

CASE STUDY

Project: Hailsham North WTW
Location: Hailsham
Client: Southern Water
Value: £1.3 million



Project Introduction

Coleman Construction & Utilities Limited's contracted civil engineering project scope comprised bulk excavation, new chambers, pipework, drainage and manholes, formation of new roadways and paths, site wide ducting, draw pits and new bases. These works were in support of Southern Water's wastewater directive to reduce the phosphorous from 1.0mg/l to 0.08mg/l in line with the new permit (Driven by Habitats 1 and No Deterioration 2) by 21/12/2021.

The awarded sub-contract by Principal Contractor CMDP, was the first of 2 large wastewater civil engineering schemes in Hailsham secured off the back of Coleman Construction & Utilities progression and safety performance, as well as the quality of their workmanship.

The contract was underpinned by a collaborative approach between CDMP and Coleman Construction & Utilities Limited, which provided a basis for proactive communication and highly coordinated activities, resulting in the safe and successful completion of a complex wastewater civil engineering project on time and to budget.

Project Deliverables

- Site establishment works
 - > Including groundworks, foundations and ductwork.
 - > Provision of temporary footpaths utilising reusable plastic gridded matting, which was then easily removed on completion
- Pipe and manhole systems
 - > Bases poured with concrete and manhole rings installed
 - > Manhole surround shutters installed, and concrete poured to gain a watertight seal
 - > Core drilling of pipe penetrations
 - > Pipe runs excavated and installed using 2 types of temporary works: (1) sheets and frames were used in congested areas; and (2) trench boxes were used in areas of no obstruction
 - > Pipe work installed as per manufactures guidelines and air tested for drain runs, plus pressure tested for pumping mains

- Ferric and Alkalinity - Ferric dosing unit to dose ferric sulphate to the treatment works and remove phosphates from the treatment process
 - > Reduce dig footprint of the area for work
 - > Installation of all required electrical and dosing line ducts
 - > Installation of Cubis rapid stack draw pits
 - > Installation of pipe work for drainage and capturing of any spill of ferric during delivery
 - > 1500mm diameter manhole (intercept chamber) to hold large spill of ferric when delivery is taking place
 - > Concrete slab to house ferric dosing unit constructed on compacted type 1 and concrete blinding
 - > Concrete access roads poured with containment humps in case of ferric spillage
- Actiflo filter system (a 3-stage tertiary treatment plant and will be the first of its kind for Southern Water for a wastewater scheme)
 - > Reduce dig footprint of the area for work
 - > Installation of all required electrical ducts
 - > Installation of Cubis rapid stack draw pits
 - > Installation of pipework for delivering water to the treatment plant from the pump station and then on to FE chamber for sampling before leaving site entering the local water course
 - > Drainage manholes and pipe work installed to take surface water and drain off from filter clean outs
- Pipes and manholes within the temporary works installed using two systems of manhole boxes and trench boxes.
- Congested areas of works within all new pipes, manholes, ducts, draw pits and chambers joining together - Coleman undertook regular programme and sequencing reviews to enable all works to be planned in advance
- Plant deliveries - a co-ordinated plan of plant and equipment deliveries to ensure works kept on track
- Interface with other contractors/stakeholders - 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 became a daily norm for Coleman Construction & Utilities staff. We always offered a solution-based approach.
- We always strived for best practice working especially where health, safety and wellbeing are concerned - aiming for zero harm every day.
- We took pride in our work, aiming to leave our sites snag free. Our attention to detail was second to none.

Challenges and Solutions

A number of challenges have been met throughout the project by Coleman Construction & Utilities Limited, which allowed the project to stay on time and within budget:

- Deep excavations for the ferric interceptor chamber and chemical dosing interception chamber - solved with sheet and frame temporary works design and installations