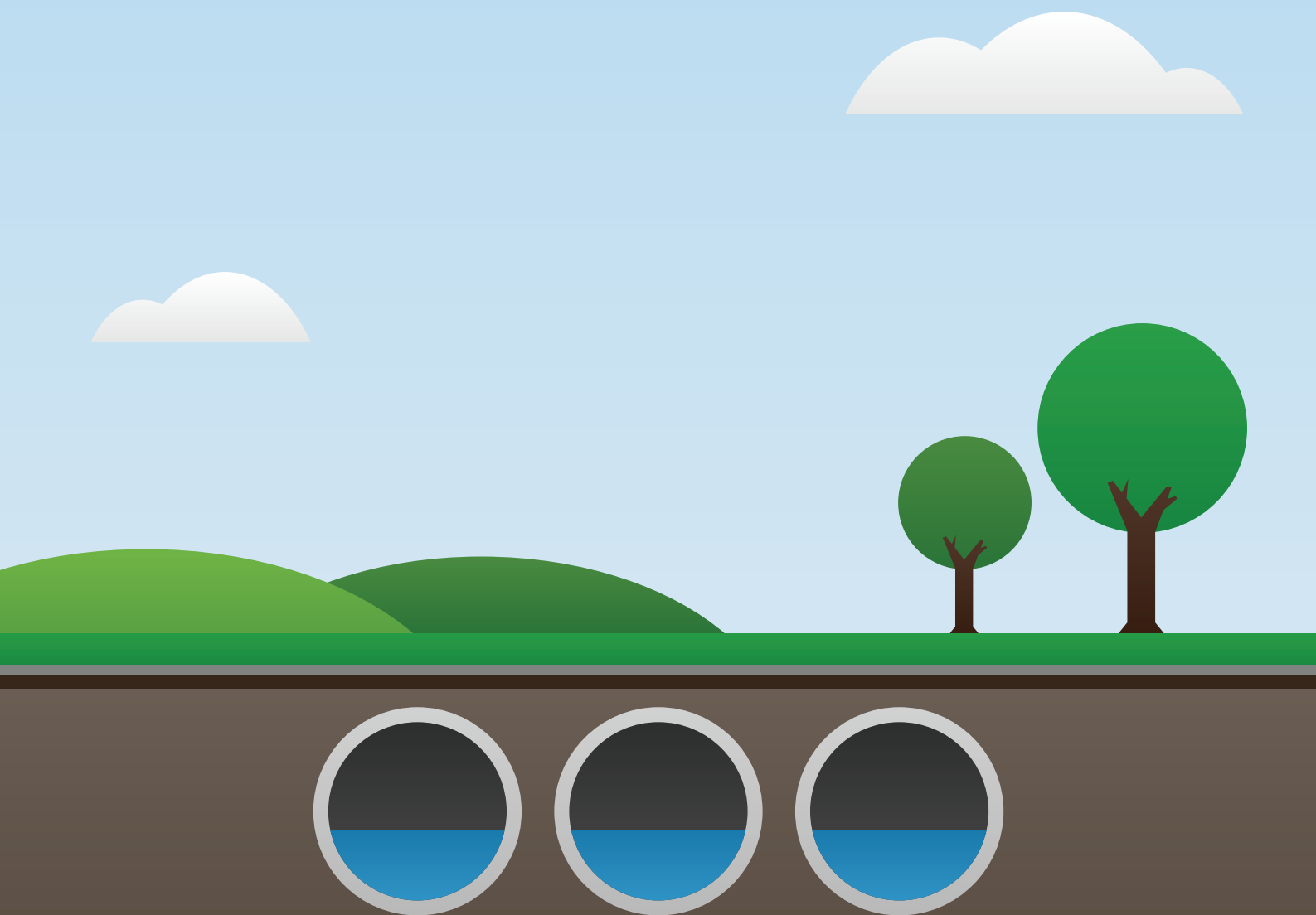


# TWINSTORE

Brochure



# What is Twinstore?

Twinstore is a patented system of stormwater attenuation which offers even further benefits over conventional systems such as thermoplastic chambers.

Developed in 2008, it is completely versatile and widely specified in the UK and Ireland as a means of reducing the tank footprint and cost.

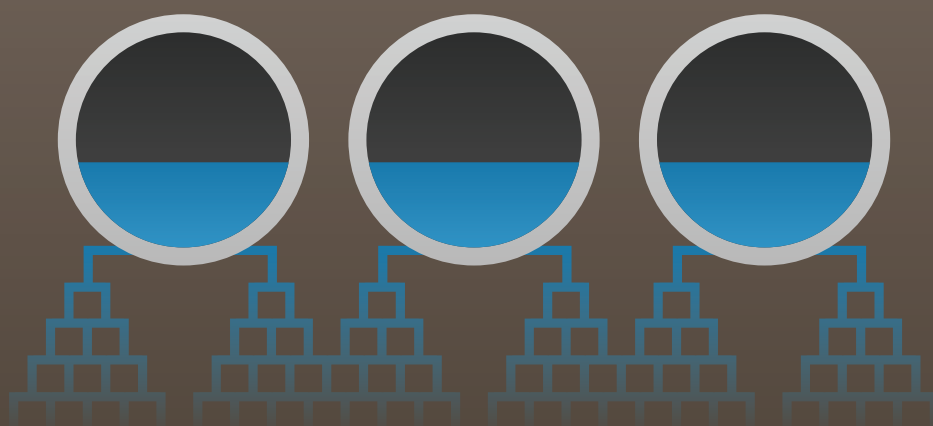
## How does Twinstore work?

Twinstore uses a manifold of lightweight, helically wound galvanised steel pipes in any diameter from 0.3 to 3.6 metres installed below the surface in a lined bed of granular material.

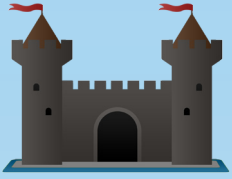
Instead of being sealed by Tubosider's watertight gaskets to create a controlled discharge tank, the pipe ends allow water to pass out into the granular fill. It balances water freely between the pipes and the backfill contained within an impermeable membrane.

By balancing the ratio of 100% void tanks to granular fill (typically 40% void), Twinstore reduces the volume and cost of the pipe system - the critical factor in any specification.

The bed of granular fill is lined with either an impermeable membrane or a geotextile liner, according to local conditions and requirements. Bentonite is particularly suitable with Twinstore, as it seals on wetting. Furthermore, the water is cleaned as it passes through the granular fill.



# Twinstore's features and benefits



## Versatility

Like any Tubosider stormwater attenuation tank, Twinstore can be fabricated to an infinite variety of layouts, unlike concrete chambers or cellular systems which are limited by size and shape.



## Reduced footprint - reduced cost

Twinstore's patented system increases the gross volume of storage with a footprint that is comparable to cellular systems.



## Easy to handle and quick to install

Tubosider lightweight steel tanks are delivered fully pre-fabricated and make handling and installation quick and simple for a small unskilled team, with no need for heavy lifting gear.



## Loadbearing capability

Manufacture to HA Standard BD 12 makes Tubosider's steel pipe systems supremely fit for purpose, capable of carrying temporary construction loads during construction and full motorway live loads if required.



## Maintainability

Twinstore can be fitted with access shafts, ladders and inlet and outlet connections for ready inspection and maintenance, and as silt cannot escape from the pipes, it is a simple job for a gulley cleaner if needed



## Recyclability

Our helibore steel pipe is manufactured from a high percentage of recycled steel and is fully recyclable, unlike cells or concrete.

# Design

Tubosider can provide assistance throughout the project, designing a tank layout to suit any layout and capacity according to the return period and the permissible discharge rate. The services we provide free for any project include an outline design and drawing, cost estimate and installation instructions.

## How does Twinstore compare?

|                               | Twinstore                     | Standard tank                 | Cells/Crates                        | Permeable paving                     |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------------------|
| Voids                         | -                             | 100%                          | Max m 95%                           | Max m 40%                            |
| Footprint                     | Small                         | Medium                        | Small                               | Large                                |
| Versatility                   | Good                          | Good                          | Limited by strength                 | Limited by strength                  |
| Installation                  | Easy                          | Easy                          | Easy                                | Complex                              |
| Strength                      | High - full highway liveloads | High - full highway liveloads | Limited - live loads and dead loads | Limited - unsuitable for heavy loads |
| Accessibility/<br>Maintenance | Fully accessible              | Fully accessible              | Not accessible                      | Not accessible                       |
| Cost                          | Low                           | Medium                        | Medium                              | High                                 |

## What specifiers and contractors are saying

- “ Delivered to us on a daily basis throughout the installation, which went in with no problems as usual, even in the limited space we had to work with. ”
- “ Installation is quite straightforward and needs no special expertise - and the support is excellent, from design and procurement through to delivery. ”
- “ Twinstore’s shallower design saved us up to 20% in tank volume, and the pipes were not only compatible with the incoming pipework, but could also be easily brought on site on a lowloader. ”
- “ The open jointed design saved us space by balancing water storage between the tank and the Bentonite lined fill. ”

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