

Butlins Bognor Regis - proposed foul water flow - Discharge Unit Method (worst case)

18/01/2021

CALCULATION OF FOUL WATER PEAK FLOW RATE

CWF

Proposed Achitect's layout shows toilet block within north east corner of proposed building, with a bar area immediately south. Calculation below is based on the number of foul water generating appliances within these two areas:

Bar area		DU	No of units	Product
	sinks	0.6	4	2.4
	dishwasher units	0.6	4	2.4

Toilet block		DU	No of units	Product
	toilets	1.8	21	37.8
	urinals	0.5	16	8
	wash basins	0.3	15	4.5
	gullies	0.9	4	3.6

Sum (DU)	58.7
K	1 (Congested use)

Expected max foul water flowrate: 7.7 l/s

Allowance for infiltration: 10% flow

Total peak foul water flow rate: 8.4 l/s

The peak value calculated is expected to be a maximum value achieved immediately after the temporary venue hosts a show. This value will NOT result in an increase in flow rate from the wider Butlins establishment as the patrons using the site will already be present on site and will use the facilities proposed at the temporary venue in lieu of the other venues that they would have otherwise used within the site.

The proposed development also replaces the existing pool building which includes a set of toilets, wash hand basins and showers as well as the pool backwash system which would have all generated water discharged to the existing downstream foul water network.

The proposed development is expected to result in a reduction in foul water as the temporary venue will not have showers or a pool.