



Application Raw Water & Sewerage
Client Essex & Suffolk
Contractor In house
Product 710mm Excel pipe in SDR21
Date 2009

ABBERTON RESERVOIR

Essex & Suffolk Water installed 710mm Excel pipes as part of a major investment programme to secure the future water supply for Essex.

In 2009, Essex & Suffolk Water started work to increase the storage capacity of its Abberton Reservoir by an additional 58% in order to meet the demand for water and to enhance the reservoir's biodiversity. The expansion work, scheduled for completion in 2013, will see the reservoir's capacity boosted from 26,000 megalitres to 41,000 megalitres.

The first stage of the investment programme involved diverting existing utilities near Abberton Reservoir. This work started with the diversion of an existing raw water main. Essex & Suffolk Water recognised the benefits of using polyethylene pipe for this part of the project.

The water company selected polyethylene pipe as it offered less risk of corrosion, high flexibility, fewer joints, lighter weight and no requirement for anchored joints or thrust blocks. PE was a cost-effective and reliable alternative to steel for this particular job with a significantly longer economic life expectancy.



GPS was awarded the order for the supply of 710mm diameter Excel (PE100) pipe. The pipe was supplied in SDR 21, which denotes the wall thickness. By careful investigation of the actual pressure and capacity requirements, substantial project savings were made by using the SDR 21 specification, rather

than a thicker-walled pipe. The thinner pipe wall also confers greater carrying capacity to the pipeline. In total approximately 2300m of butt-fusion jointed PE pipe was required to complete the work.

One of the difficulties faced by Essex & Suffolk Water was that new pipes had to be delivered through an area of sensitive wildlife habitat and the small village of Layer de la Haye. GPS worked with Essex & Suffolk Water to minimise the number of transport movements on and off site and to choose the delivery route least disruptive to the surrounding habitat. They also investigated the delivery route to enable transportation of 18m pipe lengths around narrow access roads and tight bends. To minimise disturbance to the local community, deliveries of pipe were scheduled for off-peak times.

John Lowne from Essex & Suffolk Water commented:

“We were really pleased with the logistical and technical support provided by GPS PE Pipe Systems, which certainly contributed to the smooth completion of this phase of the project”.