

NATIONAL TRUST -THE VYNE LARGE LAKE CULVERT SHERBOURNE ST.JOHN,HAMPSHIRE

Always looking to provide environmentally friendly solutions, iLine Technologies were tasked with the renovating a section of a masonry culvert situated in the beautiful setting of the National Trust The Vyne grounds in Basingstoke.

In the 16th century the Grade 1 listed house was built by Lord Sandys, King Henry V111's lord Chamberlain. The large lake was originally constructed as part of the landscape garden at The Vyne around 1766, when one of the headwater streams of the Bow brook, passing close to the house was dammed off. This formed the Large Lake creating a 28,000m³ reservoir retained by a 3m high dam. A second dam was constructed upstream of the lake to prevent flooding of water meadows & agricultural land which now forms a valuable part of an environmental enhanced area-hence the need to ensure that a environmentally friendly solution was found.



The end section of the masonry culvert serving The Vyne Country Estate was suffering from structural failure where it changes from a ovality 1575mm x 2870 mm section to a more circular 1260mm section. Throughout this section the Loss of brickwork, voiding with large root penetration was causing major concerns for the safety of the road and pedestrian walkways above.

There was also evidence throughout (footprints, crawfish shells & claw marks) that the culvert is used by wildlife thought to be mink or possible otter.

Therefore, careful environmental consideration was required for any potential renovation solution to ensure that the wildlife existence was not disturbed, and site aesthetics was maintained.

After discussion with the National Trust and JBA consulting GRP segmental lining was chosen as the best environmentally friendly, low carbon emission solution.

Channeline international with their ability to manufacture unique shapes & sizes of GRP preformed segmental liners was the ideal chose to manufacture these units to enable iLine to renovate this crumbling culvert.

To accommodate the change of shape and size at the end of the culvert two profiles were designed, a circular 1450mm- 24mm thick liner and a flat bottomed arch 1475mm x 2600mm- 42mm thick for the end liner section.

To join the two different shapes & sizes together, an on-site purpose made step was created by iLine, this ensure the aesthetic of the culvert at the end section was preserved.



The GRP units were installed and grouted by iLine with no disruption to the National Trust or the Public.

Another successful job completed to the satisfaction of the National Trust and associated businesses without any disruption or delays-providing an environmentally friendly low carbon emission solution.