

### Introduction

Draincoil® can be easily installed due to its long coil lengths, flexibility and light weight. Subsoil drains can be installed by:

- Trenching
- Ploughing into the ground

Draincoil® pipes are flexible and when buried and develop an interaction with the surrounding soil to resist the loads on the system. Therefore, adequate soil support at the sides of the pipe is essential for proper performance.

### Main Installation Features

- Trench width should be as narrow as practicable but approximately 200mm greater than pipe diameter to allow for compaction of pipe bedding material under the haunches.
- Selected overlay material to a minimum of 150mm over pipe.
- The above two features provide a filter zone.
- For agricultural applications, a minimum of 650mm cover should be maintained to avoid deep rippers and heavy machinery.
- A 50mm minimum pipe underlay of filter material should be first placed in the trench to take out any irregularities in the trench bed and provide a drainage path underneath the Draincoil® pipe.
- Ensure that appropriate filter material aggregate or coarse sand is used. A maximum filter aggregate size of 13mm should be used.
- Trenches should have clearly cut sides to avoid contamination of the filter during construction.

### Pipe Laying

- As most water enters the pipe from underneath, there is little point in installing a drain deep into a solid clay layer. Where such a layer occurs within the planned depth zone of the drainage system, the pipe should be installed just into this layer. In heavy clay soils, granular backfill should be brought to the top of the clay layer in order to keep the pipe at a minimum depth of 650mm.
- Always ensure that the pipe has only porous soil above, avoiding heavy clay backfill which restricts the flow of water to the pipe.

- The pipe should be kept in the centre of the trench and the filter material compacted under the haunches, around the sides and above the pipe.
- Draincoil® may be connected to the stormwater system or to a soak pit.
- Draincoil® connections must never be made into the sewerage system.

### Minimum Cover Over Pipe (Dimension H)

Draincoil®	Minimum Cover Height
Not subject to vehicular loading	300mm
<b>Subject to vehicular loading:</b>	
• Not in roadways	450mm
• In sealed roadways	600mm
• Under unsealed roadways	750mm
Pipes in embankment conditions or subject to construction equipment loading	750mm
Agricultural applications subject to deep rippers & heavy machinery	650mm

### Depth and Spacing

#### Typical Depth & Spacing for Agricultural Subsurface Drains

The following table should be used as a guide only. The design of a subsoil drainage system is influenced by a number of factors, including for example, topography, soil texture, tree spacing, vehicle access and proposed crop requirements. The advice of relevant authorities and design specialists should be sought.

Soil Type	Depth (m)*	Spacing (m)
Deep light sand	1.8 – 2.1	27 – 40 †
Loam	1.2	13
Clay loams & clay	0.9 – 1.1	7 – 13

\* The depth of the impermeable soil layer is the critical factor in determining maximum drain depth. Spacing varies depending on the soil texture. The relevant authority in each state is available to advise a drainage depth and spacing for the appropriate crop.

† Good results have been achieved at spacing up to 80 metres.