

# River Severn 1.7km Sewage Outfall

Stockton Drilling  
Information  
Factsheet

**Wessex  
Water**

**“One of the drills was carried out in extremely difficult conditions... And was carried out in a spirit of co-operation and teamwork, with a Stockton Director resident on site during the latter stages.”**

John Allsop  
Engineering Director  
TJ Brent Ltd



#### **Pipelines Projects HDD Specialists Management**

Stockton is a specialist pipeline contractor based in the UK, operating worldwide with the largest privately owned maxi-rig fleet of directional drilling equipment in the UK. A pioneer in Horizontal Directional Drilling (HDD) Stockton combines expertise in traditional open-cut methods with state-of-the-art HDD and tunnelling techniques to successfully tackle a variety of challenging situations.

In recent years the Stockton team has grown and developed and can now offer a full project management capability – while still taking care of those specialist crossings and demanding terrain and geology.



#### **1.7km Sewage Outfall in Tidal Estuary**

– Challenging marine conditions

#### **The Project**

The project was to fabricate and install a 1.7km HDPE gravity-fed sewage outfall within the tidal River Severn estuary. The pipeline consisted of several diameters up to 500mm, and included a 60m horizontal directional drilled outfall. 700m of the pipeline was installed above the high-water mark along the south-eastern banks of the river with the rest of the line being installed within the inter-tidal zone, including the HDD work. This section of project also took the pipeline over a rock outcrop known locally as the Aust or Black Rock.

#### **Risk Assessment**

Due to the particular challenges of working within an area well-known for a great tidal range and fast currents SDL carried out extensive risk assessments before work commenced. The risks were not restricted to the inter-tidal zone and working practices were introduced to ensure safe-working throughout the project.

Measures taken included the provision of safety wardens to ensure all personnel were logged in and out of the inter-tidal zone and to monitor the condition of the cliff face throughout the works. Specialist PPE equipment was also provided.

Before every project SDL will complete a series of assessments covering risk, health and safety and environment. With experience of working in challenging conditions, both on-shore and marine environments and are very familiar with the many environmental constraints present along most pipeline routes. A commitment to minimising any works done is inherent in the SDL approach.

#### **Environment**

The pipeline route is located within an internationally important site for wintering birds, protected as a SSI/ RAMSAR/SPA site, and is known as an area of archaeological interest. In addition, the available project window was restricted to a period of June to October to safeguard the life-cycle of the ‘Shad’ that spawns in the area, coupled with planning constraints linked to protecting the foreshore salt marsh and the Aust itself this significantly impacted operations - especially plant movements and refueling.

#### **Project Summary**

- 1.7km HDPE pipeline installation
- 100m HDD
- River Severn estuary
- Large tidal range and fast currents
- HDD drill and pipeline installation within the inter-tidal region
- Major environmental constraints
- Tight window of opportunity for project execution



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