

### Scour Valve Flow Calculation: Cynwyd Reservoir

Orifice Sum:  $Q = Cd A \sqrt{2 g h}$

$\sqrt{2gh} = 11.71921499$

$h = 7$

$g = 9.81$

$Cd = 0.62$  Coefficient

Pipe diameter (m)	Open area (m2)	CdA	Flow (m3/s)
0.300	0.071	0.044	<b>0.514</b>

$A =$  Area

Anticipated open/close time for testing: 180 seconds

Flow over one minute: (flow x time) 92 Cubic Meters

Capacity nominally 50% 46 Cubic Meters  
 reduced to account for  
 part-open time

Completed by: D Needle

Date: 13/12/2021

Version: 1