

# **STONEMAN** **STONEMAN** ENGINEERING



**Flood Defence**

## Introduction to Stoneman Engineering

Established in 1976 Stoneman Engineering (SW) Ltd offer a diverse range of engineering solutions throughout many industries. For many years we have worked alongside the Environment Agency and contractors such as Carillion Civils, Interserve Civils and Midas Construction in providing flood defence equipment throughout the UK.

Shown on the following pages are examples of some of the projects that we have been involved with, including the recent installation of the Tidal Exchange Valve on the Axe Estuary near Seaton for the Environment Agency.

# Tidal Exchange Valve

A new 5 ha lagoon known as the Black Hole Marsh has recently been created on land owned by the East Devon District Council next to the Axe Estuary near Seaton. The Black Hole Marsh will provide a new wetland habitat.

In order to control the amount of salt water flooding the area a tidal valve was installed. The initial design of the valve was carried out by Mr. Mike Williams of the Environment Agency, with the engineering design completed by Mr. Stephen Kingett of Stoneman Engineering.

Key Benefits of the valve:

- Restores tidal flushing of the Black Hole Marsh, without the flooding of upland property.
- Restoration of wetland habitat.
- Controls flooding of marsh.



The two images above show the tidal valve under construction in our workshop.



The image above shows the valve being tested in its closed position. This is how the valve would appear during low-tide.



The image above shows the valve being tested in the half-closed position. This is how the valve would appear during mid-tide.



The above image shows the valve being tested in the closed position.  
This is how the valve would appear during high-tide.



The above image shows the valve being loaded onto the tram for transportation to site location.



The above image shows the valve in its closed position during low-tide. The side valve is now open allowing fresh water into the Estuary. A side view of this can be seen below.



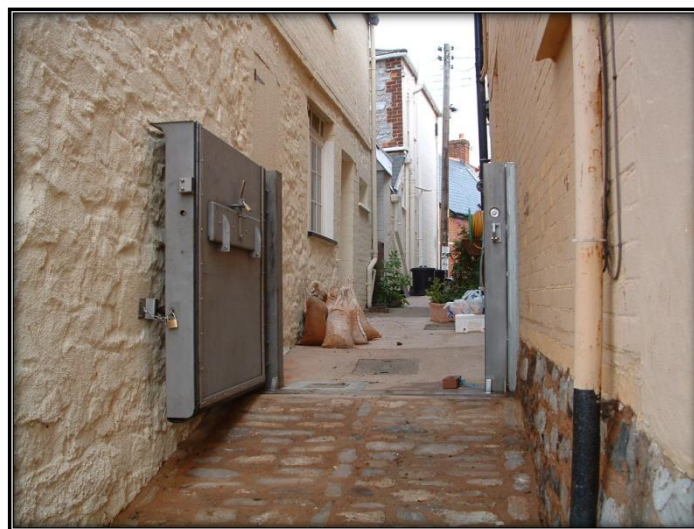


The above image shows the valve manually in the open position. This represents a mid-tide allowing salt water into the Black Hole Marsh.

During high tide both valves are in the closed position.

## Flood Defence Gates

Shown below is a selection of various flood defence gates that Stoneman Engineering have assisted with design, fabricated and installed.



The images above show sea defence gates manufactured for Mowlem Civil at Lympstone in Devon. Telemetry shows a control centre what position the gate is in whether it be open or closed.



The image above shows a sea defence gate manufactured for Mowlem Civil at Lympstone in Devon. Telemetry shows a control centre what position the gate is in, whether it be open or closed.



The image above shows a timber clad sea defence gate manufactured for Mowlem Civil at Lympstone in Devon. Telemetry shows a control centre what position the gate is in, whether it be open or closed.



The above images show sea defence gates at Seaton, manufactured and installed for the Environment Agency.

The images below show timber clad gates that were installed in Beesands for Interserve Civil.



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