Barhale

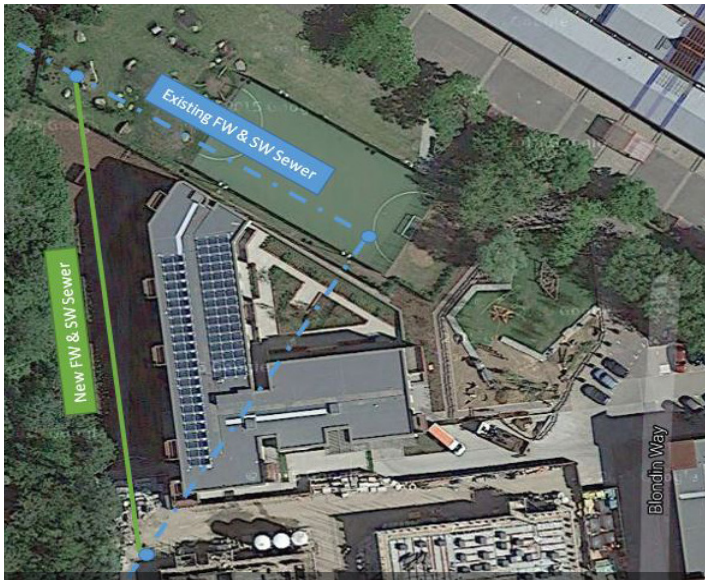
Downtown Road Sewer Diversion

Client: Barratt Homes

Location: Rotherhithe, Southwark

Value: £410k

Duration: 5 Months



Location of new and existing FW &SW Sewer

Two metre reduced dig

In Brief...

Barratt Developments sought to construct a block of low rise houses in the Rothershide area of London. To achieve this, the existing foul and storm trunk sewers that were running across the centre of the site needed to be diverted to the perimeter. The work comprised the installation of clay and concrete pipes for the new route and the forming of "on-line" manholes through which to break into the existing sewers in order to divert the flows. Once diverted, the old sewers were abandoned. The Client provided a design that showed the new route. Flows were maintained within the sewers throughout the duration of the project.

Technical Features...

Scope:

Barhale were engaged in an ICE form of contract, to locate and divert the existing sewers. We liaised with the Client's sub-contractor who removed excavated spoil, treated it and returned it to site to be used a backfill. The ground had to be excavated for the Foul and Storm sewers included the removal of sections of a previous dockyard walls, known as the Russian Dock, (a previously infilled shipyard dock that was originally used for the importing of timber from Norway, Russia and Sweden. The dock was closed in 1970). Our works were as follows:

Foul Water Works

- Barhale's team on-site excavated to a depth of 7m and formed a concrete bed and surround on the existing sewer pipe. Ground water was encountered 0.5m above crown of pipe. A 4" hydrainer pump was used to control and divert the ground water during the work.
- To achieve a 7m depth, we first reduced the ground by 2m and then used trench boxes for the remaining 5m
- We laid 81m of 450 pipe and passed below the 1500 sewer in two locations where a sheeted pit with timber polling boards below pipe was required. The pipe was supported across trench
- The existing flows were maintained whilst making final connections

Storm Water Works

- Working at a 5m depth, using trench boxes, we laid 73m of 1500mm diameter pipe
- The manhole channels were formed using vertform shutters
- When connections, we provided assistance to Barratt Developments to proving that the existing connections to the trunk sewer were dead before they were abandoned

Private Pipe

- To complete the works, we also liaised closely with the adjacent Redriff School. This enabled us to locate a 4m deep private foul water pipe and existing manhole, both on the "to be abandoned" route. The manhole for the private pipework was located underneath the school's astro turf pitch !
- Over a weekend we removed the astro turf, exposed the manhole, grouted the sewers beneath it, backfilled the manholes and relaid the pitch.
- To form the new connections and redirect the private pipe, we laid 61m of 225mm clay pipe around the perimeter of the pitch.

Laying astro turf

Customer Benefits...

By working collaboratively with our client, the combined team successfully managed a number of changes and delivery issues throughout the project:

- Working collaboratively, we identified and agreed a number of improvements to the design. These increased the size of the manholes/pipelines and required some amendment to the construction methods.
- When the client's spoil contractor was unable to attend site to remove spoil, we agreed with the Client a method for Barhale to stockpile spoil safely. Whilst this additional work affected the output rate for the pipe laying, we were still able to maintain delivery against the programme.
- Barhale managed the changes outlined above and delivered the whole project on-time, enabling the Client to commence site remediation and begin the piling works for construction.
- Barhale managed the 12 month defect inspections jointly with the Client and have since handed over the works fully to the Client.