

Britannia Road - Collapsed Sewer Under Railtrack

Client:	Yorkshire Water
Location:	Huddersfield, South Yorkshire
Value:	£260k
Duration:	4 Months

In Brief...

Network Rail informed Yorkshire Water that foul sewage was leaking to the surface and onto the railway track. After CCTV investigation and attempts at unblocking the pipeline, it was found that the 225mm diameter foul sewer had collapsed due to its 100 year old age and ground pressure caused by the trains. The sewer was shallow at only 1.5m depth and had been affected by a Network Rail track drainage project.



Technical Features...

Following an optioneering process, the damaged sewer was reinstated at its existing alignment and was relined in sections, with live flows. This required the use of a temporary overpumping system.

The sewer line crosses the main MVL3 Manchester to Huddersfield line, so the works were carried out over a series of short Rules of Route (ROR) night possessions.

The project was developed in accordance with Network Rail Standards by; Yorkshire Water, Barhale, Network Rail's ASPRO team and designers GHD. Barhale engaged Trackwork Ltd to provide specialist P-Way works, on-track plant, and safety critical staff.

Track monitoring was undertaken for the duration of the project, ensuring track geometry was maintained.

Our works were carried out during a series of 6 hour Rules of Route (midweek and weekend) possessions, when the trains would not be operational. This was to mitigate disruption as much as possible. Barhale's works on this project involved:

- Develop design F001/F002/F003
- Liaise with the ASPRO team
- Temporary works F003 ground support
- Moving sleepers
- Digging down to the sewer
- Excavations were 1-2m in depth
- Removal of collapsed clay sewer which was replaced with a new steel pipeline
- 9.9m of the damaged sewer was replaced with new 250mm diameter pipework

The CCTV investigation works identified some further works that needed to be undertaken. The pipeline had root infiltration, holes and cracks. This was rectified utilising specialist root cutting equipment and GRP internal pipe-lining along a further 18.8m of the pipe.

Once all the works were completed, the sewage contaminated ballast was jet washed down and disinfected to reduce the risk to track workers.

Customer and Community Engagement...

With support from Yorkshire Water's customer care team, Barhale contacted each customer to inform them in advance of the works, along with providing our teams' contact details.

Working collaboratively with Yorkshire Water and Network Rail ASPRO, our team developed a customer communication plan and followed this throughout the lifecycle of this project.

Aside from the onsite interaction, Yorkshire Water's customer service team managed individual customers with updates over the phone and visits to ensure that all were happy with the works being undertaken.