

# CASE STUDY



**Project:** Battle WTW Civil Engineering  
**Location:** Battle, East Sussex  
**Client:** Principal Contractor - CMDP JV  
(Costain/MWH Delivery Partnership)  
Client - Southern Water



## Project Introduction

Coleman Construction & Utilities Limited has successfully delivered a £1.7m civil engineering wastewater treatment works sub-contract in Battle, East Sussex.

As part of the AMP capital investment programme, Southern Water had identified the need for NEP P removal. The driver for this scheme was to provide new assets to help the site achieve an increase in full flow to treatment (FFT) from 39 l/s to 51.8 l/s. In addition to this the site was required to achieve a new permit limit of 0.5 mg/l of phosphorus and changes to permitted Iron levels.

Coleman Construction & Utilities Limited's contracted civil engineering scope on behalf of Principal Contractor CMDP JV comprised bulk excavation, new chambers, pipework, drainage and manholes, extension of a roadway and provision of hardstanding's, site wide ducting, draw pits and new reinforced concrete structures.

The contract was underpinned throughout by a collaborative approach with CMDP JV and Southern Water, as well as other project stakeholders, providing the basis for proactive communication and highly coordinated activities, resulting in the safe and successful completion of this wastewater civil engineering project.

## Project Deliverables - Civil Engineering Scope

### Inlet Works Area:

- 2 no. Circular pre-cast concrete ring chambers
- Concrete base
- Associated pipework
- Hardstandings and topsoil reinstatement

### Storm Tank:

- Careful breakout and removal of unknown underground structures
- Rectangular cast in-situ tank
- Associated pipework including cores into existing assets to incorporate the new pipework
- Benching
- New access road
- Hardstandings and topsoil reinstatement

### Humus Tank:

- Sheet & frame temporary works installed in close proximity to existing assets
- Careful breakout and removal of unknown underground structures
- 11.2m diameter 5.5m deep radial flow cast In-situ tank using Peri formwork solution
- Associated pipework
- Hydrostatic test
- Concrete base and hardstandings
- Connecting rectangular cast in-situ De-sludge chamber

Humus Flow Splitter Chamber:

- New rectangular cast in-situ chamber
- Associated pipework
- Associated ductwork
- Concrete base

MCC Base

Sand Filter Tank Area

Sitewide Ductwork:

- Over 300mm of ductwork trenches
- 10 no. draw pits

Sitewide Pipework:

- Mix of PE, UPVC and Ductile Iron pipework ranging from DN50 to DN500

**Challenges and Solutions**

Several challenges have been met throughout the project by Coleman Construction & Utilities Limited, which are detailed below:

- The considerable number of previously unidentified services in the area where construction was required. Our site delivery team utilised Cable Avoidance Tools and Signal Generators, as well as Vacuum Excavators, to undertake multiple trial holes on proposed service routes. Some extensive underground masonry and concrete structures were also discovered which required careful breakout and removal.
- The site suffered from a lot of surface water runoff as well as groundwater issues. These were exacerbated by extremely wet weather conditions for an extended period of time. The site team utilised pumping methods to manage the water flow and keep works progressing.
- Deliveries were part of a co-ordinated plan of plant and equipment logistics to ensure works kept on track. This was of particular importance as the site was split into two work areas with a public footpath running between the two.
- Interface with other contractors/stakeholders included collaborative early engagement meetings, regular planning, and liaison through weekly project meetings.

**Benefits**

- Coleman Construction & Utilities Limited provided a non-confrontational approach to commercial and contractual matters, preferring to work collaboratively in the interests of the project. As a result, working relationships with the client at all levels and across all disciplines are at an all-time high.
- Collaborative working has become a daily norm for Coleman Construction & Utilities staff. We always offer a solution-based approach.
- We are always striving for best practice working especially where health, safety and wellbeing are concerned - we aim for zero harm every day.
- We take pride in our work and aim to leave our sites snag free. Our attention to detail is second to none.