In order to increase the treatment capacity of Sutton and East Surrey’s Bough Beech Water Treatment Works a new strategic water main was constructed between the existing Buckland Pumping station and Outwood Reservoir and pumping station.

The project involved the installation of 16.4km of 800mm diameter water main and 870 metres of 500mm diameter water main to an existing reservoir and pumping station. As part of the installation, a number of no-dig crossings were required and pipe jacking and guided auger boring works were carried out at four sites to accommodate the twin 600mm diameter water mains.

From piled drive and reception pits two twin 1000 mm diameter pipe jacks, 40 metres and 70 metres in length were installed under railways, and a twin 70 metre length, 1000mm diameter was jacked under a road. The fourth crossing was a twin 900mm diameter road crossing, 60 metres in length, carried out by guided auger.

Ground Conditions were stiff clay.