



# Project: Constable Bridge

Location: Stixwold Engine Drain, Lincolnshire

## Bespoke 1.8m Penstock

Client: Witham Third District Drainage Board

Aquatic Control Engineering Ltd (ACE) has completed the replacement of an existing penstock at Constables Bridge, for the Witham Third District Drainage Board.

The existing penstock had reached the end of its usual life, failed, and needed to be replaced. Consisting of timber boards held within a mild steel frame. The dimensions were 1950mm x 1950mm, plus frame, and were secured to an existing concrete headwall.

The location for the penstock is on the Drainage Board maintained watercourse Stixwold Engine Drain. This forms the boundary between the two pumped catchments of Southrey and Duckpool Pumping Stations.

The penstock's purpose is to pen the summer water levels in the drain. This ensures there is sufficient water maintained in the drain to enable irrigation of land by the local framers.

ACE acted as main contractor under CDM regulations delivering a full turnkey solution on this project. ACE completed a full survey of the asset to scope out the works required. The new penstock was designed and manufactured by ACE's own brand of water flow control products, AQUIKO. The bespoke penstock is a 1.8m channel mounted weir penstock manufactured at ACE's head office in Rampton. The Penstock has the option to be operated by a handwheel or battery powered portable actuator.

For the installation process ACE set the asset dry using a portable dam installed by Robert Nicholas and dewatering pumps provided by ACE.

The old penstock removal proved trickier than the survey initially indicated due to the water levels at the time of the survey. Once dry the ACE Operations team discovered the old penstock had been cast into concrete. This meant the old penstock required cutting out.

The project was successfully completed in the time frame specified at the beginning of the project. The project once again demonstrated ACE's capabilities to deliver a bespoke design, build and fit package of works.



**Aquatic Control Engineering Ltd**

[www.aquaticcontrol.co.uk](http://www.aquaticcontrol.co.uk)  
[info@aquaticcontrol.co.uk](mailto:info@aquaticcontrol.co.uk)  
01777 249 080

**Aquatic Control Engineering** are market leaders of innovative water flow control, maintenance and fish passage equipment. We are proud to supply our customers with high quality, innovative solutions and high standard installation services for over 20 years