



# M62 Junction 25 to 26

**Type of System:** Stormwater Attenuation

**Date of Installation:** June 2012

**Tank Size:** 627m<sup>3</sup>

### Site Problem:

A newly implemented junction infrastructure on the M62 between junctions 25 and 26 had been subjected to frequent flooding over the previous three years. A solution needed to be found to alleviate flood risks in the vicinity, allowing traffic to continue during heavy storms and prevent flood damage to surrounding properties.

### Project Requirements:

The tank was to be located on the hard shoulder of the M62, where it would be subject to the high speed traffic above. This meant that on top of dealing with the usual stormwater requirements, the tank had to be capable of dealing with the structural loading from the surrounding areas of the tank.

Furthermore, the scheme was adopted by the local authority and the highways agency, who had specified requirements for inspection and maintenance access points, as well as various other requirements for the supply of appropriate test data.



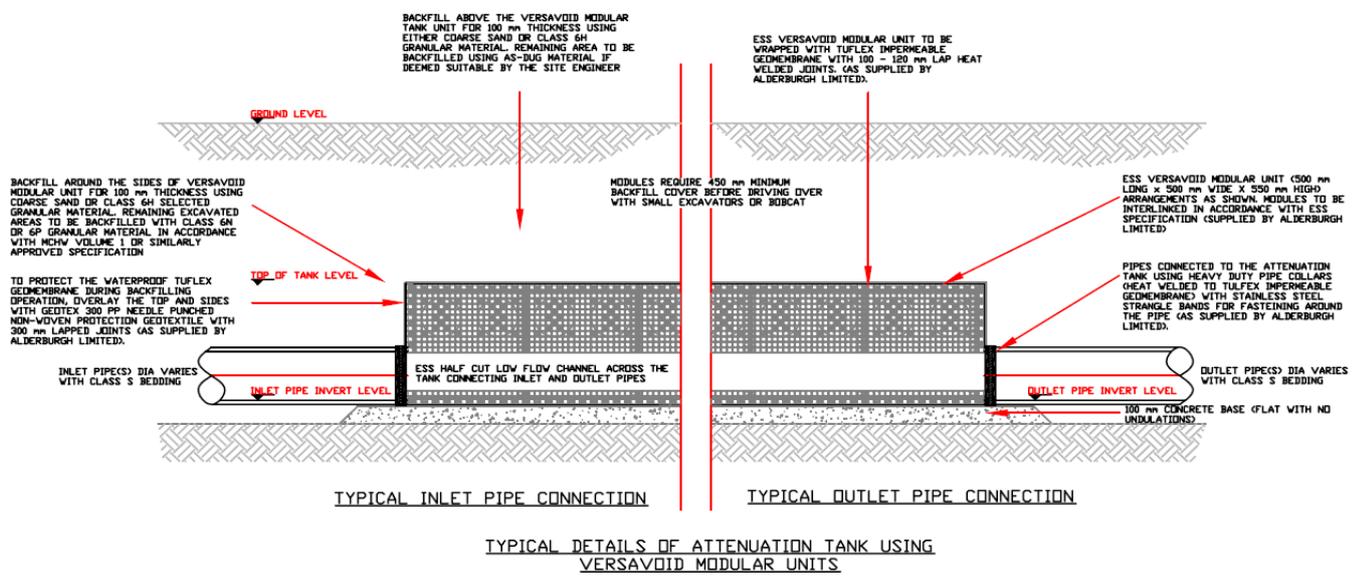
**VERSAVOID**

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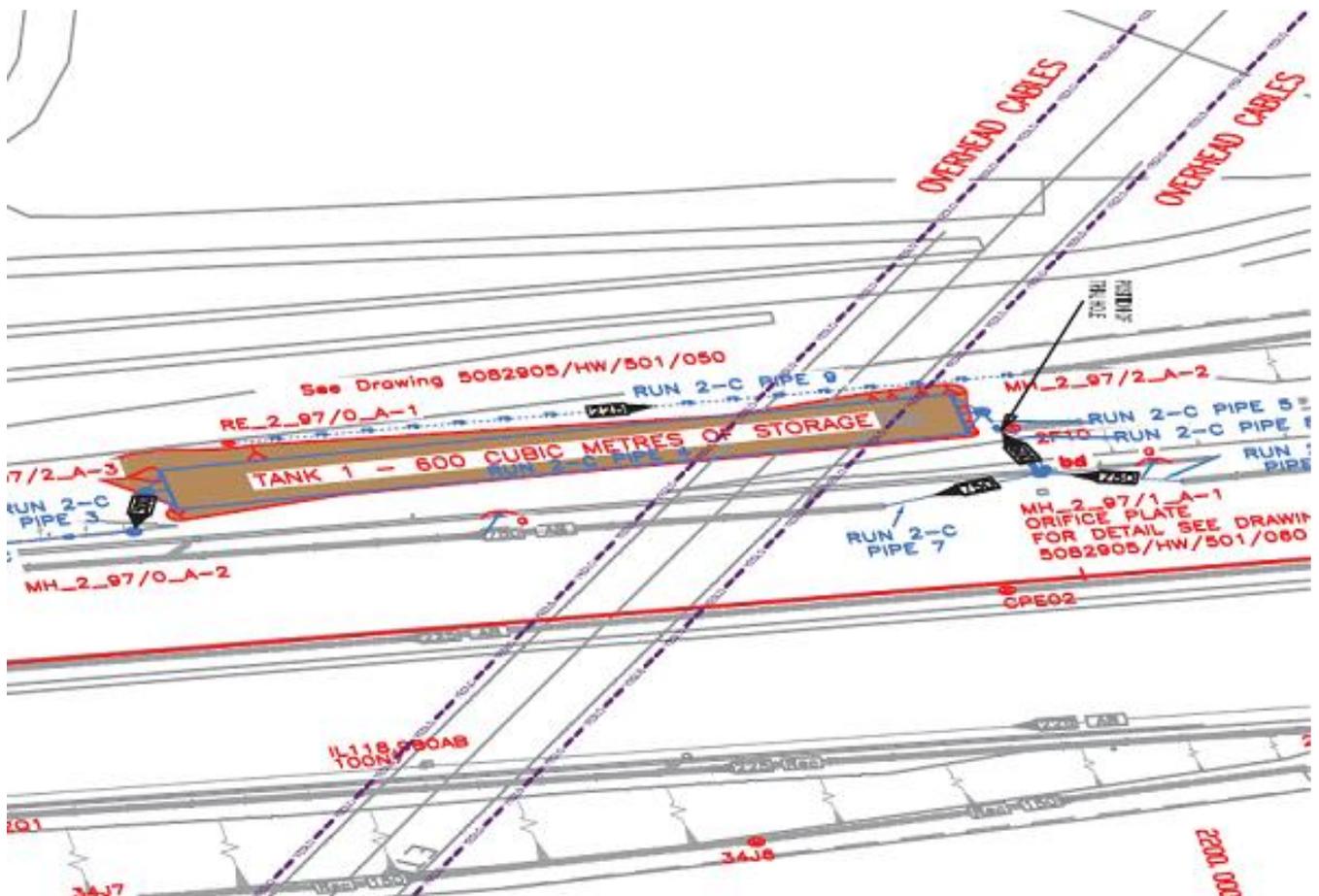
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### ESS Solution:

ESS specified a modular VersaVoid tank with a void ratio of 96%. At 627m<sup>3</sup> this provided approximately 602m<sup>3</sup> of storage capacity for excess stormwater runoff from the surrounding roads.

The 320kN/m<sup>2</sup> loading strength provided by each module gave the tank the required structural stability to cope with loading from above. The 120kN/m<sup>2</sup> lateral strength provided the same capability horizontally, allowing the tank to cope with any side loading that may occur from traffic flows either side of the tank.

Other additions included three inlets/outlets with 225mm diameter pipes, as well as three inspection units above the tank for maintenance and inspection at 25m centres.

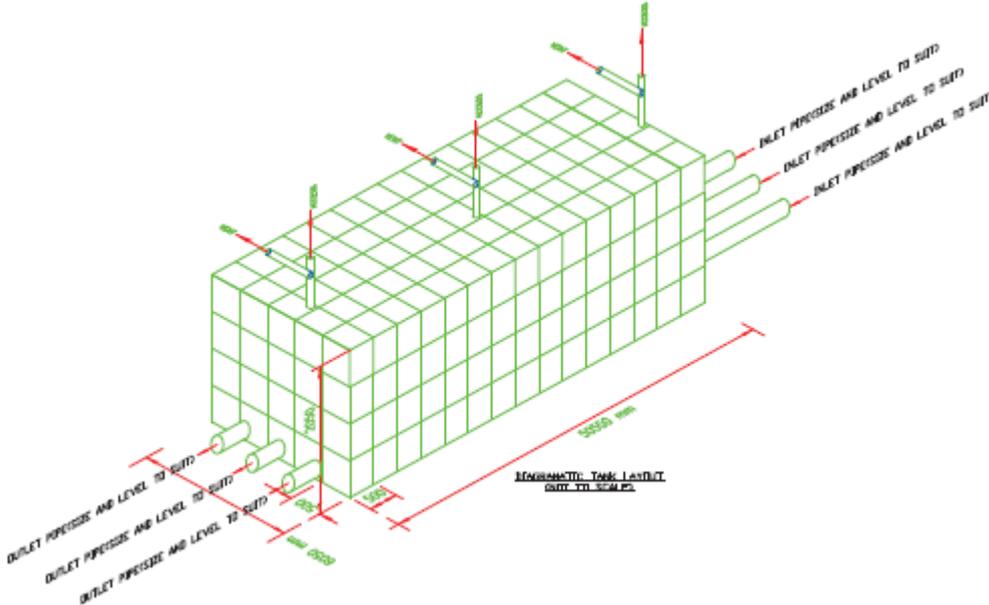




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## Special Considerations:

Rectangular Tank Configuration: 50.55m x 6.05m x 2.05m  
= 627m<sup>3</sup>  
Nett: = 602m<sup>3</sup>  
Gross: = 627m<sup>3</sup>



The straightforward tank shape, combined with VersaVoid’s modular configuration, meant the tank was simple to create and install





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### Specialist Considerations: Loading Compliance

Due to VersaVoid being independently tested according to CIRIA guidelines – and by two separate institutions – ESS were able to provide all of the specified test data. The information provided complied with all of the necessary documentation, such as CIRIA C680, 609 and 697.

All tests, including compressive strength, lateral strength and long term creep tests, complied with CIRIA guidelines as outlined in CIRIA C697 and followed defined methodology outlined in C680. On top of this, ESS supplied its own in-house test data.



### Special Considerations: Access

The Highways Agency had specified for access as a main priority of the installation. VersaVoid's unique, open and accessible structure was immediately able to provide total access with the addition of a few external access points.

For vertical access, ESS suggested inspection units to be installed at 25m centres above the tank, allowing safe access that did not interfere with the heavy traffic flows either side of the traffic island.

For horizontal access, manifold manholes were installed at either end of the tank above the inlet/outlet chambers. This provided complete access throughout the tank for any future maintenance or inspection to be carried out.





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### Summary:

- VersaVoid provided a design that met all of the stringent requirements set by the local authority and the Highways Agency including CIRIA requirements for both loading and access.
- Modular configuration allowed for a flexible, ideal site solution that worked with other existing infrastructure both above and below ground level. The modular assembly further reduced installation times allowing a much more economical solution to be found.
- Load bearing capabilities and high void ratios provided the most efficient solution for a restricted site with loading issues.

