

### The Water Cycle

(a) The water cycle is the term used to describe the naturally occurring processes of rainfall, evaporation, absorption, storage and use of water in the environment. The cycle starts with cloud formation and when rain falls, it is collected on the ground and runs into existing bodies of water such as streams, lakes and rivers. Some of this water finds its way back into the environment through evaporation back into the atmosphere and some finds its way back into the soil through percolation for use by plants and trees.

(b) The system is dynamic and constantly changing. Weather conditions such as humidity and temperature effect the amount of water drawn back into the air by evaporation or transpiration. The amount of rainfall (or lack of it) affects percolation of water into the soil in the proceeding days and months.

(c) Human use of water affects the water cycle in a variety of ways. Specifically water is drawn from its normal course of function within the water cycle and applied to domestic, agricultural and industrial uses. This diverted water, once used must be returned to the water cycle somewhere further downstream. The quality of water within a catchment has a significant impact on environmental and public health. The specific purpose of your Garden Master AWTS is to ensure that all waste water is correctly treated before it is returned to the water cycle.

### Domestic Waste Water

By statutory requirement all water used in a domestic situation is required to be collected and treated before it is returned to the water cycle. With houses that are not connected to a centralised sewage system this treatment must be carried out in a fully approved on-site wastewater treatment system. This is to protect our environment and public health from waterborne pollutants. This responsibility ultimately lies with the householder and for this reason your should become sufficiently familiar with the operation of your Garden Master AWTS.

A typical domestic dwelling generates wastewater from the kitchen, bathroom, laundry and toilets. Wastewater can be divided into two categories depending on the degree of human waste it contains. Grey water is the largest proportion of wastewater and flows from all the non-effluent sources such as drains, sinks, baths and showers. Black water is from your toilet. Your Garden Master is designed to treat both black and grey water and, after processing, return it to the environment through a suitable irrigation system to the designated land application area.



## Site Access

Ensure the site of the proposed excavation is clear and free of any obstacles so as to ensure good access for both the excavator and the Crane Truck. The crane truck requires clear access to reverse up to the excavation.

## Excavation

Mark out and excavate the hole as per the excavation details on the following page.

Ensure the Excavation is solid and level. Screed a 50mm base of crusher dust or sand.

Place the Garden Master 7100 into the excavation, lifting only using the 4 x swift lift lugs located in the bottom of the tank.

All personnel should keep well clear of the excavation.

## Installation

Backfill the excavation with clean fill, no rocks. This would generally be the spoil removed during the initial excavation of the hole.

Immediately fill the system with water. The system will take approximately 7,000 litres to fill to operational level. Failure to fill the system could result in the tank floating out of the ground if heavy rain is experienced.

Connect the sewer line to the inlet of the tank. All plumbing connections are to be carried out by a licensed Plumber only.

## Electrical

All electrical connection must be carried out by a licensed electrician. Connect the Garden Master as per the Electrical specifications below. Leave the power to the Garden Master switched off until the system is commissioned by an authorised agent.

## Commissioning

This will be carried out by an authorised Garden Master Agent. Connect the outlet of the system to the approved disposal area only. The disposal area must be constructed in accordance with the approval. The system will start automatically when the power is switched on.

## Bio-Logic Elite 7100 Specifications

Tank Dimensions	Chamber Capacity
Diameter = 2540mm	A 7100 Lt Tank – AS 1546
Height = 2050mm	B 3050 Lt Septic Chamber
Bottom of tank to bottom of inlet = 1600mm	C 3300 Lt Aeration Chamber
3m x 3m x 2050mm deep from high side	D 350 Lt Clarifier
	E 350 Lt Chlorination Chamber
	F Biological Media