

SCHEME

Arbury Park Development

CLIENT

Galliford Try

CONSULTANT

WSP Development

WEHOLITE SOLUTION

Multi-legged WEHOLITE HDPE storm water attenuation tank (3 km x 2.1 m diameter)

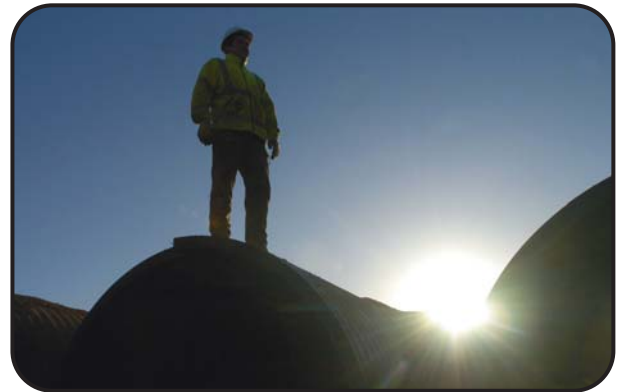
Largest WEHOLITE delivery on record at Arbury Park Development, Cambridge



Over three kilometres of 2.1 m diameter WEHOLITE HDPE was installed at the new multi-million pound Arbury Park development in Cambridge by main contractors Galliford Try.

Supplied by ASSET International Ltd - the £1 million WEHOLITE HDPE delivery is one of the largest on record and forms part of a £13 million investment to help minimise the risk of flooding and provide the necessary infrastructure such as roads and utilities.

Located on the northern fringes of Cambridge, the development led by Gallagher Estate includes a new community centre, a range of formal and informal play facilities, 900 new homes, a new primary school and improved roads and transport links. Lands Improvement Holdings, Kings Hedges Investments Ltd and Cambridge City Council are joint landowners.



Before the storm water storage tanks could be installed, groundwater had to be drained from the site by way of well point dewatering.

In order to maximise the land that could be developed on the 32 hectare site, whilst minimising the risk of flooding precipitated in part by the areas high water table, the infrastructure design and development required a suitable solution provided in part by using large diameter WEHOLITE HDPE to act as storm water storage tanks.



THE ESSENTIAL HDPE WATER MANAGEMENT SOLUTION

CONTACT ASSET International Ltd:

Head office: Stephenson Street, Newport, South Wales, NP19 4XH

Tel: 01633 271906 - Fax: 01633 290519 - E-mail: sales@assetint.co.uk - Web site: www.weholite.co.uk

Scottish office: 1 McMillan Road, Netherton Industrial Estate, Wishaw, Lanarkshire, ML2 0LA

Tel: 01698 355838 - Fax: 01698 356184

The WEHOLITE HDPE installation was then carried out in two stages, the first involving the prefabrication and on-site assembly of four 2.1 m diameter tanks. Each tank was delivered to site in eight sections, then welded together to provide a storage capacity of 350 m³ per tank. This was then followed by the installation of a 1 km WEHOLITE HDPE tank, also measuring 2.1 m in diameter.

Specifying WEHOLITE HDPE, WSP Development and Transportation Associate, Colin Sharp, said: "Our major consideration was finding a product that could easily be adopted by Anglian Water and did not require large-scale jointing. As WEHOLITE HDPE was available in lengths of up to 15 m, the product was chosen as the best and quickest option for use under public spaces."

The 1 km tank has a storage capacity of 3,500 m³ which together with the four smaller tanks allows for nearly 8,000 m³ of additional water storage during periods of heavy rainfall, thus minimising the risk of flooding and pollution into nearby water courses.

The tanks will act as a buffer between the new development and the existing main drainage system, storing storm water run-off for gradual, controlled release over time.



Naturally, preventing flotation of the tanks was the next concern. By using computer simulated techniques at ASSET International Ltd to calculate WEHOLITE's breaking point, the decision was made to put a concrete slab on top and the tanks were joined to the existing network by way of a band seal.

Commenting on the early success of the works, Richard Lakin, Site Agent at Galliford Try said: "The speed with which the WEHOLITE HDPE tanks were installed was impressive. Despite some wet weather in December, the first four tanks went in in less than two weeks, whilst the remaining 1 km tank was installed in around a fortnight.

"As the average 14 m length weighed around 3.3 tonne compared to 8.6 tonne per 2.5 m length in concrete (a total of 49 tonne), we were also able to use lighter equipment and any alterations needed could be made on site without holding up other works."

Using WEHOLITE HDPE aided early completion of the first set of houses. It will take between three and four years to build the full 900 houses.

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