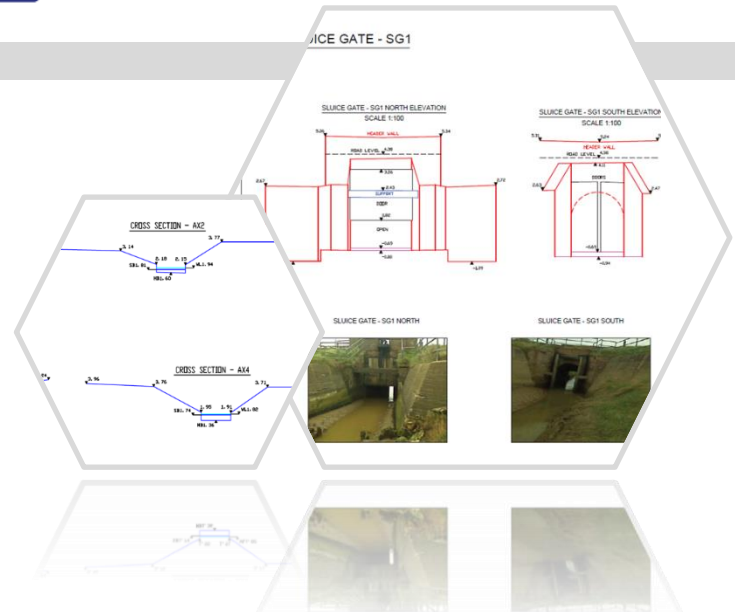


## PROJECT AT A GLANCE

**Project:** Drainage Survey  
**Location:** East Yorkshire  
**Year:** 2019  
**Duration:** 3 Days



## PROJECT BRIEF

LSTC was approached by a Yorkshire based drainage consultancy to survey details of a drainage system in East Yorkshire. The client required enough information to inform prospective alterations & updates at various locations along the watercourse.

## CHALLENGES

- 📍 To provide an accurate record of the current condition of the drainage ditch, and features such as culverts, outfalls, and sluice gates.
- 📍 To deliver information in a timely and cost-sensitive manner.

## OUR APPROACH

To collect the most accurate and comprehensive information possible our survey team used a combination of the Leica MS60 Total Station Theodolite and Leica GS14 GPS antenna to collect millimetre-accurate positions and levels along the course of the drain. These collected points formed the basis of long & cross section drawings. For hard features such as culverts, outfalls & sluice gates, we used a handheld Zeb REVO RT laser scanner to collect millions of data points quickly and accurately, from which highly accurate drawings of these features were produced. To provide a record of the condition of the features, our survey team also collected numerous high-quality photographs which were supplied to the client.

## PROJECT OUTCOME / DELIVERABLES

From the data collected during the survey phase, we were able to produce detailed plans, cross-sections, longitudinal sections & elevational drawings of all the requested areas of interest. The data was provided in PDF and CAD formats, and the point cloud data was delivered in LAS format for further digital inspection by the client.

Using these deliverables as a basis, the client can carry out their design works with the greatest of confidence in the accuracy of the information and ensure the feasibility of their designs before any construction work is undertaken.