

**SCHEME****Chesterfield Residential Development****CLIENT****UCS Civils Limited adopted by Yorkshire Water****CONSULTANT****Steve Daykin Consultants****WEHOLITE SOLUTION****497 m x 1.5 m diameter, multi legged 2KN WEHOLITE**

### **WEHOLITE storage solution placed beneath car park site at Barratt Homes residential development, Chesterfield**



WEHOLITE was chosen as a rain water attenuation tank solution for a residential development of 150 dwellings for Barratt Homes East Midlands. The tanks were positioned under a future residential car park having been pre-designed for such loadings.

The purpose of using WEHOLITE in this case was to reduce the flash flood effect of a prolonged hard surfaced catchment area, in the event of a large amount of storm rain entering a watercourse in a short space of time.

By using WEHOLITE, the outlet to the watercourse can be regulated by a Hydro-brake, otherwise known as a Reduced Diameter Penstock, and released slowly over a much longer period of time.

Barratt Homes identified the need for housing in the area and purchased the land some years ago. The site was formerly industrial warehousing, a heavy steelworks industry, a WW2 munitions factory and manufacturing businesses on what was called Chesterfield Cylinders site.

Following discussions between the client and contractor, ASSET International Ltd. was chosen to supply thirty 14 m long 1.5 m diameter WEHOLITE sections and eleven 7 m long special end sections.

Phase one of the works, involving the attenuation tanks, began in September 2005 and finished in November 2005. Pipes were excavated, installed and backfilled in a period of three weeks. ASSET then welded the pipes within a further period of two weeks. Ground investigation suggested that the foundations of the previous buildings and ground contamination on other parts of the site may have affected the installation on site. However, there were no major obstacles that WEHOLITE could not succeed. Phase two, involving the placement of drainage systems for the 150 homes, is in working progress.

Mike Evans, Planning Manager for contractor UCS Civils Limited said, "ASSET WEHOLITE was chosen in preference to precast concrete box culverts of equivalent storage volume, for economic and productivity reasons."

Mike continues by identifying the key benefits to using WEHOLITE on this particular site, "WEHOLITE provided a shorter manufacture and delivery period with no need for large mobile cranes during installation, resulting in savings in plant costs and overall project time scale."

## **THE ESSENTIAL HDPE WATER MANAGEMENT SOLUTION**

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