

SHEET NO. D5 OF D5 Rev B

Holiday Cottages  
Longacre, Maypole Lane  
Yapton.BN18 0DR  
Driveway

Job No.  
17 -1779  
Prepared By BL

Date Jan 2018

Soakaway Designed to the M100-360 Min flood event (+30%).

|                                                             |                       |               |      |                 |                          |                           |                  |                |  |
|-------------------------------------------------------------|-----------------------|---------------|------|-----------------|--------------------------|---------------------------|------------------|----------------|--|
| Summary - Designed to the minimum standard (100%):          |                       |               |      |                 |                          |                           |                  |                |  |
|                                                             |                       |               |      |                 |                          |                           |                  |                |  |
|                                                             |                       |               |      |                 |                          |                           |                  |                |  |
| Length (m)                                                  | 22                    | Minimum size  |      |                 |                          |                           |                  |                |  |
| Depth Below invert (m)                                      | 0.35                  |               |      |                 |                          |                           |                  |                |  |
| Width (m)                                                   | 2.5                   |               |      |                 |                          |                           |                  |                |  |
| free volume                                                 | 30%                   | Type 3 Gravel |      |                 |                          |                           |                  |                |  |
| Return Period                                               | 100 years + 30%       |               |      |                 |                          |                           |                  |                |  |
| r =                                                         | 0.36                  |               |      |                 |                          |                           |                  |                |  |
| Impermeable Area (m <sup>2</sup> )=                         | 55                    |               |      |                 |                          |                           |                  |                |  |
| Soil Infiltration rate (f)                                  | <u>3.56E-06</u>       |               |      |                 |                          |                           |                  |                |  |
| A <sub>s50</sub> (m <sup>2</sup> )                          | 9.45                  |               |      |                 |                          |                           |                  |                |  |
| Outflow factor OF (m <sup>3</sup> /s)= f x A <sub>s50</sub> | 3.36E-05              |               |      |                 |                          |                           |                  |                |  |
|                                                             |                       |               |      |                 |                          |                           |                  |                |  |
| Duration (mins)                                             | Z1                    | M5 (mm)       | Z2   | M10 (mm)        | Inflow (m <sup>3</sup> ) | Outflow (m <sup>3</sup> ) | Resultant Volume |                |  |
| 5                                                           | 0.36                  | 7.2           | 3.22 | 24.4            | 1.3                      | 0.010                     | 1.3              |                |  |
| 10                                                          | 0.51                  | 10.2          | 3.22 | 34.5            | 1.9                      | 0.010                     | 1.9              |                |  |
| 15                                                          | 0.62                  | 12.4          | 3.22 | 42.0            | 2.3                      | 0.030                     | 2.3              |                |  |
| 30                                                          | 0.79                  | 15.8          | 3.22 | 53.5            | 2.9                      | 0.061                     | 2.9              |                |  |
| 60                                                          | 1.00                  | 20.0          | 3.22 | 67.7            | 3.7                      | 0.121                     | 3.6              |                |  |
| 120                                                         | 1.22                  | 24.5          | 3.22 | 82.9            | 4.6                      | 0.242                     | 4.3              |                |  |
| 240                                                         | 1.48                  | 29.9          | 3.22 | 101.2           | 5.6                      | 0.484                     | 5.1              |                |  |
| 360                                                         | 1.62                  | 33.8          | 3.22 | 114.4           | 6.3                      | 0.727                     | 5.6              | max level (MI) |  |
| 600                                                         | 1.82                  | 38.9          | 3.22 | 131.7           | 7.2                      | 1.211                     | 6.0              |                |  |
| 1440                                                        | 2.28                  | 49.6          | 3.22 | 167.9           | 9.2                      | 2.907                     | 6.3              |                |  |
|                                                             |                       |               |      |                 |                          |                           |                  |                |  |
| ML (m <sup>3</sup> )                                        |                       | 5.6           |      |                 |                          |                           |                  |                |  |
| storage capacity=LxWxDx 95%                                 |                       | 5.8           | ok   |                 |                          |                           |                  |                |  |
| Time for emptying half< 24hours                             | (MS x OF X 0.5) /3600 | 25            | ok   | For 1 in 100 yr |                          |                           |                  |                |  |