



Project: Primrose Hill

Location: Middlesbrough

Concept through to delivery

Client: AMCO Construction



The Primrose Hill culvert in Middlesbrough has historically suffered from unauthorised access, as commonly the culvert sees low flows, attracting vandals.

Despite this, the culvert can be subject to higher flows, which also carries large amounts of floating debris, so any access prevention solution was required to allow full conveyance during flooding.

ACE were approached by AMCO construction, following previous projects, to assist with the development of a specialist solution that can:

- Prevent unauthorised access
- Prevent trash entering the culvert
- Allow quick opening in case of flooding

Prior to contract award, ACE assisted with conceptualising a solution using 3d modelling, to assist with planning consent and visualisation.

Once approved, ACE implemented the design, using a part-penstock, part-screen design, to allow some flow through the culvert, but prevent trash and vandals entering the culvert.

The penstock then also incorporated a bespoke actuation package, which allowed the equipment to be operated by a Rotork Actuator, or through a quick-change gearbox arrangement, a CBF Spindle driver (in case of power failure).

Other features included screen tyres that are easy to replace in case of damage, and a black paint finish to reduce the risk of theft.

ACE would like to thank AMCO for their assistance with the project.



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