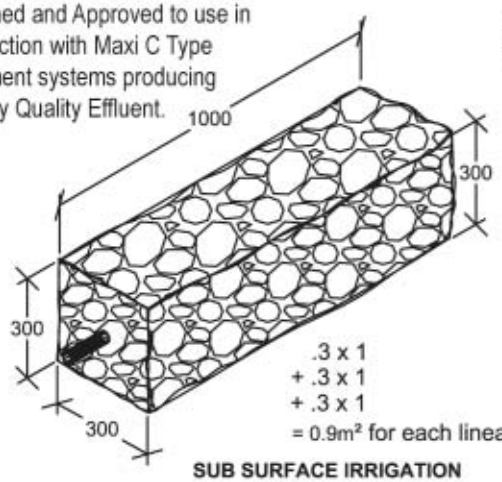
DESIGN CALCULATIONS FOR SUBSURFACE TRENCH IRRIGATION

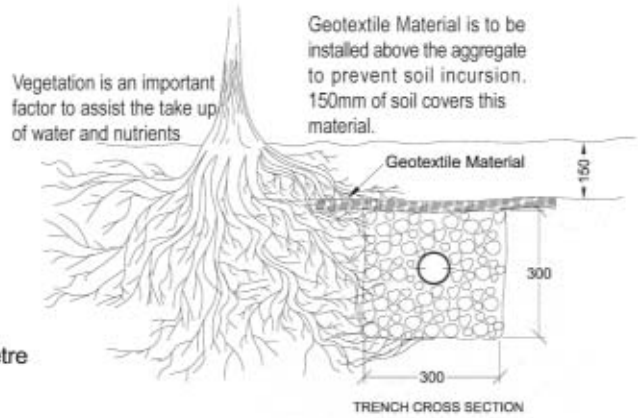
Designed and Approved to use in conjunction with Maxi C Type Treatment systems producing Primary Quality Effluent.



.3 x 1
+ .3 x 1
+ .3 x 1
= 0.9m² for each linear metre

SUB SURFACE IRRIGATION

From the Health (Treatment of sewage and Disposal of Effluent and Liquid Waste) Regulations 1974



TRENCH CROSS SECTION

SUBSURFACE TRENCH IRRIGATION with the MAXI C Tank is ***APPROVED BY THE HEALTH DEPARTMENT OF WA.***

Example for a 4 Bedroom Residence
= 829 ltrs per (Combined Waste)

Disposal Method Proposed:
Pressurised Subsurface trench irrigation .3m x .3m in sandy soil

SCHEDULE 9 TABLE 1

DOMESTIC WATER CONSUMPTION (Litres per Day) 90% Per Capita Water Consumption	
Nº of bedrooms	Combined Waste
2 or less	564 ltrs
3	761 ltrs
4 or more	829 ltrs

$$A = \frac{V}{L.I.R.}$$ where -

A = minimum infiltration area m²

V = volume of wastewater (litres) Schedule 9

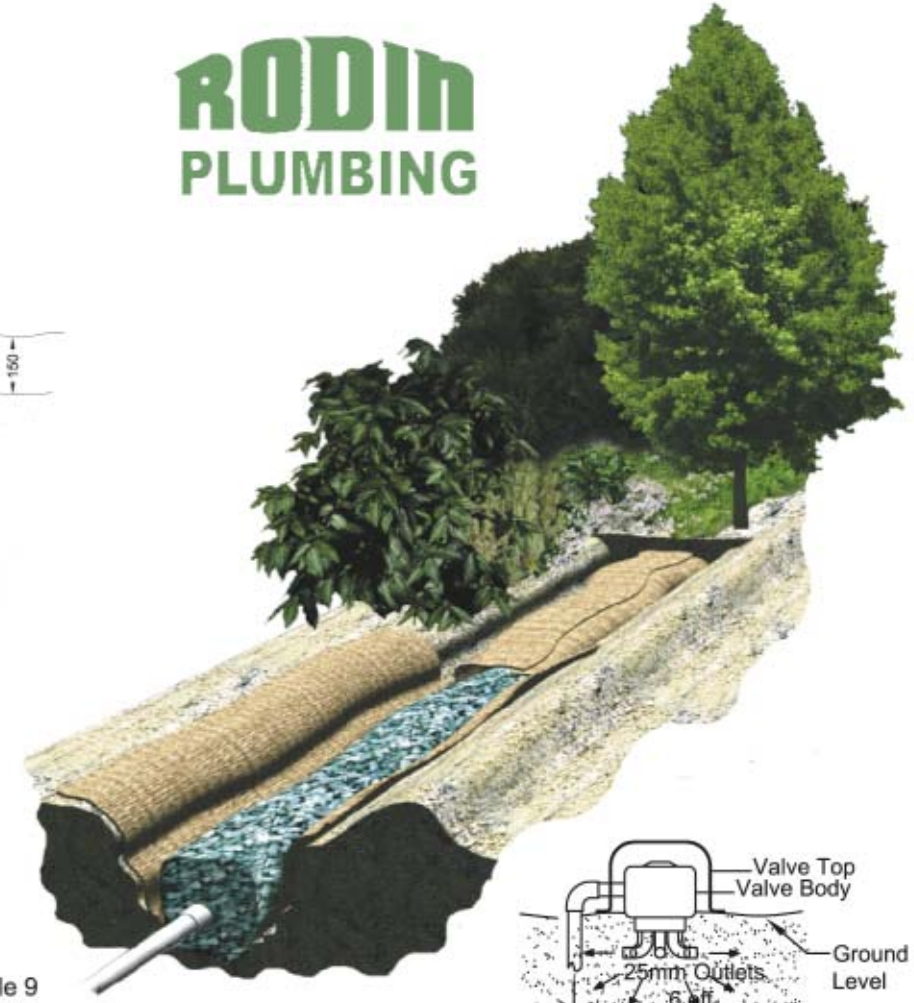
L.I.R. = loading infiltration rate Schedule 8

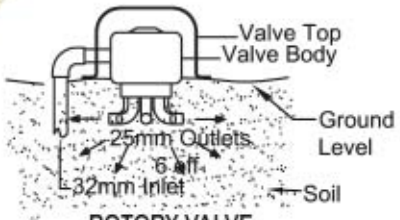
SCHEDULE 8 TABLE

GUIDE FOR L.I.R.		L I R (Load infiltration rate) litres per m² per day	
Time for water to fall 25mm (minutes)	Soil Type	Alternating System	Non Alternating System
1 to 5	sand	* 30	* 15
more than 5 to 60	loams or gravels	20	10
more than 60	impervious clays etc.	as approved by the Executive Director Public Health	as approved by the Executive Director Public Health

NOTE: IRRIGATION TO BE NO CLOSER THAN: 1.8m to a Boundry & 1.8m to a Building or Foundation

RODIN PLUMBING





ROTORY VALVE
(to achieve an Alternating System)

Available in 2,3,4,5,or 6 Stations

Note: rotary Valve must be the highest point of irrigation system

Alternating
(in sandy soil)

$A = \frac{V}{L.I.R.} = \frac{829}{30} = 27.6m^2$ Area required

Square Metre per Linear Metre = 0.9m² / 1m

Irigation Length: 0.9 ÷ 27.6 =

30 metres length of trench made up of 2,3,4,5 or 6 different stations

(2 stations 15m long or 3 stations 10m long etc.)

Non Alternating
(in sandy soil)

$A = \frac{V}{L.I.R.} = \frac{829}{15} = 55m^2$ Area required

Square Metre per Linear Metre = 0.9m² / 1m

Irigation Length: 0.9÷ 55 =

61metres length of trench using only a single station.