



06th July 2018

Re: Waterford Airport. Runway Extension 2018.

Project Ref: 218020

Surface Water Attenuation Calculations Car Park D/01

Site Area: 4,800 m²

Impermeable Area: 4,800 m²

Design Area: $0.9 \times 4,800 = 4,320\text{m}^2$

Permissible Outflow

Max 6.0l/s/HA 6.0 l/s

Attenuation Calculations for 1:30 Year Storm

Storm Duration (hrs)	Rainfall (mm)	Design Area (M ²)	Volume (M ³)	Discharge (M ³) (6.0l/s)	Storage Required (M ³)
1	27	4,800	130	17	113
2	34	4,800	163	34	129
4	43	4,800	206	68	138
6	52	4,800	250	102	148
12	68	4,800	326	204	122

Critical Storm Duration = 6 hour

Storage Volume Required = $14 \times 8 \times 1.35 = 151 \text{ m}^3 > 148 \text{ m}^3$

Hydrobrake = 6.0 l/s