

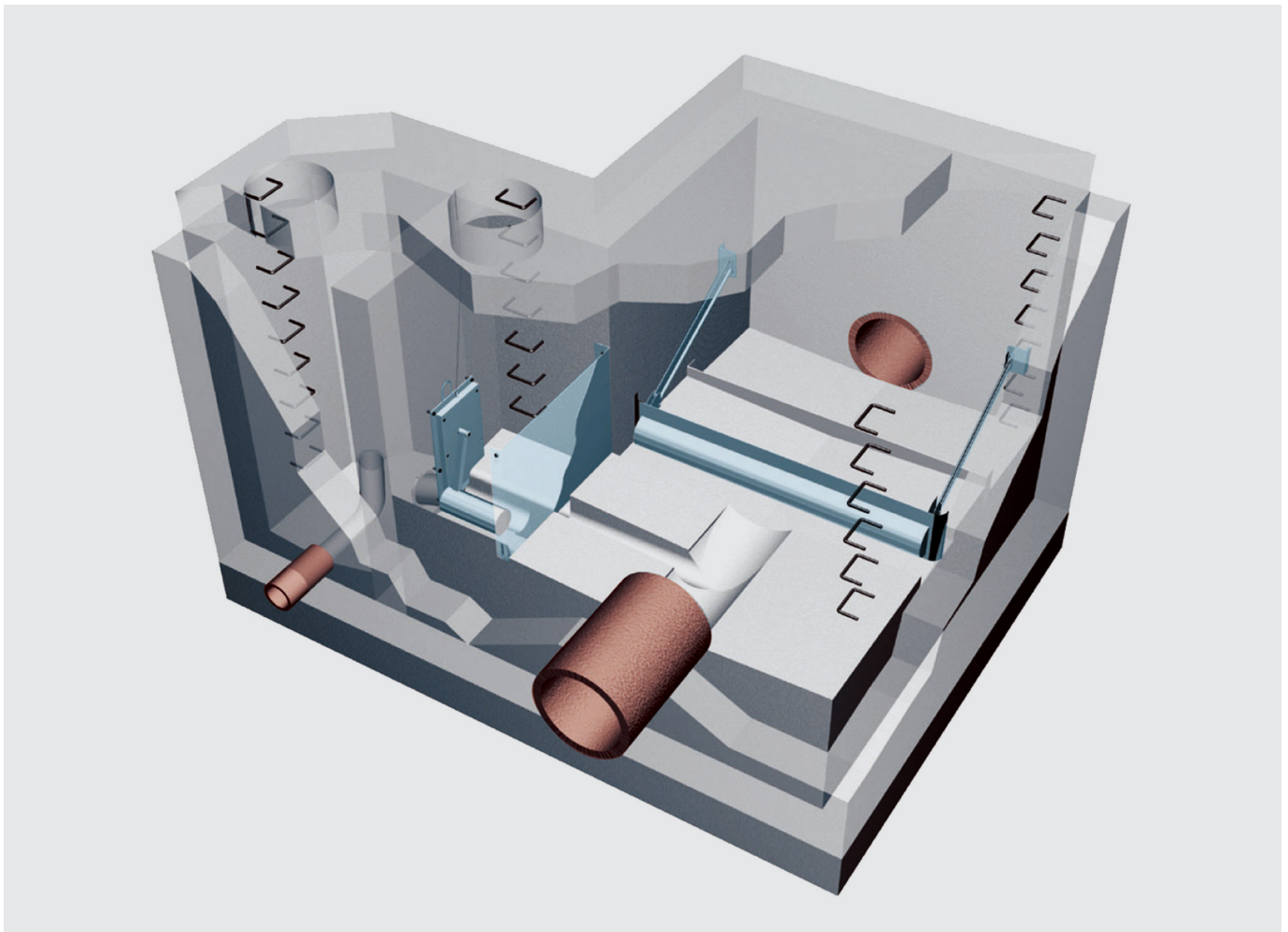
Flow Diversion

Key Features & Benefits:

- All sewer sizes can be accommodated
- Used to divert foul effluent erroneously connected to SW systems to foul treatment
- Automatically shuts in storm conditions
- Site-specific design

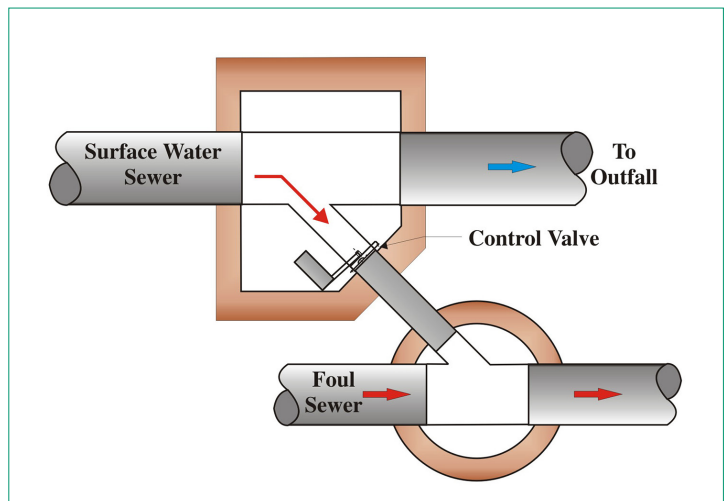
How We Create Value:

- Mechanical control to divert foul flows
- Cost effective solution used where foul connection to Surface Water are unknown and costly to remove
- Eliminates unsightly discharges to watercourse during dry periods
- Low maintenance

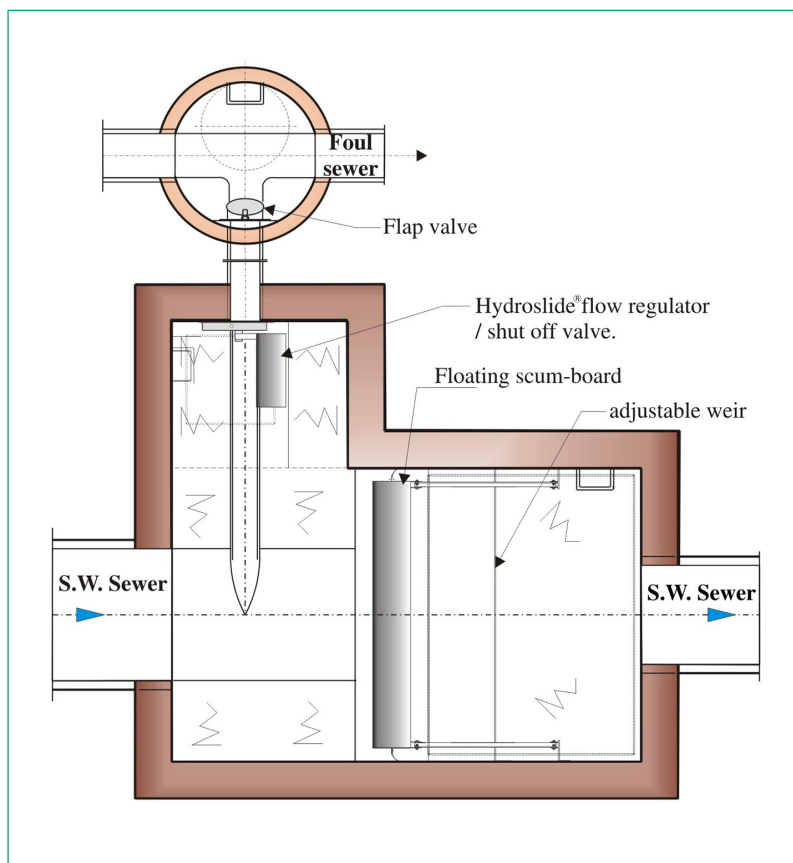


Flow Diversion

In many urban areas, there are foul drains connected to the surface water system. This has occurred for a number of reasons and it is sometimes very difficult to find where these connections are. These connection errors show up mainly at the Surface Water discharge point at a watercourse. The expensive solution is to survey the system to locate where the connections are and then carry out construction works to remove each one individually. This could take many years and be expensive. To avoid this, the HydroSwitch® flow diversion system was designed and has been used in some of the UK's major urban areas to remove the pollution nuisance.



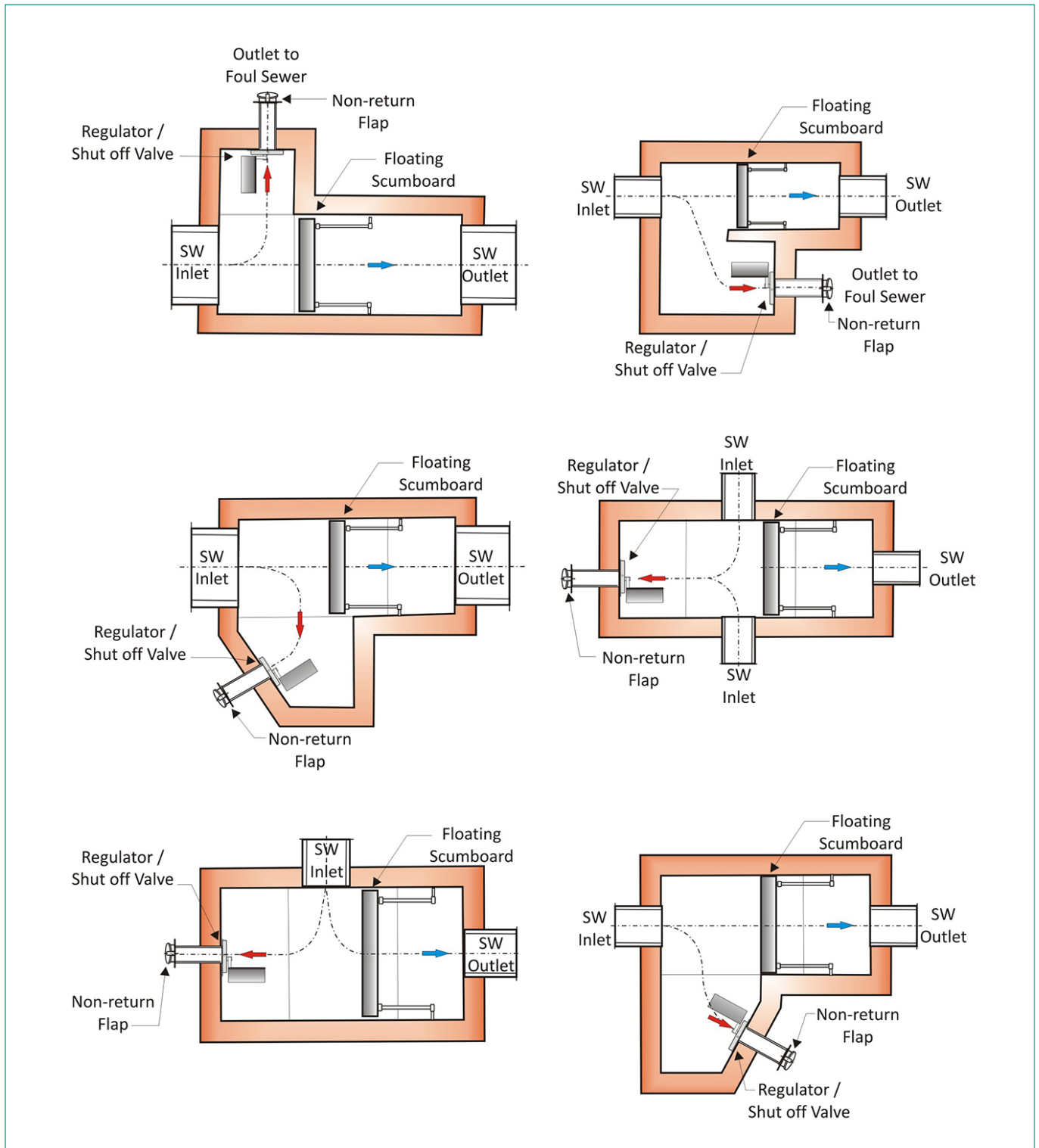
In simple terms, during dry weather the only flow within the Surface Water sewer would be the effluent from the foul connections. A diversion chamber is constructed where this flow can be directed into the foul sewer to enable the flow to be transported to the treatment facility. A control valve is fitted on the pipe link between the two systems. This valve permits flow to pass unhindered during dry weather, but during storm conditions as the flow increases within the Surface Water system, the valve closes to stop flow entering the foul sewer. All flows within the Surface Water system now pass directly to its outfall and as the dilution factor is high, the nuisance does not occur at the discharge point. When the storm abates, the flow in the Surface Water reduces and the control reopens to permit the foul flow to resume its path to the foul system.



A typical installation is shown below, this can include a floating baffle to prevent floating debris from passing down the Surface Water system during storm conditions.

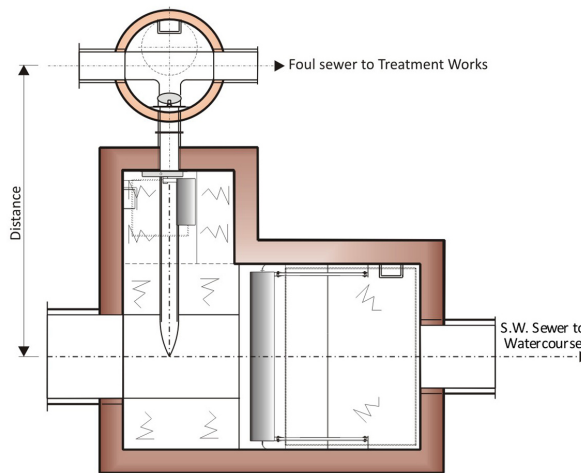
The above chamber layout is an example of a typical design; however, many other designs are possible dependent upon the relative positions of the foul and surface water sewers. The following drawings show a number of different configurations that can be used;

Flow Diversion



Flow Diversion

Typical Data Requirement for HydroSwitch®



Project Name: _____

Address: _____

Required Data

Surface Water Data

SW Inlet diameter mm
 SW Outlet diameter mm
 SW Invert Level
 SW Flow Q_{Max} l/s
 Foul Flow in SW System l/s

Foul Sewer Data

Foul Sewer diameter mm
 Gradient of Foul Sewer %
 Required Flow control from SW l/s
 Foul Sewer Invert Level m
 Distance from SW sewer m

Additional Information

Ground Level at SW Sewer m
 Ground Level at Foul Sewer m
 Is the SW sewer affected by backwater from watercourse ? If so, Max Level m

Note:

The regulated foul flow from the SW system is usually in the range of 10 - 25 l/s.