

# PHOENIX PLASTICS

## ENVIRODRAIN

**ENVIRODRAIN** is a sub surface corrugated drainage pipe manufactured to Australian Standard 2439 – Part 1.

**ENVIRODRAIN** is utilised for sub surface drainage of domestic to agricultural projects as well as construction and road projects. The light weight corrugated pipe has regularly punched slotted openings along its entire length to allow an efficient drainage solution that is durable and easy to use.



Excess ground water can have far reaching effects on the structural strength of buildings and roads as well as water logging of domestic areas, agricultural land and sporting facilities. Sub surface drainage has shown significant reduction in problems caused by salinity of agricultural land.

**ENVIRODRAIN** installation is dependent on the size and type of project. Domestic applications may only require manually prepared trenches and installation. Larger projects such as agricultural, sporting fields and road construction may need machine digging including dedicated laser levelling pipe installation machinery. Some projects will specify the installation design depending on the project but the following is a simple installation guide for most applications.

- Prepare a trench 200mm wider than the **ENVIRODRAIN** diameter.

- Select a suitable clean aggregate to act as a filter and pipe bedding. This is important with aggregate no larger than 12mm.
- Place a 50mm bed of clean aggregate in the bottom of the trench to allow a consistent gradient for water flow with no significant variations that may cause blockages.
- Place the **ENVIRODRAIN** in the trench and backfill with clean aggregate around the pipe ensuring all sides are filled and sufficient cover to reduce movement of the pipe.
- Select a light porous cover soil and bury the pipe to a recommended 150mm minimum coverage. This coverage depth will vary and increase where heavier surface loads are experienced.
- If the filter aggregate, backfill material or original earth is or contains very fine material, a filter sock around the pipe should be used to prevent the fine material entering and blocking the pipe.
- **ENVIRODRAIN** is available with RTA grade filter sock for road and civil engineering projects and standard grade filter sock for domestic applications.
- The grade of the drainage pipe line will vary depending upon the situation but in all instances it is important that the drainage pipe line falls at a consistent rate with no significant variations up or down. Significant variations up or down will cause changes in water velocity which may cause soil particles to accumulate resulting in blockages.

**ENVIRODRAIN** also is also a very efficient soakwell in distributing unwanted rainwater underground in sandy soils. A benefit of using **ENVIRODRAIN** as a soakwell is that you can bury the pipe in a simple trench in any direction you desire. The distribution of water efficiency can be easily increased by simply increasing the length of pipe or backfilling around the pipe with gravel – remembering to always slope the pipe away from the water source. In very sandy soils it is advisable to install pipe fitted with a filter sock to prevent blockage.

Golf courses, local parks and various sporting fields are all locations where the usage of the facilities is determined by climatic conditions and the recovery rate of the surface area of the facilities. **ENVIRODRAIN** can maximise drainage efficiency and return the surface area to a useable condition.

**ENVIRODRAIN** is also available without perforations where transfer of water is required from collection points to discharge into dams or other drainage systems.

Fittings such as ‘Y’ joiners are also available. Fittings such as bends are not required as the pipe can easily be bent around normal curves

### GUIDE FOR PIPE GRADES

0.5% to 1.0% - Civil engineering projects
1.0% to 3.0% - Sporting facilities, parks etc.
0.2% & over - Flat agricultural land

### PIPE SIZE & FLOW GUIDE

#### MAXIMUM FLOW CAPACITY

Gradient	Flow & Velocity	50mm OD	65mm OD	80mm OD	100mm OD
1:80	Cubic m/h	2.5	4.5	8.3	15.8
	m/s	0.5	0.5	0.6	0.8
1:100	Cubic m/h	1.6	3.3	5.8	11.1
	m/s	0.3	0.4	0.4	0.5
1::200	Cubic m/h	1.2	2.3	4.1	7.8
	m/s	0.2	0.3	0.3	0.4
1:300	Cubic m/h	1.0	1.9	3.3	6.3
	m/s	0.2	0.2	0.3	0.3
1:500	Cubic m/h	0.8	1.4	2.6	4.9
	m/s	0.1	0.2	0.2	0.2
1:750	Cubic m/h	0.6	1.2	2.1	4.0
	m/s	0.1	0.1	0.2	0.2
1:1000	Cubic m/h	0.5	1.0	1.8	3.4
	m/s	0.1	0.1	0.1	0.2

### ENVIRODRAIN SIZES AVAILABLE

Outside Diameter	Class Of Pipe	Material	Standard Stock Coil Lengths Note: Various lengths available on request.
50mm	400	High Density Polyethylene	10m – 20m – 100m – 200m
65mm	400	High Density Polyethylene	10m – 20m – 100m – 200m
80mm	400	High Density Polyethylene	10m – 20m – 100m
100mm	400	High Density Polyethylene	10m – 20m – 100m
100mm	Envirostorm	PP	30m

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