Environment Agency

Sluice Gate Upgrade

Duddington

Introduction

The purpose of the CEMA Sluice Gate software at Duddington is to make the most efficient use of the two sluice gates to maintain a desired upstream river level. The Sluice Gate is controlled via a Rockwell CompactLogix PLC with RSLogix 5000 software utilising a Rotork IQ Actuator to drive the Gate.
The CEMA Standard Sluice Gate Control Software has been designed to compare a river retention set-point with an upstream level, which is derived from two local upstream devices.

CEMA Scope

Control System Comprising:

- New Control Panels
- New Systems Integration
- New PLC Hardware

Electrical Installation Comprising:

- New Site Cabling Installation including Ducting and Traywork
- New Duck Pressure Transducer
- NICEIC Testing and Certification
- New Telemetry Outstation

Mechanical Installation:

- New Rotork IQ Actuator
- New Machined Shaft Bush

Reference

Quote from J Fowler – MEICA Engineer, Environment Agency, Anglian Region, Lincoln.

"CEMA and the EA have collaborated for 7 Years to Design and Deliver both Sluice Gate Automation and Pump Station Automation Schemes that will allow the integration in time of all EA Sluice Gates and Pump Stations.
Working with the specialist dedicated Environment Agency Team at CEMA Ltd Automation was already enabling us to deliver the Sluice Gate Automation Schemes through an efficient delivery model however our expectations were exceeded when CEMA utilised their in house MEICA Company Warboys Services to deliver the entire scheme including the Mechanical Installation.
The works have been challenging but has resulted in a robust system that is laying the foundations of a centralised intelligent Flood Defence Structure across the Anglian Region"

New Actuator & Site Cabling

New Actuator

Existing Install

New Control Panels

New Actuator

CEMA GROUP