

SCHEME

Thornton, Bradford

CLIENT

Yorkshire Water

CONSTRUCTION

JN Bentley Ltd

Mott MacDonald Bentley Ltd

PIPE APPLICATION

180m of 2800mm diameter WEHOLITE HDPE class 2kN/m<sup>2</sup> pipe installed as 1,100m<sup>3</sup> attenuation tank



### River Cleansing Scheme on Target Thanks to WEHOLITE



A groundbreaking scheme which will significantly reduce pollution in the Thornton area of Bradford is the first time large diameter WEHOLITE plastic pipes have been used on a Yorkshire Water capital project. This scheme forms part of Yorkshire Water's Urban Pollution Management Strategy for AMP 3, which includes large scale civil engineering works to significantly reduce the impact from 50 combined sewer overflows (CSO) on the Bradford Beck river system.

The £0.65m scheme will result in Bradford Beck, complying with the RE3 river ecology classification.

Yorkshire Water currently supplies water and sewerage services to 1.7 million households and 140,000 businesses and collects, treats and disposes of about one billion litres of water per day. As part of its targets to improve the water quality in and around Bradford under APM 3, a CSO off Leaventhorpe Lane was targeted for improvement. A preferred solution was identified which required the construction of a new CSO chamber with a powered screen, and the provision of an amount of storage to reduce spills of storm sewerage into the adjacent Clayton Beck.

MMB project leader, Phil Jenkinson said: "We assessed the cost benefit of a number of storage solutions to attenuate up to 1,100m<sup>3</sup> of storm effluent. Given the size of the storage requirement and its proposed location, we found it would be both cost-effective and practical to lay large diameter Weholite pipes, which are available in longer, lighter lengths compared to other similar storage solutions."

The attenuation tank is made up of 2.8m diameter pipes laid to a fall in four 45m lengths in a 'snake-like' formation with a built-in overflow chamber leading to a new wet well pumping station.

Mr Jenkinson added: "During extreme wet weather conditions storm sewage is stored, with the tank filling from its lowest point until it reaches maximum capacity. Following a storm the stored effluent will be pumped back to the sewer, and it is anticipated that debris will settle towards the lower sections of the tank, where the return pumps are located in an adjacent pumping station. In addition, given the large diameter of the pipes, we have been able to install access shafts, which will allow remote jettors to be used to aid additional cleansing.

### THE ESSENTIAL SOLUTION FOR PIPE USERS NATIONWIDE

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