



# British Precast Drainage Association

Publications from the British Precast Drainage Association (BPDA):

BPDA was formed in 2017 from the integration of the Concrete Pipeline Systems Association (CPSA) and the Box Culvert Association (BCA).

Information published by both CPSA and BCA will be rebranded and replaced as BPDA in due course. New material will be branded BPDA.

All CPSA and BCA web traffic will be redirected to the new BPDA web site at [www.precastdrainage.co.uk](http://www.precastdrainage.co.uk)

## **Over 200m of large diameter precast concrete pipes have been installed as part of the refurbishment of Pennington Pumping Station.**

Pennington Pumping Station is a key asset in Greater Manchester's flood defence operations. Situated in Leigh, 15km west of Manchester City Centre, the station pumps water from a network of drainage ditches into Pennington Flash, a 70 hectare lake created early in the 20th Century by coal mining subsidence. Now a nature reserve, the Flash is linked to the Liverpool and Leeds Canal.

The pumping station's refurbishment was included in the regional asset replacement programme. Contractor Amalgamated Construction (AMCO) was engaged by the Northern Region of the Environment Agency under a Mechanical, Electrical, Instrumentation, Control and Automation (MEICA) Framework to carry out the refurbishment and to upgrade the associated infrastructure.

The scheme included the demolition of the existing pumping station building and its replacement with a new kiosk to house the motor control centre for the two replacement pumps. The associated infrastructure upgrade included replacement of 236m of 750mm diameter discharge pipework to provide an improved, consistent pipeline gradient over its length. The pipe was buried between 1.5m and 2.0m below ground.

Before it set about replacing the discharge pipework the Environment Agency and AMCO undertook a comparison of the benefits of large diameter concrete pipes with those of plastic pipes for this application. The benefit of concrete in offering a strong, stable, sustainable performance, backed by over 150 years of proven success made it the obvious choice for this project.

AMCO's civil engineering contractor Centrum was responsible for removal of the old discharge pipe and its replacement with the new concrete pipeline. The pipeline was constructed from 750mm diameter precast concrete pipe sections supplied by Concrete Pipeline Systems Association (CPSA) member CPM Group. It was fully surrounded with granular bedding to Class S because the site's soft ground meant that it had minimal bearing strength.

The successful completion of the project will ensure Pennington Pumping Station remains a key asset in Manchester's flood defences for many years to come.

