

UK Service team Delivers Complete Sewage Pump Station on Time and on Budget

Case study facts

Location: UK

Customer: Severn Trent and Winvic Construction

Timeframe: 2022

Results:

- The pump station was completed on time and on budget
- It is operating reliably
- Saved time, hassle, and cost by providing a complete solution



Pump station exterior



Dosing plant, Mains Incomer and Actuated Valves.



Sewage pumps and MCC

Background

Mercia Park contractor Winvic Construction required a pump station for a luxury car manufacturer's new 270,000-m² logistics complex in northwest Leicestershire, UK. The wastewater pump station must deliver up to 64 m³/hr of effluent more than 10 km (6.2 miles) to the local treatment plant.

Solutions

NOV's UK service team provided a complete pump station solution, from the initial concept to equipment supply, installation, commissioning, and maintenance. Our engineering team in Manchester worked with end-user Severn Trent, a construction company, and civil engineering consultants on the initial concept through to the final design. The NOV engineering team modeled and designed the complete pump station

kiosk layouts along with the pump sumps and storage chambers, including actuated valves and dosing package.

The pump station design consists of two NOV Z3BC, 75 kW Mono EZ Strip Epsilon progressive cavity pumps in duty/standby arrangement along with two NOV CT203 Mono TR munchers.

The pumps were rated at 18 bar to accommodate the rising main back pressure, and the sewage maceration of the munchers was designed to overcome and reduce the risk of blockage.

Our engineering team also designed the entire electrical system from incoming supply, motor control centre, and level controls to cable selection, routing, and ducting. We produced the associated cable schematics and cable schedules for the progressive cavity pumps,

munchers, centrifugal pumps, and actuated control valves.

Our Manchester facility manufactured the pumps, munchers, pipework, and valves. In one month, our expert field service technicians installed and commissioned all the equipment, including the electrical system, framework control panel, and dosing system, on time and on budget.

To prove the pump station's reliability, it must operate for 12 months prior to adoption by the local water company. During this period, we have operated and monitored the system's performance.

Results

The pump station has operated consistently, safely, and efficiently for more than 18 months. The end-user has inquired about similar pump stations.