

APPENDIX C

FIRE SCENARIO

The capacity of the system to accommodate a fire coinciding with the 2yr-48hr rainfall event has been checked as follows:

Total inflow to blanket = rainfall + water used for fire-fighting

Rainfall depth for 2yr-48hr event = $0.776\text{mm/hr} = 0.037248\text{m}$

Contributing area = 31,720m²

Rainfall volume = 1181.5 m^3

Water used for fire-fighting = 1,900l/min for 2hrs
= 1.9x 60 x 2
= 228m³

Total inflow to blanket = 1,409.5 m³

$$\text{Volume of storage within blanket} = \text{Nett area} \times \text{depth} \times \text{porosity}$$
$$\text{Nett area} = \text{Gross area of terrace} \times 0.85 = 31,720 \times 0.85 = 26,962\text{m}^2$$
$$\begin{aligned}\text{Volume of storage within blanket} &= 26,962 \text{ area} \times 0.3 \times 0.3 \\ &= 2426.6\text{m}^3\end{aligned}$$