



Amiblu®

Pumping Station Upgrade Sheffield - UK

"We're very pleased with the quality of the GRP jacking pipes, there's less chance of error with them. Comparing them to concrete, the internal liner is much smoother which will give a better hydraulic performance. All pipes are inspected before installation and unlike other systems, none have been rejected and all drives have passed CCTV and air test inspections."

- Andy Laughton, Site Manager, Barhale

Background

The former mining and steelworks site at Waverley in the City of Sheffield was chosen for regeneration with the creation of a new residential and commercial development. To accommodate for the increase in capacity, the local pumping station needed to be upgraded, along with almost 4,000 planned new homes, retail outlets and public amenities.

Country City	UK - Sheffield
Year of construction	2019
Application	Sewer
Total length	1040 m
Nominal diameter	DN 400 mm
Nominal pressure	PN 1 bar
Nominal stiffness	SN 200,000 N/m ²
Technology	Hobas
Installation	Microtunneling
Consultant	GHD Consulting
Contractor	Barhale
Client	Yorkshire Water

Pipes designed for generations

To serve the growing Waverley community, Yorkshire Water needed to evaluate its assets as the existing pumping station did not have enough capacity to cope with the forthcoming population growth generating more sewerage, so Yorkshire Water framework contractor Barhale Construction undertook the contract to upgrade the pumping station and pipelines.

The new 2,147 m gravity pipeline is a mix of GRP and concrete, installed by microtunneling, guided auger boring and open cut techniques. Hobas GRP jacking pipes De 427, SN 200,000 in 1 m lengths were chosen for the No-Dig section as they were best suited to the challenging ground conditions and Amiblu was able to deliver in accordance with the site programme.

In addition, the outside diameter of the Hobas Jacking Pipe was a close match to the concrete DN 375 mm pipe which was laid in the open cut trenches.

Amiblu's pipes are corrosion-resistant and have a very low roughness coefficient of 0.01-0.016 mm, resulting in an excellent flow rate. They further reduce costs and operation time thanks to their light weight and the installation without wooden packers.

Conditions at the former mining site were quite challenging. The area has a high water table and consists mainly of made ground, comprising contaminated soils and several unexpected obstructions which were removed, the dug soils replaced and the guided auger boring continued. The decision to continue with the trenchless installation was made for safety and quality reasons; shoring the ground for man entry was not a feasible option for installation under the given conditions.

The project was well prepared, with 2.4 m diameter launch pits at 60 m intervals. Starting in May 2019, the Barhale team were able to complete up to 60 m drives in just one day.

Hobas GRP jacking pipes were installed through challenging ground conditions.

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