Queen Elizabeth Hospital, Birmingham

Type of System: Stormwater Attenuation

Date of Installation: 2009

Tank Size: 1,100m^3

Site Details:

The Queen Elizabeth hospital in Edgbaston, Birmingham opened in 2010. It was Britain's biggest "super hospital" at a cost of £545 million. The site required an attenuation tank of around 1,100m^3.

Project Requirements:

The tank needed to be deep enough to provide the required volume, and strong enough to withstand the loading and cover level that would be placed upon it.

VERSAVOID

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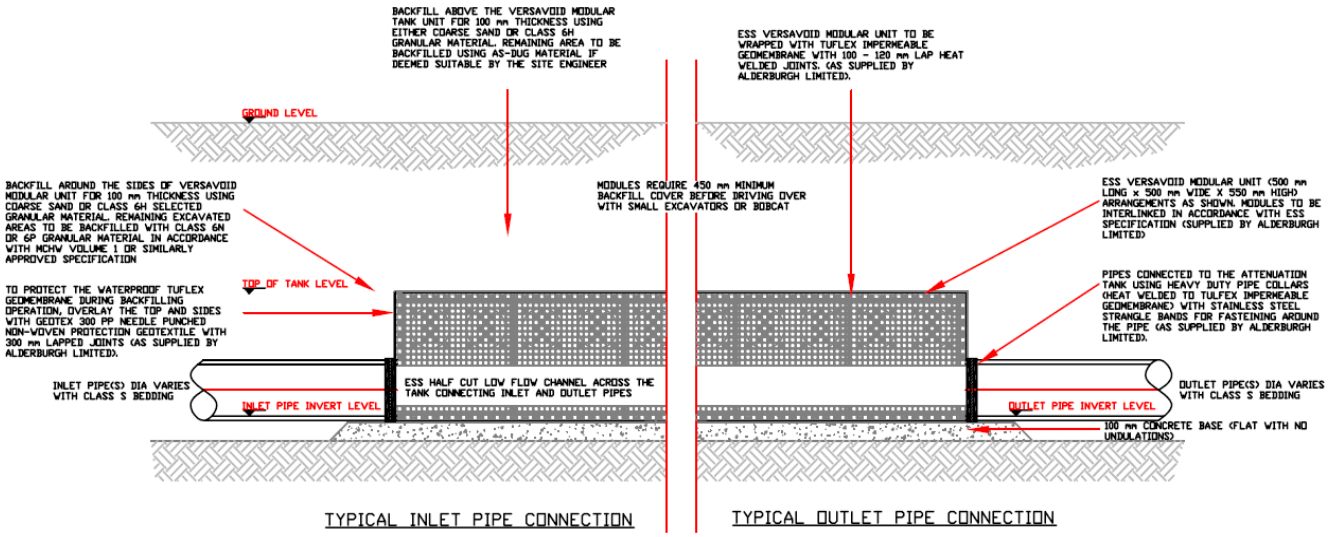


TYPICAL DETAILS OF ATTENUATION TANK USING VERSAVOID MODULAR UNITS

Queen Elizabeth Hospital, Birmingham

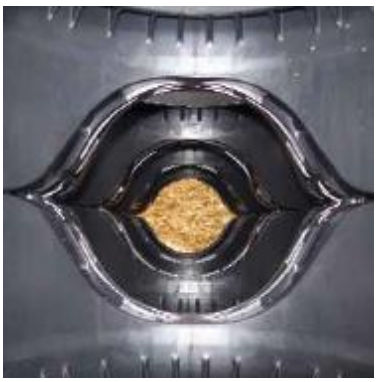
ESS Solution:

ESS opted to provide the VersaVoid product due to its outstanding compressive and lateral strength.

This meant the product was more than capable of providing the loading strength required. Furthermore, due to the modular assembly of the system, the required depth was easily achievable.

The system was also able to provide a massive eight metres from tank invert to ground cover level.

ESS has extensive and stringent test data with regard to compressive & lateral loadings, and long-term creep on its products, which enabled us to provide the calculations and back-up to the design team.



Queen Elizabeth Hospital, Birmingham

Summary:

- 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.
- The high void ratio of the modules meant less excavation was required due to their high storage capacity.