

Streetsbrook Valley Flood Alleviation, Solihull (Severn Trent AMP4 Contract).

Client: Severn Trent Water
Value: £3.1m
Period: April—December 2009

A large number of property floodings in the Streetsbrook Valley catchment area of Solihull required an integrated range of solutions to remove the sewer flooding risk and achieve the benefits necessary. The designed scheme includes a large amount of foul and surface water sewer replacement and upsizing together with strategic flood storage provided by shaft tank pumping stations.

There was significant public interest and opposition to the scheme, including from Solihull MBC, in this affluent area of the West Midlands which included the requirement to enforce a number of road closures and diversions on main arterial traffic routes through Solihull and into Birmingham to complete the extensive re-sewerage programme. Prior to the work commencing a public meeting was held to allay residents fears about the nature of the work and to explain the benefits, proposed plant and methodology and to introduce the construction team.

During the work both Severn Trent's site staff and our construction team carried out a high profile customer care strategy which included visits and talks to local schools and businesses and regular liaison and updates with affected residents.

The success of the strategy and the professional way the scheme was carried out can be measured by the fact that we did not have one complaint during the project.

The main work included

- At one end of the drainage catchment a 10.5m dia x 20m deep shaft tank was constructed in the private land of West Warwickshire Sports Club to provide 1200 m3 storage
- 2 no shaft tanks were constructed adjacent to each other in POS at the mid point of the catchment; 1 x 10.5m x 11m foul pumped storage tank with 500m3 storage and a 12.5m dia x 11m deep storm water pumped storage tank to provide 700m3 storage
- The shafts were sunk as jacked caissons through wet sands and gravels
- Pre-cast concrete sectional shaft cover slabs were contractor designed and pre-cast on site adjacent to the shafts. A 200 tonne mobile crane was required to handle and place these units.
- Associated M+E works including 2 x 3kw pumps and 1 x mixer pump for each tank together with kiosk and telemetry.



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- Constructing 2.3km of foul and surface water sewers in open cut trench ranging in diameter from 300mm up to 900mm and depths ranging from 2.5m to 6m.
- 3 open cut gangs worked in parallel in different locations
- The majority of the open cut sewers were in poor ground conditions of running sand requiring full sheeting trench support and dewatering
- Building 66 new manholes up to 1800mm dia
- The majority of the sewers are constructed in trunk road and suburban highway and high quality reinstatements have been carried out throughout including full width re-construction in many of the carriageways and re-surfacing the sports club car park.
- In total over 6,000m² of carriageway resurfacing was carried out
- Highways affected included the main arterial route's of Streetsbrook Road and Grange Road as well as estate roads including Greswolde, Haseley Road & Beechwood Park Road
- Extensive traffic management was required including road closures and diversions and involving detailed liaison and programming with Solihull highways department

