

|                                                                             |                                                             |                                                                                     |
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| Unit 1, Ensign House<br>Parkway Court, Longbridge Road<br>Plymouth, PL6 8LR | VICTORIA ROAD<br>INFILTRATION BASIN D<br>SURCHARGED OUTFALL |  |
| Date 20/02/2026<br>File SWD NETWORK - INFILTRAT...                          | Designed by EPH<br>Checked by                               |                                                                                     |
| Innovyze                                                                    | Network 2019.1                                              |                                                                                     |

## STORM SEWER DESIGN by the Modified Rational Method

### Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

#### FEH Rainfall Model

|                                               |        |
|-----------------------------------------------|--------|
| Return Period (years)                         | 1      |
| FEH Rainfall Version                          | 1999   |
| Site Location GB 386850 145550 ST 86850 45550 |        |
| C (1km)                                       | -0.027 |
| D1 (1km)                                      | 0.363  |
| D2 (1km)                                      | 0.417  |
| D3 (1km)                                      | 0.273  |
| E (1km)                                       | 0.289  |
| F (1km)                                       | 2.484  |
| Maximum Rainfall (mm/hr)                      | 50     |
| Maximum Time of Concentration (mins)          | 30     |
| Foul Sewage (l/s/ha)                          | 0.000  |
| Volumetric Runoff Coeff.                      | 0.750  |
| PIMP (%)                                      | 100    |
| Add Flow / Climate Change (%)                 | 0      |
| Minimum Backdrop Height (m)                   | 0.200  |
| Maximum Backdrop Height (m)                   | 1.500  |
| Min Design Depth for Optimisation (m)         | 1.200  |
| Min Vel for Auto Design only (m/s)            | 1.00   |
| Min Slope for Optimisation (1:X)              | 500    |

Designed with Level Soffits

### Surcharged Outfall Details for Storm

| Outfall<br>Pipe Number | Outfall C. Level<br>Name (m) | I. Level<br>(m) | Min<br>I. Level (m) | D,L<br>(mm) | W<br>(mm) |
|------------------------|------------------------------|-----------------|---------------------|-------------|-----------|
|------------------------|------------------------------|-----------------|---------------------|-------------|-----------|

|       |         |         |       |   |   |
|-------|---------|---------|-------|---|---|
| 1.009 | 134.500 | 133.500 | 0.000 | 0 | 0 |
|-------|---------|---------|-------|---|---|

Datum (m) 133.500 Offset (mins) 0

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 30             | 0.696        | 330            | 0.696        | 630            | 0.696        | 930            | 0.696        | 1230           | 0.696        | 1530           | 0.696        |
| 60             | 0.696        | 360            | 0.696        | 660            | 0.696        | 960            | 0.696        | 1260           | 0.696        | 1560           | 0.696        |
| 90             | 0.696        | 390            | 0.696        | 690            | 0.696        | 990            | 0.696        | 1290           | 0.696        | 1590           | 0.696        |
| 120            | 0.696        | 420            | 0.696        | 720            | 0.696        | 1020           | 0.696        | 1320           | 0.696        | 1620           | 0.696        |
| 150            | 0.696        | 450            | 0.696        | 750            | 0.696        | 1050           | 0.696        | 1350           | 0.696        | 1650           | 0.696        |
| 180            | 0.696        | 480            | 0.696        | 780            | 0.696        | 1080           | 0.696        | 1380           | 0.696        | 1680           | 0.696        |
| 210            | 0.696        | 510            | 0.696        | 810            | 0.696        | 1110           | 0.696        | 1410           | 0.696        | 1710           | 0.696        |
| 240            | 0.696        | 540            | 0.696        | 840            | 0.696        | 1140           | 0.696        | 1440           | 0.696        | 1740           | 0.696        |
| 270            | 0.696        | 570            | 0.696        | 870            | 0.696        | 1170           | 0.696        | 1470           | 0.696        | 1770           | 0.696        |
| 300            | 0.696        | 600            | 0.696        | 900            | 0.696        | 1200           | 0.696        | 1500           | 0.696        | 1800           | 0.696        |

|                                                                             |                                                             |                                                                                     |
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| Unit 1, Ensign House<br>Parkway Court, Longbridge Road<br>Plymouth, PL6 8LR | VICTORIA ROAD<br>INFILTRATION BASIN D<br>SURCHARGED OUTFALL |  |
| Date 20/02/2026<br>File SWD NETWORK - INFILTRAT...                          | Designed by EPH<br>Checked by                               |                                                                                     |
| Innovyze                                                                    | Network 2019.1                                              |                                                                                     |

Surcharged Outfall Details for Storm

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 1830           | 0.696        | 2010           | 0.696        | 2190           | 0.696        | 2370           | 0.696        | 2550           | 0.696        | 2730           | 0.696        |
| 1860           | 0.696        | 2040           | 0.696        | 2220           | 0.696        | 2400           | 0.696        | 2580           | 0.696        | 2760           | 0.696        |
| 1890           | 0.696        | 2070           | 0.696        | 2250           | 0.696        | 2430           | 0.696        | 2610           | 0.696        | 2790           | 0.696        |
| 1920           | 0.696        | 2100           | 0.696        | 2280           | 0.696        | 2460           | 0.696        | 2640           | 0.696        | 2820           | 0.696        |
| 1950           | 0.696        | 2130           | 0.696        | 2310           | 0.696        | 2490           | 0.696        | 2670           | 0.696        | 2850           | 0.696        |
| 1980           | 0.696        | 2160           | 0.696        | 2340           | 0.696        | 2520           | 0.696        | 2700           | 0.696        | 2880           | 0.696        |



|                                                                             |                                                             |                                                                                     |
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| Date 20/02/2026<br>File SWD NETWORK - INFILTRAT...                          | Designed by EPH<br>Checked by                               |                                                                                     |
| Innovyze                                                                    | Network 2019.1                                              |                                                                                     |

Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN    | US/MH<br>Name | Water<br>Level<br>(m) | Surcharged<br>Depth<br>(m) | Flooded<br>Volume<br>(m³) | Flow /<br>Cap. | Overflow<br>(l/s) | Pipe<br>Flow<br>(l/s) | Status      | Level<br>Exceeded |
|-------|---------------|-----------------------|----------------------------|---------------------------|----------------|-------------------|-----------------------|-------------|-------------------|
| 1.000 | DIST TANK     | 134.691               | 0.331                      | 0.000                     | 0.26           |                   | 1.0                   | FLOOD RISK  |                   |
| 1.001 | SIC 30-1      | 134.725               | 0.385                      | 0.000                     | 0.09           |                   | 0.9                   | FLOOD RISK  |                   |
| 1.002 | SMH 153       | 134.212               | 0.052                      | 0.000                     | 0.02           |                   | 0.5                   | SURCHARGED  |                   |
| 2.000 | DIST TANK     | 134.664               | 0.354                      | 0.000                     | 0.12           |                   | 0.5                   | FLOOD RISK  |                   |
| 2.001 | SIC 44-1      | 134.698               | 0.408                      | 0.000                     | 0.04           |                   | 0.3                   | FLOOD RISK  |                   |
| 1.003 | JUNCTION      | 134.122               | 0.000                      | 0.000                     | 0.14           |                   | 5.2                   | SURCHARGED* |                   |
| 3.000 | DIST TANK     | 134.676               | 0.341                      | 0.000                     | 0.12           |                   | 0.7                   | FLOOD RISK  |                   |
| 3.001 | SIC 32-1      | 134.705               | 0.420                      | 0.000                     | 0.08           |                   | 0.6                   | FLOOD RISK  |                   |
| 1.004 | JUNCTION      | 134.053               | 0.000                      | 0.000                     | 0.05           |                   | 1.6                   | SURCHARGED* |                   |
| 4.000 | DIST TANK     | 134.394               | 0.214                      | 0.000                     | 0.12           |                   | 0.5                   | SURCHARGED  |                   |

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Unit 1, Ensign House  
Parkway Court, Longbridge Road  
Plymouth, PL6 8LR

VICTORIA ROAD  
INFILTRATION BASIN D  
SURCHARGED OUTFALL

Date 20/02/2026  
File SWD NETWORK - INFILTRAT...

Designed by EPH  
Checked by

Innovyze

Network 2019.1

Micro Drainage

Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN    | US/MH<br>Name | Storm       | Return<br>Period | Climate<br>Change | First (X)<br>Surcharge | First (Y)<br>Flood | First (Z)<br>Overflow | Overflow<br>Act. |
|-------|---------------|-------------|------------------|-------------------|------------------------|--------------------|-----------------------|------------------|
| 4.001 | SIC 42-1      | 180 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 1.005 | JUNCTION      | 15 Winter   | 100              | +45%              |                        |                    |                       |                  |
| 5.000 | DIST TANK     | 180 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 5.001 | SIC 34-1      | 180 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 1.006 | JUNCTION      | 15 Winter   | 100              | +45%              |                        |                    |                       |                  |
| 6.000 | DIST TANK     | 2880 Winter | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 6.001 | SIC 35-1      | 2880 Winter | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 1.007 | SMH 152       | 2160 Winter | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 7.000 | DIST TANK     | 120 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 7.001 | SIC 36-1      | 120 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 7.002 | SMH 154       | 2160 Winter | 100              | +45%              | 100/180 Summer         |                    |                       |                  |
| 8.000 | DIST TANK     | 60 Winter   | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 8.001 | SIC 39-1      | 60 Winter   | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 7.003 | JUNCTION      | 1440 Winter | 100              | +45%              |                        |                    |                       |                  |
| 9.000 | DIST TANK     | 180 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 9.001 | SIC 41-1      | 180 Winter  | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 7.004 | JUNCTION      | 2160 Winter | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 1.008 | SMH 151       | 2160 Winter | 100              | +45%              | 100/15 Summer          |                    |                       |                  |
| 1.009 | SMH 150       | 2160 Winter | 100              | +45%              | 100/30 Summer          |                    |                       |                  |

| PN    | US/MH<br>Name | Water<br>Level<br>(m) | Surcharged<br>Depth<br>(m) | Flooded<br>Volume<br>(m³) | Flow /<br>Cap. | Overflow<br>(l/s) | Pipe<br>Flow<br>(l/s) | Status      | Level<br>Exceeded |
|-------|---------------|-----------------------|----------------------------|---------------------------|----------------|-------------------|-----------------------|-------------|-------------------|
| 4.001 | SIC 42-1      | 134.445               | 0.285                      | 0.000                     | 0.03           |                   | 0.3                   | SURCHARGED  |                   |
| 1.005 | JUNCTION      | 134.027               | 0.000                      | 0.000                     | 0.64           |                   | 23.6                  | SURCHARGED* |                   |
| 5.000 | DIST TANK     | 134.452               | 0.352                      | 0.000                     | 0.12           |                   | 0.5                   | FLOOD RISK  |                   |
| 5.001 | SIC 34-1      | 134.485               | 0.405                      | 0.000                     | 0.04           |                   | 0.3                   | FLOOD RISK  |                   |
| 1.006 | JUNCTION      | 133.959               | 0.000                      | 0.000                     | 0.61           |                   | 25.0                  | SURCHARGED* |                   |
| 6.000 | DIST TANK     | 134.304               | 0.349                      | 0.000                     | 0.14           |                   | 0.5                   | FLOOD RISK  |                   |
| 6.001 | SIC 35-1      | 134.341               | 0.406                      | 0.000                     | 0.05           |                   | 0.3                   | FLOOD RISK  |                   |
| 1.007 | SMH 152       | 134.206               | 0.331                      | 0.000                     | 0.11           |                   | 3.6                   | FLOOD RISK  |                   |
| 7.000 | DIST TANK     | 134.464               | 0.244                      | 0.000                     | 0.11           |                   | 0.4                   | FLOOD RISK  |                   |
| 7.001 | SIC 36-1      | 134.499               | 0.299                      | 0.000                     | 0.03           |                   | 0.3                   | SURCHARGED  |                   |
| 7.002 | SMH 154       | 134.205               | 0.185                      | 0.000                     | 0.01           |                   | 0.4                   | SURCHARGED  |                   |
| 8.000 | DIST TANK     | 134.700               | 0.600                      | 0.000                     | 0.44           |                   | 1.7                   | FLOOD RISK  |                   |
| 8.001 | SIC 39-1      | 134.718               | 0.638                      | 0.000                     | 0.15           |                   | 1.6                   | FLOOD RISK  |                   |
| 7.003 | JUNCTION      | 133.956               | 0.000                      | 0.000                     | 0.03           |                   | 1.2                   | SURCHARGED* |                   |
| 9.000 | DIST TANK     | 134.497               | 0.327                      | 0.000                     | 0.12           |                   | 0.5                   | FLOOD RISK  |                   |
| 9.001 | SIC 41-1      | 134.531               | 0.381                      | 0.000                     | 0.02           |                   | 0.3                   | FLOOD RISK  |                   |
| 7.004 | JUNCTION      | 134.204               | 0.327                      | 0.000                     | 0.07           |                   | 2.4                   | SURCHARGED  |                   |
| 1.008 | SMH 151       | 134.203               | 0.388                      | 0.000                     | 0.21           |                   | 6.3                   | SURCHARGED  |                   |
| 1.009 | SMH 150       | 134.200               | 0.425                      | 0.000                     | 3.00           |                   | 94.5                  | SURCHARGED  |                   |

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