



Project No: 22244

Project Name 325 Deansgate

Title ATTENUATION TANK

Date

By

Return period of 1:1 year

SURFACE WATER DRAINAGE DESIGN

Total Hardstanding

675

m<sup>2</sup>

Existing run L/s

5.12

Pipe outlet L/s

2.56

L/s

0.0026 m<sup>3</sup>/s

Volume provided26.0m<sup>3</sup>

Max storage required2m<sup>3</sup>

|  | Duration of storm |         |         | Rainfall, mm | Rainfall, mm/hr | Input          |     | Output Limit   |     | Storage required | Storage excess | Actual outflow |
|--|-------------------|---------|---------|--------------|-----------------|----------------|-----|----------------|-----|------------------|----------------|----------------|
|  | hours             | minutes | seconds |              |                 | m <sup>3</sup> | L/s | m <sup>3</sup> | L/s | m <sup>3</sup>   | m <sup>3</sup> | L/s            |
|  | 0.08              | 5       | 300     | 4            | 48              | 2.7            | 9.0 | 0.8            | 2.6 | 1.93             | 24             | 2.6            |
|  | 0.17              | 10      | 600     | 6            | 34              | 3.8            | 6.3 | 1.5            | 2.6 | 2.25             | 24             | 2.6            |
|  | 0.25              | 15      | 900     | 7            | 27              | 4.6            | 5.1 | 2.3            | 2.6 | 2.30             | 24             | 2.6            |
|  | 0.50              | 30      | 1800    | 9            | 18              | 5.9            | 3.3 | 4.6            | 2.6 | 1.33             | 25             | 2.6            |
|  | 1                 | 60      | 3600    | 11           | 11              | 7.7            | 2.1 | 9.2            | 2.6 | -1.53            | 28             | 2.1            |
|  | 2                 | 120     | 7200    | 14           | 7               | 9.6            | 1.3 | 18.4           | 2.6 | -8.86            | 35             | 1.3            |
|  | 4                 | 240     | 14400   | 18           | 4               | 11.9           | 0.8 | 36.9           | 2.6 | -25.00           | 51             | 0.8            |
|  | 6                 | 360     | 21600   | 20           | 3               | 13.8           | 0.6 | 55.3           | 2.6 | -41.56           | 68             | 0.6            |
|  | 10                | 600     | 36000   | 24           | 2               | 16.2           | 0.5 | 92.2           | 2.6 | -76.01           | 102            | 0.5            |
|  | 24                | 1440    | 86400   | 31           | 1               | 21.1           | 0.2 | 221.3          | 2.6 | -200.25          | 226            | 0.2            |