



# TUBOSIDER

GRUPPORUSCALLA

UNITED KINGDOM LTD



**SOAKAWAYS** reduce the amount of water disposed of through surface water sewers or into local water courses and can also provide some degree of filtration.

Infiltration drainage systems or **SOAKAWAYS** are a traditional means of disposing of stormwater from buildings and paved areas. **SOAKAWAYS** reduce the amount of water disposed of through surface water sewers or into local water courses and can also provide some degree of filtration.

Tubosider's **SOAKAWAYS** are fabricated from perforated corrugated galvanised pipe produced from pre-galvanised steel coil, similar to Helibore pipe. The % perforation of a pipe is varied according to the desired outflow rate. Unlike other forms of **SOAKAWAY**, Tubosider systems are always fully accessible for inspection and maintenance.

#### Key features and benefits:

- full design and detailing service, consistent with SUDS, using the latest software.
- perforated pipe systems manufactured in diameters from 0.3m to 3.6m to fit any situation
- variations in % perforation of a pipe to influence outflow rates
- choice of pipe systems or vertical rings or a combination of the two
- Tubosider systems are always fully accessible for inspection and maintenance

## STRUCTURE AND PERFORMANCE

Manufacturing perforated pipe in diameters from 0.3m to 3.6m to fit any situation, Tubosider can produce pipe systems or vertical rings or a combination of the two. We can also provide a full design and detailing service, consistent with SUDS, using the latest software.

Several key criteria determine the suitability and performance of an infiltration system. Briefly, these are:

- 🔩 the capacity of the soil to infiltrate water - the "infiltration coefficient"
- 🔩 existing or historic groundwater levels - should be at least 1m below the invert of the intended **SOAKAWAY**
- 🔩 the plan area available for siting of the **SOAKAWAY** unit

## DESIGN METHODS

CIRIA Report C697, the SUDS manual, lays emphasis on dealing with runoff at source. Tubosider can design and manufacture a number of systems consistent with SUDS philosophy and methods.

Tubosider have the resource to provide solutions using Microdrain software and also BRESOAK. These methods provide results which are acceptable for building control purposes.

The method for sizing a **SOAKAWAY** is based on the equation of volumes:

**I - O = S** where

**I** = Inflow from drained impermeable area

**O** = Outflow infiltrating into the soil during rainfall

**S** = Required storage in the soakaway

## ACHIEVING THE RIGHT SOLUTION

The inflow rate for **SOAKAWAY** design is normally based on a 1 in 10 year storm return period.

The soil infiltration rate is best established by excavating soakage trial pits on site and following procedures such as those described in BRE Digest 365.

The time of emptying of a **SOAKAWAY** should be 24 hours to reduce from full to half volume, in readiness for subsequent storm inflows.

The rate of outflow from a trench system will depend on its depth and width and on the numbers of pipe runs within the excavation.

## USEFUL REFERENCES

- CIRIA Report C697, the SUDS Manual**
- BRE Digest 365**
- CIRIA Report 156, Infiltration Drainage**

