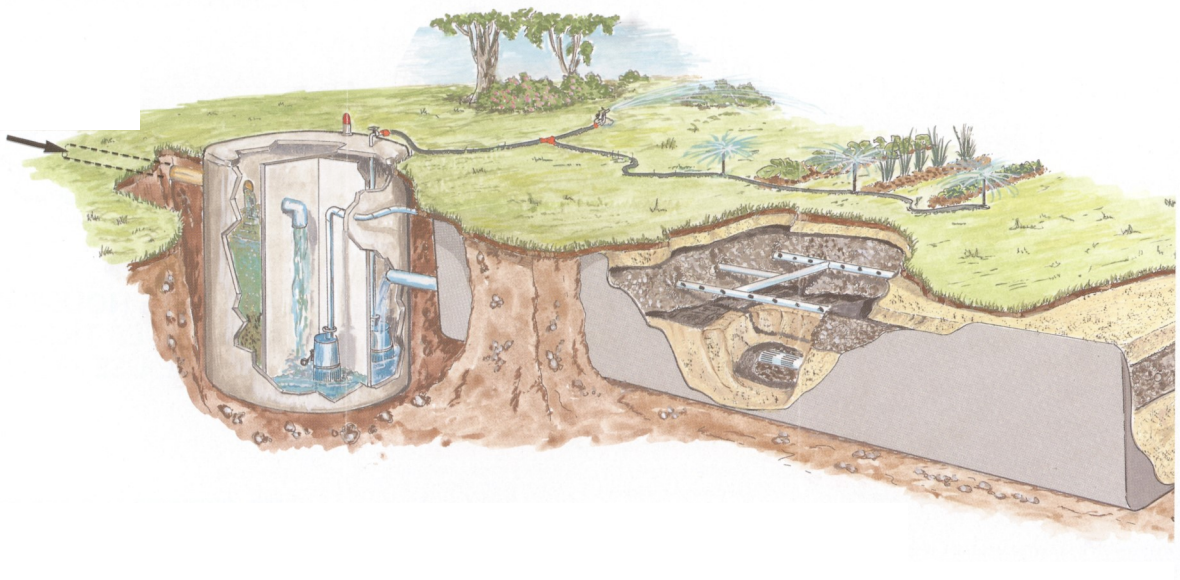


Envirotech ASF*

Wastewater Treatment Systems

***Aerobic Sand Filtration - the **NATURAL** choice**



Harnessing Technology for the Enhancement of the Environment

ENVIROTECH was established in 1993 by Chris Palmer, a civil engineer, who spent the first 17 years of his professional career with the State Authority as a waste water engineer in the design, maintenance and operation of municipal sewerage treatment plants. In this period Chris was involved in preparing guide lines and manuals and contributing to the writing of Australian Standards for relevant plumbing and on-site waste water standards.

He is currently the Chairman of the committee responsible for:

AS 1547 – Management of On-site Domestic Wastewater System

AS 1546 – Septic Tanks

Waterless Composting Toilets

Aerated Wastewater Treatment Systems

ENVIROTECH has earned a high reputation with local authorities and regulators for its innovative ASF™ design for domestic wastewater treatment. ASF produces the highest quality effluent with a minimum of maintenance and the lowest running/power requirement when compared with other systems available on the market. ASF™ treats the household wastewater to an advanced secondary level.

ENVIROTECH was the first to gain State Government Approval for its greywater treatment unit. (G. T. U.) Our G.T.U. was selected for the “Healthy Home Project” at Mermaid Beach, Gold Coast. The success of the project led to a G.T.U. being chosen by “Greening Australia” for its first display home at Seventeen Mile Rocks, Brisbane.

ENVIROTECH has a sound technical base with its future direction being towards ecologically sustainable housing developments.

ENVIROTECH have currently expanded our operations to include a full range of sewerage treatment systems from a standard ASF to the newly approved Advanced Secondary ASF.

ENVIROTECH has a full range of projects Pacific commercial systems.

If you require any information on the above products please feel free to contact our office for your local agent.

Specification

Envirotech ASF-Generation II Aerobic Sand Filter System

General Description:

The Envirotech ASF-Generation II aerobic sand filter system is designed to treat the full wastewater stream from a residential dwelling occupied by a maximum of 10 persons. The Envirotech ASF-Generation II system comprises of a wastewater treatment tank contains the following chambers.

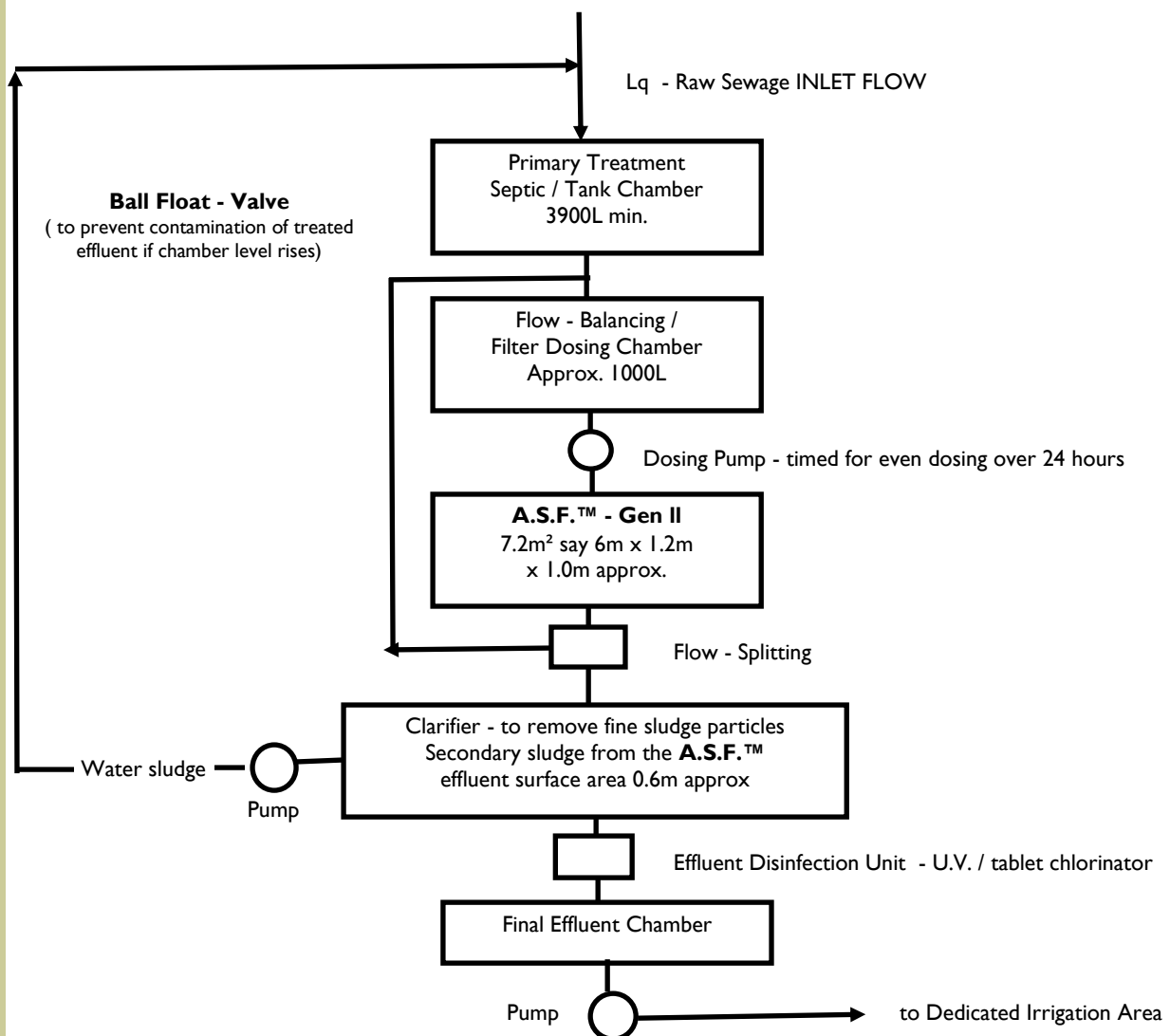
- Primary Treatment Chamber / Septic Tank (minimum capacity of 3900 litres). The chamber is used for the separation from the wastewater of settleable / gross solids and floatable matter such as greases and fats. The chamber is fitted with a partition wall and an effluent filter on the outlet of the chamber. The chamber also receives the sludge return from the clarifier (see process flow diagram).
- Flow - Balancing Chamber (maximum capacity of 1000 litres). Primary treated effluent is collected in the chamber. A dosing pump is connected to a timer to pump effluent at regular periods, 6-8 times per hour over a 24 hour period, from the chamber to the sand filter. The level within the chamber will rise and fall throughout a 24 hour period. At zero inflow periods, the level in the chamber will fall to a point when pumping to the sand filter stops until the level rises again. The dosing pump is fitted with a high-level alarm float-switch to alert a pump problem.
- Aerobic Sand Filter (ASF). The sand filter receives the primary treated effluent at regular intervals. The effluent is distributed across the top coarse aggregate layer through 4 rows of pressure pipes. The effluent flows downwards over the media aggregate on which an active biomass is formed. The secondary treated effluent is collected in a 100mm diameter underdrain and directed to the clarifier chamber.

The Envirotech Aerobic Sand Filter (ASF) consists of an excavation 7.2m² in area (6m long x 1.2m wide x 1.0m deep). The ASF is Fully lined and constricted using the following materials:

- a layer of 20mm aggregate, 150mm deep, laid over a 100mm dia. slotted underdrain pipe: followed by
- a layer of 5-7mm aggregate, 600mm deep; and
- a layer of 20mm aggregate, 150mm deep
- a network of 4 rows of 25 dia. PVC pressure pipes, containing 6.5mm holes at 600mm centres facing downwards in the top aggregate layer;
- a geotextile material laid over the top aggregate layer to prevent ingress of sand and soils;
- the ASF is finished with a cover of sand and topsoil in a form of a mound to prevent entry of surface run-off water.

- **Clarifier.** The secondary treated effluent enters the clarifier from the underdrain. 80% of the treated effluent is recirculated back to the inlet end of the flow-balancing chamber. A pump at the base of the clarifier returns sludge particles to the inlet of the primary treatment chamber/septic tank.
- **Final Effluent chamber.** The treated effluent is collected in the chamber after disinfection by a UV disinfection unit or tablet chlorinator. The treated and disinfected effluent is pumped to the dedicated land application area.

PROCESS FLOW DIAGRAM



The Envirotech ASF- Generation II system is available in the following configurations:

- a single concrete tank, with a minimum capacity of 6000 litres or equivalent and containing a primary treatment chamber, flow - balancing chamber, clarifier and final effluent chamber.
- a series of individual tanks consisting of a primary treatment / septic tank with a capacity of 4000 litres and three small pump wells to be used as a flow - balancing well, a clarifier well and a final effluent pump well.
- two injection moulded polypropylene tanks, with a capacity of 3900 litres.

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Wastewater FAQs

What is the difference between a septic tank, an aerated treatment system and the *Envirotech ASF*?

Septic tanks use old technology utilising underground trenches. They are heavily reliant on good quality topsoil to allow the wastewater to percolate through the soil. In Australia, the soils are mainly weathered over the last 360 million years, and it is difficult to find reasonable quality topsoil over the entire length of the required trenches. Septic tank trenches can pollute ground water supplies and can leak onto lawns with infectious, smelly discharge. This has the potential to cause serious illness, particularly in children and the elderly or infirm.

Aerobic treatment systems use a mechanical blower via diffusers (huge increase of surface area) to recreate the air spaces normally found in good quality topsoil.

The *Envirotech ASF* treatment system is sized to accommodate the required amount of air supply in the voids between the gravels and sands (which are carefully graded and layered). This is replicated inside a dedicated liner, where the primary treated effluent is evenly distributed and then allowed to percolate, collecting valuable oxygen for the aerobic bacteria before returning back to the system for irrigation.

(Note: the air supply is therefore maintained regardless of power failure.)

What is the average daily power usage?

Negligible. The *Envirotech ASF* does not have a blower attached to the system, and the filter and effluent pumps run for ONLY 10 minutes per day (approximately).

What are the ongoing costs?

Minimal. The *Envirotech ASF* is the only true install-and-forget system. The secondary system is approved for ONCE-A-YEAR inspection and the advanced is for a minimum of two (other system types require servicing once a quarter).

What warranty is offered on the treatment plant?

There is a 1-year manufacturer's warranty on the filter and irrigation pumps, which is extended a further year if you renew your first year maintenance agreement.

The control unit and alarm are both covered by a 2 year manufacturer's warranty (excluding globe). All fittings, pipe work and fixings carry a 2 year warranty. The vessel (the concrete tank) and concrete internal baffles carry a 15 year warranty. (Note: the life expectancy of the sand filter is well in excess of 15 years.)

How will the wastewater be disposed of?

The wastewater has been treated and disinfected and will be disposed of via your "land application area". This area could be above-ground heavy droplet sprinklers, or subsurface irrigation, or various other methods, and will be decided between your local Council and (in most instances) a geotechnical engineer. We will construct the disposal area in accordance with the geotechnical report approved by your council.

Are installations allowed on sewerage blocks?

No - Treatment systems can only be installed in areas where reticulated sewerage disposal is not provided

Will the system smell?

No - Odours emanating from a treatment system are caused by bacteria that have died. Reasons for this range from lack of air (the blower has been turned off for a number of hours) to chemical pollution. The *Envirotech ASF* does not rely on a blower to provide air to the bacteria, so under normal household operating conditions there is no smell.

Wastewater FAQs (Envirotech) Continued

Will I receive information about the system once it is installed?

Absolutely. We will provide you with our informative Owner's Guide, and our staff are also happy to answer any queries you might have.

What happens to solids in the system?

Solids represent approximately 0.1% of household wastewater, which the systems continually reprocess until it forms a layer of residual ("sludge"). After a number of years the accumulated sludge will need to be removed from the system. Your service technician will advise you when de-sludging is required.

Do I have to do any maintenance to the system?

Your service provider will provide all the maintenance requirements for the system, leaving you free to enjoy your lifestyle. However, you are required to ensure the irrigation area is free of weeds and debris at all times. Full information on this is contained in our Owner's Guide. Your service technician will also assist you as much as possible .

Can I locate the tank away from my house?

Yes, provided the correct fall can be achieved (sometimes with the use of riser rings), generally speaking the tank can be located where you choose.

What happens in a power failure?

The treatment system will stop, along with all your electrical appliances. However, because the *Envirotech ASF* treats the wastewater without the use of an electric blower, no harm will occur to the system and the bacteria will continue to process the waste. When the power is reconnected, the system alarm should clear

How much noise comes from the system?

The *Envirotech ASF* is designed for silent running. There is no noise from the system.

What do I do with the system when I go on holiday?

Nothing at all; it will keep on quietly working while you're away.

What is an Envirotech ASF?

The *Envirotech ASF* was designed by one of Australia's foremost specialists in the field of onsite wastewater treatment and disposal systems. Using the latest and most appropriate technology available, it is especially appropriate for commercial developments such as caravan parks, motels, shopping centres and schools.

The *Envirotech ASF* does not use mechanical aerators, diffusers, blowers or other costly moving parts, nor does it use artificial media material. Instead, a well designed and carefully constructed buried Aerobic Sand Filter offers secondary treatment and "polishing" of the effluent in a completely natural way.

The ASF has been designed using the engineering principle of the Long Term Acceptance Rate (LTAR), thus ensuring that the *Envirotech ASF* has a long life without hydraulic surcharging.

Benefits of an Envirotech ASF

- the **most cost effective system** available
- requires at **least maintenance - one and up to four times a year** (other system types require quarterly servicing)
- is a **passive system** (there is a **minimum of mechanical equipment** to wear out and need replacement)
- has the most consistent and highest quality effluent of all systems (its extremely stable process can **withstand wide fluctuations** in both **hydraulic and organic** loading, without any reduction in effluent quality)
- uses **negligible electrical power consumption** (the filter and effluent pumps run for ONLY 10 minutes approx per day)
- has the added capability to **deactivate/remove viruses and helminths** which chlorination of a secondary effluent cannot do (and it is interesting to note that viruses are responsible for 70% of illnesses in man today)
- has **low visual impact**
- is **individually designed** to suit all specific needs
- is a **long life trouble-free system** (the life expectancy of the sand filter is well in excess of 15 years)

Help protect your health and environment

Help protect your health and environment



The Envirotech ASF Process Flow

The Envirotech ASF system has been developed for the treatment of all household wastewater to a standard suitable for the renovated water to be irrigated onto lawn and garden areas.

It is the “engineered” alternative to the conventional septic tank system but without the high maintenance costs inherent with mechanical aeration plants

The ASF system utilises natural processes of settling and filtration in an environment whereby organisms beneficial to the breakdown of wastes may flourish.

Primary Treatment

The ASF system is simple but clever. All household wastewater is directed to the one house drain (just like being connected to town sewerage) which leads to a large capacity primary treatment chamber that has a high surface area to depth ratio.

In this chamber, naturally occurring bacteria start the treatment process by breaking down the settled solids through anaerobic digestion. Fats and other light matter float to the surface and form a scum.

The liquid wastewater (“mixed liquor”), which has now had a large proportion of the suspended solids removed, flows into a pump chamber where, by simple float switch control it is pumped onto the buried aerobic sand filter.

Secondary Treatment

A well designed and carefully constructed buried aerobic sand filter offers secondary treatment and “polishing” of the effluent in a completely natural way.

Liquid wastewater from the primary treatment pump chamber is dose-loaded onto a bed of clean crushed rock. From there it percolates slowly down through the various layers of specially graded sand and rock.

Physical, chemical and biological processes occur naturally within the ASF to remove organic material and, most importantly, harmful bacteria, pathogens and viruses.

At the base of the fully lined ASF, the renovated water is collected and drained to a pump chamber ready for re-use on your lawn or garden.

This is re-use without the need to add any chlorine or other disinfectants which can produce residuals and compounds regarded in many countries as unacceptable contaminants.

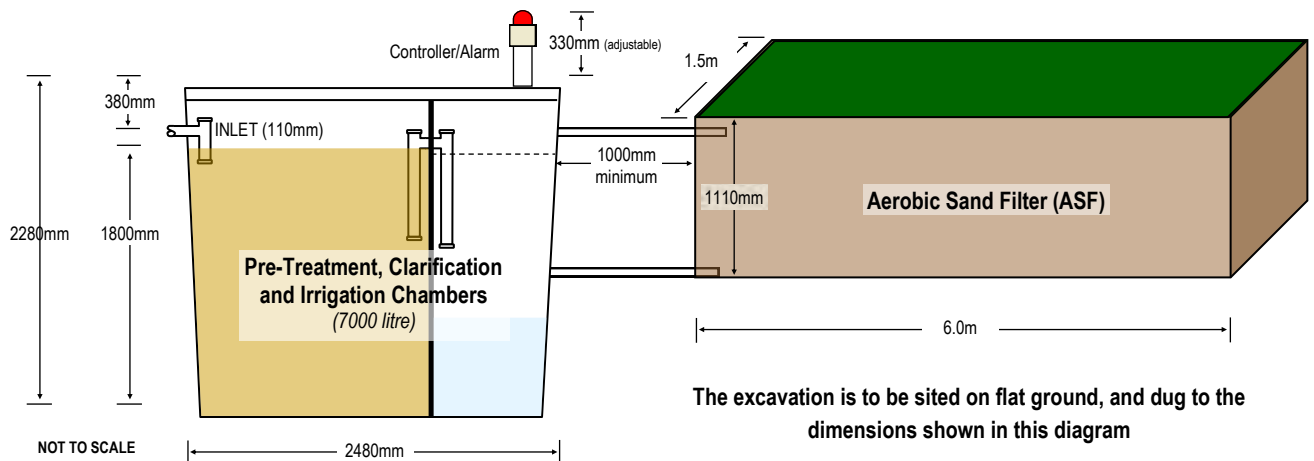
Excavation, Delivery & Placement

Tank Dimensions

Control box/alarm height	0.330m	Overall height	2.28m
Outside diameter	2.48m	Invert (from tank bottom to bottom of inlet pipe)	1.8m

ASF Dimensions

Length 6.0m	Width 1.5m	Height 1.1m
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Excavation and Backfilling

The following directions and recommendations are to be followed:

- Site preparation drawings show excavation walls to be perpendicular. However, depending on soil conditions, the excavator may need to angle or retain the side walls such that they don't cave in during installation.
- Sand or excavated material/spoil with maximum particle size of 50mm is used.
- The base of the septic tank is to be placed on a 50mm levelled layer of sand or 5ml aggregate.
- Ensure that sand or excavated material does not fall on the lid of the tank, as this will fall into the system through the manholes and clog the system and irrigation pump.
- Following placement, the loose backfill material must be kept at least 70mm



Safety

Except for the persons responsible for lifting and positioning the tank, there must not be any person within 20m of the installation site during lifting and positioning.

Filling with Water

- After backfilling, the tank must be filled with 5300 litres, ensuring that the tank's separate compartments are raised equally at no more than 600mm increments.
- If the tank is not filled with water, it could hydraulically lift out of the ground during wet conditions.
- If our quotation does not include the excavation service, then it is the responsibility of the customer to ensure that the tank is filled with water after backfilling. We will not accept any responsibility if this action is not carried out.
- Water in the system is also required in order for the treatment system to be commissioned for use.
- Potable water must be used.

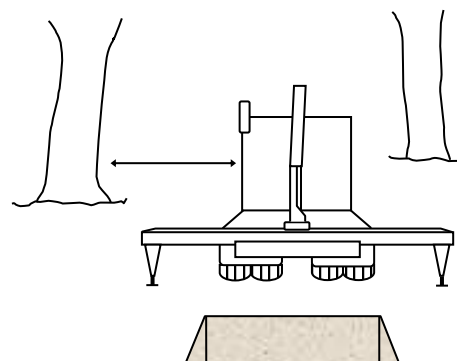
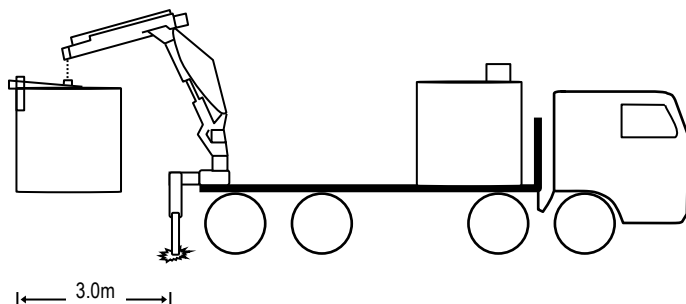
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Delivery & Placement

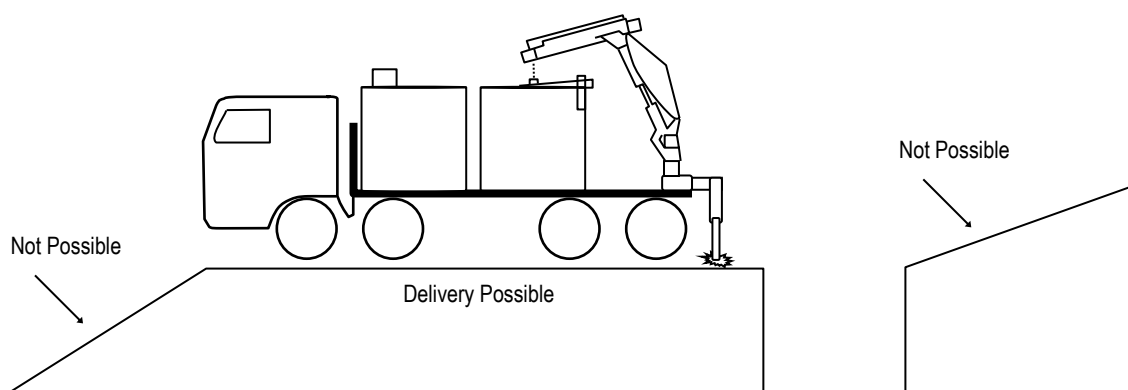
In most areas, the tank will be delivered by a truck equipped with a crane located at the rear of the vehicle. Such a vehicle will back up to the tank site, then lift and slew the tank into position behind the vehicle before placing the tank into the prepared excavation. The maximum reach from the rear of the vehicle is 3m to the centre of the tank.

Make sure the truck has access to your site and observe the following requirements:

- 4.8m needed to pass under trees and power lines
- 3.0m needed between gateposts
- Site conditions should be dry and stable under foot



To enable the tank to be unloaded, a distance of 6m in diameter around the truck will be required. This will also allow enough distance for the crane's outriggers (legs).



Positioning

The tank must be level in both the inflow/outflow direction, and must be 90 degrees to the inflow/outflow direction (that is, less than 1 degree in deviation).

Important Notes

- Tanks will not be lifted over houses, sheds or other property of value, nor will they be lifted under low power lines.
- Tank sites that are cut out of sloping hills will require an adequate flat area for the truck to unload. Unloading on awkward and dangerous sites will be at the driver's discretion.
- Safe and clear access is the total responsibility of the customer.

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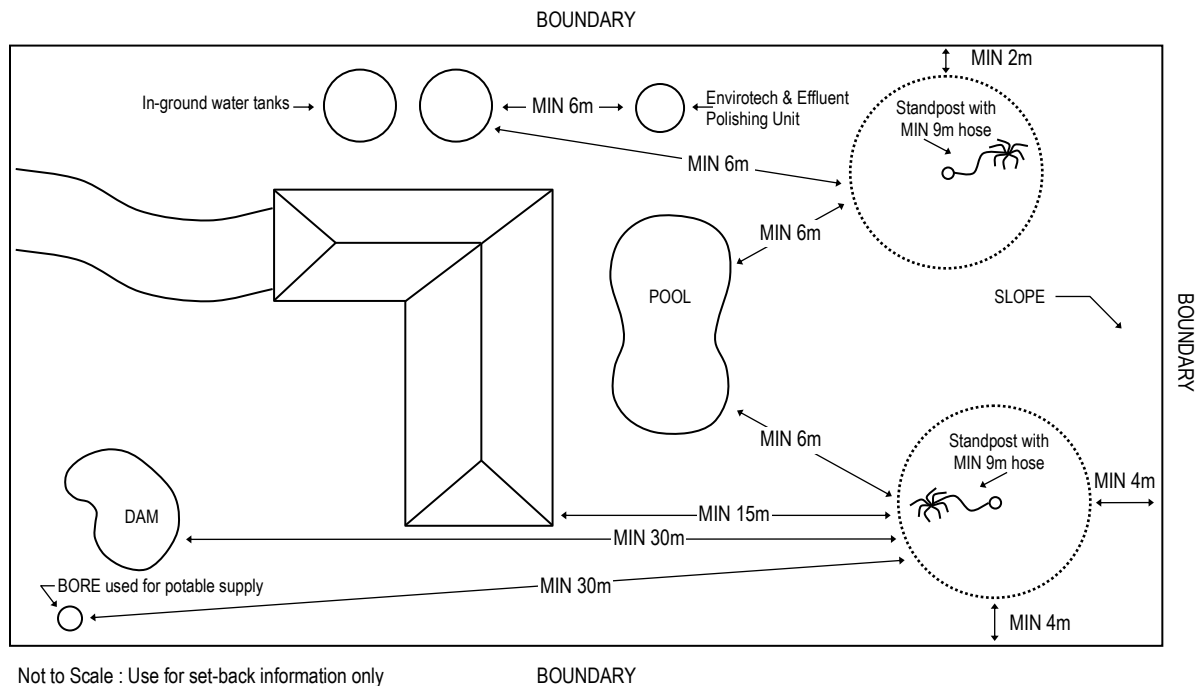
The Land Application Area

Most councils require a Geotechnical Engineer Report (Site & Soil Evaluation) to be carried out prior to lodging an application to install a wastewater treatment system.

The irrigation system is constructed in accordance with the geotechnical report approved by your local council. Upon completion, the geotechnical engineer and local council confirm that the irrigation system has been constructed as per the approved report. The irrigation area is then tested upon commissioning the system for use.

The treated water is dispersed through irrigation lines, using the method directed by the geotechnical report. Methods of dispersal vary between local councils, ranging from above-ground heavy droplet sprinklers to pressure-compensating drippers and shallow subsurface irrigation.

In this way nutrients are returned to nature via lawns and gardens. And this also ensures that the area designated as your irrigation area receives the benefit of regular watering, is sustainable and environmentally balanced, and the health and welfare of the occupants and the public at large are protected.



Typical Council Set-Back Distances

Feature	Set-Back Distance
Water edge of permanent watercourse, farm dams and drainage channel	30 metres
Bore or well used for domestic water supply	30 metres
Dwelling and recreation areas	15 metres
Property boundaries, paths and walkways	4 metres (low side) 2 metres (high side)
Edge of swimming pools and in-ground water supply tanks	6 metres

Some Suitable Plants

This list is intended to provide a selection of trees, shrubs and other plants that may be considered suitable for your treatment system's surface irrigation disposal area.

Due to the wide-ranging climate and soil variations we experience in Queensland however, we strongly recommend that you make further enquiries with your local plant nursery before finalising your plant choice

CLIMBERS			PERENNIALS		
Botanical Name	Common Name	Approx Height	Botanical Name	Common Name	Approx Height
<i>Bougainvillea</i> spp.			<i>Aster novi-beigii</i>	Perennial Aster	
<i>Hardenbergia violacea</i>	Purple Coral Pea		<i>Canna</i>		
<i>Hibbertia scandens</i>	Snake Vine		<i>Chrysanthemum frutescens</i>	Marguerite Daisy	
<i>Jasminum officinale</i>	Common Jasmine		<i>Chrysanthemum maximum</i>	Shasta Daisy	
<i>Jasminum Grandiflorum</i>			<i>Gazania rigens</i>	Black-eyed Susan	
<i>Kennedia rubicunda</i>	Dusky Coral Pea		<i>Salvia uliginosa</i>	Bog Salvia	
<i>Lonicera japonica</i>	Japanese Honeysuckle				
<i>Passiflora</i> spp.					
<i>Vitis coignetiae</i>	Glory Vine				
<i>Pandorea jasminoides</i>					
TREES			SHRUBS		
Botanical Name	Common Name	Approx Height	Botanical Name	Common Name	Approx Height
<i>Agonis flexuosa</i>	Willow Myrtle	5-6m	<i>Abelia x grandiflow</i>	Abelia	2-3m
<i>Acacia baileyana</i>	Cootamundra Wattle	3-6m	<i>Acacia floribunda</i>	Gossamer Wattle	2-4m
<i>Banksia</i> spp.			<i>Acacia longifolia</i>	Sallow Wattle	2-4m
<i>Casuarina glauca</i>	Swamp Oak	6-12m	<i>Acacia iteaphylla</i>		
<i>Casuarina stricta</i>	Drooping Sheoake	3-5m	<i>Alocasia Purpurea</i>		
<i>Casuarina cunninghamiana</i>	River Sheoake	6-10m	<i>Chamelacium uncinatum</i>	Geraldton Wax	2-4m
<i>Callistemon viminalis</i>	Red Bottlebrush	3-6m	<i>Clerodendrum heterophylla</i>		
<i>Callistemon salignus</i>	White Bottlebrush	3-6m	<i>Cotoneaster</i> spp.		
<i>Eucalyptus grandis</i>	Flooded Gum	10-15m	<i>Cortaderia selloana</i>	Pampas Grass	2-3m
<i>Eucalyptus camaldulensis</i>	River Red Gum	15-20m	<i>Cupha ignea</i>		
<i>Eucalyptus cosmophylla</i>	Cup Gum	5-6m	<i>Cuphea micropetala</i>		
<i>Hakea</i> spp.			<i>Cyperus alternifolius</i>	Umbrella Grass	0.5-1m
<i>Hymenosporum flavum</i>	Native Frangipani	3-6m	<i>Cyperus papyrus</i>	Papyrus	
<i>Leptosporum laevigatum</i>	Coast Tea Tree	5-6m	<i>Hebe</i> spp.	Veronia	0.5-1m
<i>Melaleuca armillaris</i>	Bracelet Honey Myrtle	3-4m	<i>Iris pseudacorus</i>	Yellow Flag Iris	0.5-1m
<i>Melaleuca quinquenervia</i>	Broad Paperbark	5-7m	<i>Melaleuca decussata</i>	Cross Leaf Honey Myrtle	1-2m
<i>Melaleuca nesphila</i>	Western Tea Myrtle	2-4m	<i>Nerium oleander</i>	Oleander	2-3m
<i>Syzygium paniculatum</i>	Bush Cherry	8-10m	<i>Phormium tenax</i>	New Zealand Flax	2-2.5m
<i>Tristania laurina</i>	Kanuka	3-5m			



Maintaining the Envirotech ASF

All sewage treatment systems require regular maintenance to ensure that the effluent quality consistently meets the standards set by the regulating authority, and a maintenance program is stipulated by your local authority in the interests of environmental health and safety. Failure to have these stipulated services carried out could result in a breach of public health legislation and subsequent legal proceedings.

The *Envirotech* treatment systems are approved for a once-a-year maintenance inspection this depends on the local government approval, instead of the usual quarterly inspections other types of treatment systems must undergo. We will contact you around the first anniversary of the system's operation to arrange an annual inspection, and emergency after-hours attendances are simply a telephone call away.

Apart from general maintenance, various water quality tests are conducted at this annual inspection, and records are kept. Reports are sent to regulating bodies in order to comply with their conditions of approval.

Annual Inspection / Quarterly

At each annual inspection, we will inspect and report on:

- the condition of the irrigation and filter pumps
- the condition of all pipes and hoses
- the efficiency of the irrigation sprays/system
- the condition of the electrical systems, including alarms
- sludge levels



Onsite tests of water quality (clarity, pH and free residual chlorine) will also be performed, and a report provided to you and your local council.

Home Owner Requirements

The home owner will be licensed by their local Council to be entirely responsible for the operation and maintenance of the plant. The existence of a service contract does not transfer the responsibility from the owner to the supplier or service provider.

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

Regular visual checking of your *Envirotech* system's exterior and irrigation system will ensure that most problems are located and fixed early. Some visual signs of the land application system failing include surface ponding or run-off of treated wastewater; soil quality deterioration; poor vegetation growth; and unusual odours.

Annual Service Contract Renewal

An offer to renew the maintenance program will be provided around the first anniversary of the system's operation and can remain open for 30 days only. Legislation requires that all treatment plant service providers must notify the local council of any contract not renewed at the expiration of those 30 days.

Envirotech ASF Warranties

Structure	Warranty	Minimum Service Life
Concrete Tank	15 years	20 years
Internal Baffles (concrete)	15 years	20 years
<i>Fittings</i>		
Pipework (PVC etc)	2 years	20 years
Fixing (Stainless etc)	2 years	20 years
<i>Electrical Components</i>		
Control Box	2 year	5 years
Alarm Panel	2year	5 years
Filter Pump	1 year*	5 years
Irrigation Pump	1 year*	5 years

Service life

All mechanical and electrical parts have a minimum service life of 5 years.

“Service life” is the time for mechanical and electrical parts to operate before breakdown or failure can reasonably be expected.

Note: the life expectancy of the sand filter is well in excess of 15 years.

*Warranty extension available

If, at the end of your complimentary first year maintenance programme you renew that agreement for a further year, the warranties covering your filter and irrigation pumps will automatically be extended to 2 years.

General Information

Responsibility

You need to be aware that the owner of the treatment plant (you) will be licensed by the local authority and will be held entirely responsible by them for the operation and maintenance of the plant, regardless of the existence of a maintenance agreement.

Electricity Consumption

The power consumption of the *Envirotech ASF* is negligible as the filter and effluent pumps run for ONLY 10 minutes per day (approximately).

De-Sludging

All treatment plants accumulate sludge (matter going down the drains that is not organic, for instance sand from the beach brought home in swimming apparel, towels and clothes etc).

Depending upon individual household usage, it will be necessary to periodically remove the contents of the anaerobic compartment. Your service technician will advise you when de-sludging is required, but it is your (the homeowner's) responsibility to organise the service.

De-sludging may be carried out by any person or organisation approved by the Health Department. Australian Standard AS/NZS 1546.1 recommends de-sludging at intervals of 3-5 years for optimum performance.

Run-off

Currently legislation states that generally speaking, everything produced on the property must be contained within the property, including treated effluent, stormwater, run-off, smells, odours etc.

You are not permitted to water the Council's footpath and care should be taken not to allow any run-off onto your neighbour's land.

Please leave diversion/retention mounds in place.

Maintenance

It is the owner's responsibility to ensure that the irrigation area/s are maintained at all times. Your service technician will assist you as much as possible in this regard. (Note—as required by law, a report on the condition of the irrigation area is included in your annual maintenance report and will be forwarded to your local Council.)

Access

For maintenance purposes, FREE access is required to ALL manholes on the tank/s and to the Controller/ Alarm module. This is a requirement of the regulating authority.

For ease of annual maintenance servicing attendances, consider locating your *Envirotech ASF* in an area that can be secured from family pets etc, with power and water services located nearby.

Electrical Circuit Specifications—For Information Only

Note: Electrical work must be carried out in accordance with AS/NZ3000 and Supply Authority Rules.
A “Notification of electrical work” certificate must be lodged with the Supply Authority for the wiring.

Important—Conduit Sealing

The conduit must be run to the junction box mounted in the side of the Controller/Alarm module on the treatment tank. Ensure that you glue all the joints in the conduit run to prevent moisture, ants etc from entering the Envirotech control box via your conduit and causing damage.

Moisture ingress is not covered by the manufacturer’s guarantee.

Circuit

A dedicated single phase plus earth circuit is to be used, protected by a 16 amp MINIMUM circuit breaker of 8Ka suitable for motor start (such as Weber/Martec AS168 type, Quicklage, Teresaki Safe “T” or Clipsal “U” type), minimum cable size 215mm, connected to and run from an EXTERNAL building switchboard (to allow for maintenance when the house is unattended) to the Envirotech Controller/Alarm module. Alarm wiring run can be two-core switch wire if required for internal alarms.

Circuit should be labelled “Envirotech System” and must be hard-wired into the Controller/Alarm module.

Current/Amps

Continuous running current is 0.6amp with maximum intermittent current up to 3.1 amps (dependent upon submersible pump size).

Alarm

The alarm may sound upon initial energising of the circuit to the system. This may be caused by a high water level and is no cause for concern. If the power is left on, the water level will return to normal within 30 minutes and the alarm will automatically reset. Be sure to return the alarm to “NORMAL” after the alarm has reset (for internal alarms only).