Hampton Loade Phase 2 Station Case Study

Project: Hampton Loade to Trimpley reinforcement pump to waste main
Location: Hampton Loade Pumping Station
Duration: 5 January - 13 March 2026 (10 weeks)

Overview

This project involved the installation of a new 500mm polyethylene (PE) pump-to-waste main to enhance network resilience and operational flexibility within the regional water supply infrastructure.

Project background

The scheme was delivered to provide a resilience main enabling Severn Trent Water to abstract water from South Staffordshire Water, creating a backup supply to Trimpley Reservoir.

This strategic interconnection strengthens regional water security by providing contingency supply options during periods of high demand or operational constraint.

Project aim

The primary objective was to install a 500mm PE pump-to-waste main from the proposed 45" cross-connection position to the existing 600mm pump-to-waste main within the grounds of Hampton Loade Pumping Station.

The installation forms a critical reinforcement link to improve system resilience and operational capability.

Project highlights

The project delivered a number of notable outcomes, including:

- Successful delivery within the 10 week programme.
- Safe execution of works within a live strategic pumping station environment.
- Strong collaboration between contractor client and designers.
- Implementation of practical engineering solutions to overcome evolving design
- and site constraints.
- Delivery of a high-quality resilience asset to support regional water supply security.

Works undertaken

This phase of works included the welding and installation of 500mm PE pipeline, with careful coordination required for the installation of the pipeline across privately owned land.

The scope of activities also involved controlled entry into Hampton Loade Pumping Station grounds, where a connection was made into an existing 600mm outfall main. In response to design revisions, the works further included the construction of a new manhole connection.

To support these activities and ensure both safety and asset protection, the phase also included installation of a temporary haul road to protect existing infrastructure and facilitate safe plant access throughout the works.

Benefits & sustainability

The use of vacuum excavation technology provided several environmental and operational benefits:

- Reduced risk of damage to existing utilities and tree roots
- Minimized ground disturbance
- Lower reinstatement requirements
- Improved safety performance

The haul road installation also reduced ground compaction and protected existing buried infrastructure.

Site challenges

Several technical and logistical challenges were encountered:

- Coordinating works alongside other contractors and South Staffordshire operational staff within a live strategic pumping station.
- Avoiding existing buried structures and critical utilities, including high-voltage cables.
- Maintaining continuous operational functionality of the pumping station.
- Working in adverse weather conditions.
- Accommodating client-led design changes including a revised route and alternative connection solution.

Overcoming the challenges

The project team implemented a range of proactive measures to mitigate risk and maintain programme:

- Vacuum excavation was utilised to safely locate and expose uncharted utilities, significantly reducing the risk of service strikes and damage to high-voltage cables and existing assets.
- A temporary haul road was constructed to protect operational water mains and ensure safe, stable access for construction plant.
- Following concerns regarding the suitability of the original connection point, the design was amended and a new manhole connection was installed to provide a more robust and maintainable solution.
- Close collaboration with client representatives and designers ensured rapid resolution of technical queries and efficient implementation of revised designs.

Outcome

The completed reinforcement main enhances operational flexibility and resilience of the regional water network, providing a strategic backup supply route to Trimpley Reservoir and strengthening long-term water security infrastructure

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Client testimonial

"The team that worked on this phase of the project were a pleasure to work with in what proved to be very challenging conditions to install 300m of 500mm pipework in 8-week period. The weather was a real issue through the full duration of the work. Most of the work was situated in a farmer's field and the ground removed had to be separated and protected as this had to be returned to original condition. The team provided excellent work without delay.

The project was extremely well planned from start to finish and the team were communicated to via the site management team throughout the works ensuring delivery on time and on Budget.

Several amendments were made to the original design route, and these changes were reacted to swiftly by all team members showcasing professionalism, technical knowledge and capabilities.

Multiple health and safety audits were undertaken due to the nature of the works that included deep excavation, working at or near watercourse and maintaining safe access to the public as a public walkway was required to remain open through the entire scheme. No major or minor issues were identified which was testament to the Management and the team on site.

The delivery was a complete success, delivered in extreme conditions, adhering to strict timelines to an extremely high standard".

David Noakes
Head of Service Delivery
On Site