



# Project: Wyberton Marsh

Black Sluice IDB

## WaStop Non-Return Valves

The WaStop's versatile functionality has found it used across the globe for a variety of situations. Whilst the majority of WaStops are employed to protect either individual or small numbers of homes, Black Sluice IDB found a novel use which has helped protect a whole district. Black Sluice IDB protects a large area of Lincolnshire stretching from Sleaford to the coast. This area contains 500m miles of water ways and 34 pumping stations. One pumping station has proved its self to be invaluable in the fight to protect the area of Wyberton, which lays to the south east of the Boston district in a coastal location.

The Wyberton Marsh pumping station came into its own during the major flood event of 2013, when a breach in the flood defence at Slippery Gowt allowed tidal water to flood into the landward feeder drains. The early activation of the 3 large pumps, reduced the damage to caused farmland and residential property. These pumps removed around 3 tons of water per second from the overloaded drainage system. One reason that the pumping station was able to operate without being effected by the flood water was the use of 3 WaStop non return valves. The pumps can be susceptible to water flowing back through the outlet pipes when idle, this can potentially prevent start up. Fortunately for the residents of the Wyberton area, Black Sluice IDB takes a holistic approach to water management across their district. This meant that they had foreseen this risk and invested in WaStop valves to be fitted on the outlet of each pump ensuring that tidal water would be blocked from flooding the pumps.

The WaStop has many attributes that make it ideally suited to protecting the pumping station in this way. Firstly it will operate in any plane, this is due to the fact that it does not rely on gravity to close. This means that the outlet pipe doesn't need to be horizontal allowing much greater flexibility in positioning without modifying the pipe. The second feature of the WaStop that makes it ideal for this situation is its location, when the WaStop is installed it is fitted completely inside the outlet pipe. This protects the valve from damage from debris which may either damage or obstruct the valve. It is hoped that the Wyberton area will never have to deal with a situation like the breach, again. But if it does the pumping station with its WaStop high outfall level protection will be ready for action once again.



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