



# Project: Pont Robin Tidal Outfall

Location: Marsh Road, Rhuddlan

## Side Hung Door Non-Return Valve

Client: Forkers Ltd



The Pont Robin Tidal Outfall forms part of the overall flood protection for the coastal defences at Rhuddlan and Abergele. Previously protected by a top hung tidal door, this asset protects low lying and defended reclaimed marsh land. Since built there has inevitably been an increase in the number of houses, industry and infrastructure forming a greater flood risk. Therefore it was critical that this structure's flood defence performance was paramount, whilst being able to evacuate inland water from the network of man-made drainage channels in between tidal cycles.



The challenge was to provide greater all-round performance for this asset, reducing inherent maintenance for the flood risk authority, whilst enhancing compliance with Water Framework Directive and fluvial connectivity.

ACE's solution was to provide two side hung HDPE doors, each measuring 1600mm x 800mm.



Among the many benefits of this solution was the ability to remove the need for an upstream trashscreen, making the asset virtually maintenance free. The low head loss from side hung doors compared to other types of flap valves also meant that there was virtually no obstruction to flow. The additional benefit is that there is much less chance for debris build up, whilst being inherently the best valve solution regarding fish and eel friendliness.

The project has proved to be highly successful and the solution continues to outperform expectations of the client.

**Aquatic Control Engineering Ltd**

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