

|                                                                                                 |  |                         |               |                                    |               |                           |              |           |
|-------------------------------------------------------------------------------------------------|--|-------------------------|---------------|------------------------------------|---------------|---------------------------|--------------|-----------|
|  ARCH ASSOCIATES |  | Arch Associates Limited |               | File: Eastmere Stables - Storm (   |               | Page 1                    |              |           |
|                                                                                                 |  |                         |               | Network: Storm                     |               | Eastmere Stables,         |              |           |
|                                                                                                 |  |                         |               | Chris Hendry                       |               | Eastergate Lane.          |              |           |
|                                                                                                 |  |                         |               | 26/03/2026                         |               | Storm Water Calculations. |              |           |
| Design Settings                                                                                 |  |                         |               |                                    |               |                           |              |           |
| Rainfall Methodology                                                                            |  | FEH-22                  |               | Minimum Velocity (m/s)             |               | 1.00                      |              |           |
| Return Period (years)                                                                           |  | 2                       |               | Connection Type                    |               | Level Soffits             |              |           |
| Additional Flow (%)                                                                             |  | 0                       |               | Minimum Backdrop Height (m)        |               | 0.200                     |              |           |
| CV                                                                                              |  | 1.000                   |               | Preferred Cover Depth (m)          |               | 1.200                     |              |           |
| Time of Entry (mins)                                                                            |  | 4.00                    |               | Include Intermediate Ground        |               | ✓                         |              |           |
| Maximum Time of Concentration (mins)                                                            |  | 30.00                   |               | Enforce best practice design rules |               | x                         |              |           |
| Maximum Rainfall (mm/hr)                                                                        |  | 100.0                   |               |                                    |               |                           |              |           |
| Nodes                                                                                           |  |                         |               |                                    |               |                           |              |           |
| Name                                                                                            |  | Area (ha)               | T of E (mins) | Cover Level (m)                    | Diameter (mm) | Easting (m)               | Northing (m) | Depth (m) |
| PS61                                                                                            |  |                         |               | 15.520                             | 1200          | 495197.651                | 106108.942   | 0.668     |
| PS18                                                                                            |  |                         |               | 15.500                             |               | 495202.891                | 106103.111   | 0.669     |
| PS14                                                                                            |  |                         |               | 15.485                             |               | 495202.479                | 106097.581   | 0.670     |
| PS64                                                                                            |  |                         |               | 15.475                             |               | 495199.091                | 106094.323   | 0.670     |
| PS10                                                                                            |  | 0.011                   | 4.00          | 15.430                             |               | 495203.611                | 106079.770   | 0.671     |
| PS6                                                                                             |  |                         |               | 15.425                             |               | 495203.964                | 106078.102   | 0.671     |
| PS3                                                                                             |  | 0.005                   | 4.00          | 15.385                             |               | 495204.771                | 106065.434   | 0.669     |
| Junction 3                                                                                      |  |                         |               | 15.370                             |               | 495200.951                | 106059.660   | 0.820     |
| Permeable Paving 4                                                                              |  | 0.030                   | 4.00          | 15.370                             |               | 495203.451                | 106059.660   | 0.845     |
| PS43                                                                                            |  | 0.010                   | 4.00          | 15.685                             |               | 495155.308                | 106135.984   | 0.665     |
| PS47                                                                                            |  | 0.010                   | 4.00          | 15.685                             |               | 495154.708                | 106132.126   | 0.666     |
| PS51                                                                                            |  |                         |               | 15.675                             |               | 495158.427                | 106131.687   | 0.667     |
| PS38                                                                                            |  |                         |               | 15.670                             |               | 495161.300                | 106134.826   | 0.669     |
| PS54                                                                                            |  |                         |               | 15.670                             |               | 495160.375                | 106131.078   | 0.669     |
| PS35                                                                                            |  | 0.010                   | 4.00          | 15.650                             |               | 495168.211                | 106133.133   | 0.670     |
| PS58                                                                                            |  | 0.008                   | 4.00          | 15.620                             |               | 495177.127                | 106125.913   | 0.673     |
| Junction 1                                                                                      |  |                         |               | 15.625                             |               | 495176.094                | 106128.583   | 0.832     |
| Permeable Paving 1                                                                              |  | 0.015                   | 4.00          | 15.615                             |               | 495178.594                | 106128.583   | 0.912     |
| PS32                                                                                            |  |                         |               | 15.600                             |               | 495182.870                | 106128.284   | 0.669     |
| PS29                                                                                            |  |                         |               | 15.590                             |               | 495201.120                | 106131.656   | 0.671     |
| PS25                                                                                            |  |                         |               | 15.675                             |               | 495196.484                | 106123.101   | 0.782     |
| PS22                                                                                            |  |                         |               | 15.560                             |               | 495196.661                | 106121.324   | 0.673     |
| Junction 2                                                                                      |  |                         |               | 15.530                             |               | 495196.773                | 106113.347   | 0.853     |
| Permeable Paving 2                                                                              |  | 0.027                   | 4.00          | 15.530                             |               | 495199.273                | 106113.347   | 0.878     |
| PS66                                                                                            |  |                         |               | 15.275                             |               | 495203.867                | 106053.148   | 0.525     |
| Permeable Paving 5                                                                              |  | 0.003                   |               | 15.250                             |               | 495200.216                | 106055.859   | 0.787     |
| Junction 4                                                                                      |  |                         |               | 15.250                             |               | 495202.867                | 106055.671   | 0.742     |
| PS16                                                                                            |  |                         | 4.00          | 15.514                             | 450           | 495223.295                | 106099.579   | 0.476     |
| PS17                                                                                            |  | 0.021                   | 4.00          | 15.492                             | 450           | 495204.926                | 106103.070   | 0.641     |
| PS12                                                                                            |  | 0.004                   | 4.00          | 15.477                             | 450           | 495221.935                | 106098.150   | 0.467     |
| PS13                                                                                            |  | 0.013                   | 4.00          | 15.477                             | 450           | 495204.498                | 106097.320   | 0.642     |
| PS60                                                                                            |  | 0.010                   | 4.00          | 15.550                             | 450           | 495193.190                | 106109.094   | 0.653     |
| PS8                                                                                             |  |                         | 4.00          | 15.463                             | 450           | 495220.037                | 106078.629   | 0.539     |
| PS9                                                                                             |  | 0.011                   | 4.00          | 15.481                             | 450           | 495206.058                | 106079.670   | 0.698     |
| PS5                                                                                             |  | 0.004                   | 4.00          | 15.494                             | 450           | 495207.941                | 106077.940   | 0.700     |
| PS2                                                                                             |  | 0.014                   | 4.00          | 15.477                             | 450           | 495208.759                | 106065.171   | 0.721     |
| PS49                                                                                            |  | 0.010                   | 4.00          | 15.920                             | 450           | 495154.573                | 106110.436   | 0.696     |
| PS50                                                                                            |  |                         |               | 15.739                             | 450           | 495157.989                | 106129.290   | 0.707     |
| PS41                                                                                            |  |                         |               | 16.025                             | 450           | 495141.957                | 106138.421   | 0.800     |
| PS42                                                                                            |  |                         |               | 15.820                             | 450           | 495152.868                | 106136.427   | 0.776     |
| PS45                                                                                            |  | 0.008                   | 4.00          | 16.050                             | 450           | 495141.355                | 106134.563   | 0.700     |
| PS46                                                                                            |  |                         |               | 15.803                             | 450           | 495152.189                | 106132.582   | 0.758     |
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## Links

| Name   | US Node    | DS Node            | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) | Rain (mm/hr) |
|--------|------------|--------------------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 18.001 | PS6        | Junction 3         | 1.000      | 0.600       | 14.754    | 14.744    | 0.010    | 100.0       | 100      | 4.11          | 56.4         |
| 17.000 | PS2        | PS3                | 3.997      | 0.600       | 14.756    | 14.716    | 0.040    | 99.9        | 100      | 4.09          | 56.4         |
| 17.001 | PS3        | Junction 3         | 1.000      | 0.600       | 14.716    | 14.706    | 0.010    | 100.0       | 100      | 4.11          | 56.4         |
| 1.009  | Junction 3 | Permeable Paving 4 | 2.500      | 0.600       | 14.550    | 14.525    | 0.025    | 100.0       | 300      | 4.60          | 56.4         |
| 2.000  | PS49       | PS50               | 19.161     | 0.600       | 15.224    | 15.032    | 0.192    | 99.8        | 100      | 4.42          | 56.4         |
| 2.001  | PS50       | PS51               | 2.437      | 0.600       | 15.032    | 15.008    | 0.024    | 101.5       | 100      | 4.47          | 56.4         |
| 2.002  | PS51       | Junction 1         | 1.000      | 0.600       | 15.008    | 14.998    | 0.010    | 100.0       | 100      | 4.49          | 56.4         |
| 1.001  | PS41       | PS42               | 11.092     | 0.600       | 15.225    | 15.044    | 0.181    | 61.3        | 100      | 4.37          | 56.4         |
| 1.002  | PS42       | PS43               | 2.480      | 0.600       | 15.044    | 15.020    | 0.024    | 103.3       | 100      | 4.42          | 56.4         |
| 1.003  | PS43       | Junction 1         | 1.000      | 0.600       | 15.020    | 15.010    | 0.010    | 100.0       | 100      | 4.45          | 56.4         |
| 4.000  | PS45       | PS46               | 11.014     | 0.600       | 15.350    | 15.045    | 0.305    | 36.1        | 100      | 4.14          | 56.4         |
| 4.001  | PS46       | PS47               | 2.560      | 0.600       | 15.045    | 15.019    | 0.026    | 98.5        | 100      | 4.20          | 56.4         |
| 4.002  | PS47       | Junction 1         | 1.000      | 0.600       | 15.019    | 15.009    | 0.010    | 100.0       | 100      | 4.22          | 56.4         |
| 5.000  | PS53       | PS54               | 2.488      | 0.600       | 15.026    | 15.001    | 0.025    | 99.5        | 100      | 4.05          | 56.4         |
| 5.001  | PS54       | Junction 1         | 1.000      | 0.600       | 15.001    | 14.991    | 0.010    | 100.0       | 100      | 4.08          | 56.4         |
| 6.000  | PS37       | PS38               | 2.314      | 0.600       | 15.024    | 15.001    | 0.023    | 100.6       | 100      | 4.05          | 56.4         |
| 6.001  | PS38       | Junction 1         | 1.000      | 0.600       | 15.001    | 14.991    | 0.010    | 100.0       | 100      | 4.07          | 56.4         |
| 3.000  | PS56       | PS57               | 9.670      | 0.600       | 15.069    | 14.972    | 0.097    | 99.7        | 100      | 4.21          | 56.4         |
| 3.001  | PS57       | PS58               | 2.488      | 0.600       | 14.972    | 14.947    | 0.025    | 99.5        | 100      | 4.26          | 56.4         |
| 3.002  | PS58       | Junction 1         | 2.863      | 0.600       | 14.947    | 14.918    | 0.029    | 100.0       | 100      | 4.33          | 56.4         |
| 7.000  | PS34       | PS35               | 2.314      | 0.600       | 15.003    | 14.980    | 0.023    | 100.6       | 100      | 4.05          | 56.4         |
| 7.001  | PS35       | Junction 1         | 1.000      | 0.600       | 14.980    | 14.970    | 0.010    | 100.0       | 100      | 4.07          | 56.4         |
| 1.004  | Junction 1 | Permeable Paving 1 | 2.500      | 0.600       | 14.793    | 14.778    | 0.015    | 166.7       | 225      | 4.53          | 56.4         |
| 9.000  | PS27       | PS28               | 12.365     | 0.600       | 15.068    | 14.944    | 0.124    | 99.7        | 100      | 4.27          | 56.4         |

| Name   | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s) | US<br>Depth<br>(m) | DS<br>Depth<br>(m) | Σ Area<br>(ha) | Σ Add<br>Inflow<br>(l/s) | Pro<br>Depth<br>(mm) | Pro<br>Velocity<br>(m/s) |
|--------|--------------|--------------|---------------|--------------------|--------------------|----------------|--------------------------|----------------------|--------------------------|
| 18.001 | 0.769        | 6.0          | 0.8           | 0.571              | 0.526              | 0.004          | 0.0                      | 25                   | 0.541                    |
| 17.000 | 0.769        | 6.0          | 2.8           | 0.621              | 0.569              | 0.014          | 0.0                      | 47                   | 0.750                    |
| 17.001 | 0.769        | 6.0          | 3.8           | 0.569              | 0.564              | 0.018          | 0.0                      | 57                   | 0.812                    |
| 1.009  | 1.572        | 111.1        | 57.5          | 0.520              | 0.545              | 0.282          | 0.0                      | 153                  | 1.585                    |
| 2.000  | 0.769        | 6.0          | 2.1           | 0.596              | 0.607              | 0.010          | 0.0                      | 41                   | 0.703                    |
| 2.001  | 0.763        | 6.0          | 2.1           | 0.607              | 0.567              | 0.010          | 0.0                      | 41                   | 0.696                    |
| 2.002  | 0.769        | 6.0          | 2.1           | 0.567              | 0.527              | 0.010          | 0.0                      | 41                   | 0.702                    |
| 1.001  | 0.985        | 7.7          | 2.0           | 0.700              | 0.676              | 0.010          | 0.0                      | 35                   | 0.827                    |
| 1.002  | 0.756        | 5.9          | 2.0           | 0.676              | 0.565              | 0.010          | 0.0                      | 40                   | 0.684                    |
| 1.003  | 0.769        | 6.0          | 4.1           | 0.565              | 0.515              | 0.020          | 0.0                      | 61                   | 0.827                    |
| 4.000  | 1.287        | 10.1         | 1.6           | 0.600              | 0.658              | 0.008          | 0.0                      | 27                   | 0.940                    |
| 4.001  | 0.775        | 6.1          | 1.6           | 0.658              | 0.566              | 0.008          | 0.0                      | 35                   | 0.650                    |
| 4.002  | 0.769        | 6.0          | 3.6           | 0.566              | 0.516              | 0.018          | 0.0                      | 56                   | 0.804                    |
| 5.000  | 0.771        | 6.1          | 1.9           | 0.581              | 0.569              | 0.009          | 0.0                      | 39                   | 0.683                    |
| 5.001  | 0.769        | 6.0          | 1.9           | 0.569              | 0.534              | 0.009          | 0.0                      | 39                   | 0.682                    |
| 6.000  | 0.766        | 6.0          | 1.8           | 0.635              | 0.569              | 0.009          | 0.0                      | 37                   | 0.665                    |
| 6.001  | 0.769        | 6.0          | 1.8           | 0.569              | 0.534              | 0.009          | 0.0                      | 37                   | 0.667                    |
| 3.000  | 0.770        | 6.0          | 1.5           | 0.554              | 0.586              | 0.007          | 0.0                      | 34                   | 0.638                    |
| 3.001  | 0.770        | 6.1          | 1.5           | 0.586              | 0.573              | 0.007          | 0.0                      | 33                   | 0.631                    |
| 3.002  | 0.769        | 6.0          | 3.0           | 0.573              | 0.607              | 0.015          | 0.0                      | 50                   | 0.766                    |
| 7.000  | 0.766        | 6.0          | 1.8           | 0.605              | 0.570              | 0.009          | 0.0                      | 38                   | 0.673                    |
| 7.001  | 0.769        | 6.0          | 3.9           | 0.570              | 0.555              | 0.019          | 0.0                      | 58                   | 0.816                    |
| 1.004  | 1.010        | 40.1         | 20.4          | 0.607              | 0.612              | 0.100          | 0.0                      | 114                  | 1.015                    |
| 9.000  | 0.770        | 6.0          | 1.3           | 0.400              | 0.524              | 0.006          | 0.0                      | 32                   | 0.614                    |



| Link   | US Node    | Dia (mm) | Node Type | MH Type   | DS Node                    | Dia (mm) | Node Type | MH Type   |
|--------|------------|----------|-----------|-----------|----------------------------|----------|-----------|-----------|
| 12.000 | PS16       | 450      | Manhole   | Adoptable | PS17                       | 450      | Manhole   | Adoptable |
| 12.001 | PS17       | 450      | Manhole   | Adoptable | PS18                       |          | Junction  |           |
| 12.002 | PS18       |          | Junction  |           | Permeable Paving 3 (Lined) |          | Junction  |           |
| 13.000 | PS12       | 450      | Manhole   | Adoptable | PS13                       | 450      | Manhole   | Adoptable |
| 13.001 | PS13       | 450      | Manhole   | Adoptable | PS14                       |          | Junction  |           |
| 13.002 | PS14       |          | Junction  |           | Permeable Paving 3 (Lined) |          | Junction  |           |
| 14.000 | PS60       | 450      | Manhole   | Adoptable | PS61                       | 1200     | Manhole   | Adoptable |
| 14.001 | PS61       | 1200     | Manhole   | Adoptable | Permeable Paving 3 (Lined) |          | Junction  |           |
| 16.000 | PS8        | 450      | Manhole   | Adoptable | PS9                        | 450      | Manhole   | Adoptable |
| 16.001 | PS9        | 450      | Manhole   | Adoptable | PS10                       |          | Junction  |           |
| 16.002 | PS10       |          | Junction  |           | Junction 3                 |          | Junction  |           |
| 15.001 | PS64       |          | Junction  |           | Permeable Paving 3 (Lined) |          | Junction  |           |
| 18.000 | PS5        | 450      | Manhole   | Adoptable | PS6                        |          | Junction  |           |
| 18.001 | PS6        |          | Junction  |           | Junction 3                 |          | Junction  |           |
| 17.000 | PS2        | 450      | Manhole   | Adoptable | PS3                        |          | Junction  |           |
| 17.001 | PS3        |          | Junction  |           | Junction 3                 |          | Junction  |           |
| 1.009  | Junction 3 |          | Junction  |           | Permeable Paving 4         |          | Junction  |           |
| 2.000  | PS49       | 450      | Manhole   | Adoptable | PS50                       | 450      | Manhole   | Adoptable |
| 2.001  | PS50       | 450      | Manhole   | Adoptable | PS51                       |          | Junction  |           |
| 2.002  | PS51       |          | Junction  |           | Junction 1                 |          | Junction  |           |
| 1.001  | PS41       | 450      | Manhole   | Adoptable | PS42                       | 450      | Manhole   | Adoptable |
| 1.002  | PS42       | 450      | Manhole   | Adoptable | PS43                       |          | Junction  |           |
| 1.003  | PS43       |          | Junction  |           | Junction 1                 |          | Junction  |           |
| 4.000  | PS45       | 450      | Manhole   | Adoptable | PS46                       | 450      | Manhole   | Adoptable |
| 4.001  | PS46       | 450      | Manhole   | Adoptable | PS47                       |          | Junction  |           |

### Pipeline Schedule

| Link   | Length<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | Link<br>Type | US CL<br>(m) | US IL<br>(m) | US Depth<br>(m) | DS CL<br>(m) | DS IL<br>(m) | DS Depth<br>(m) |
|--------|---------------|----------------|-------------|--------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
| 4.002  | 1.000         | 100.0          | 100         | Circular     | 15.685       | 15.019       | 0.566           | 15.625       | 15.009       | 0.516           |
| 5.000  | 2.488         | 99.5           | 100         | Circular     | 15.707       | 15.026       | 0.581           | 15.670       | 15.001       | 0.569           |
| 5.001  | 1.000         | 100.0          | 100         | Circular     | 15.670       | 15.001       | 0.569           | 15.625       | 14.991       | 0.530           |
| 6.000  | 2.314         | 100.6          | 100         | Circular     | 15.759       | 15.024       | 0.635           | 15.670       | 15.001       | 0.569           |
| 6.001  | 1.000         | 100.0          | 100         | Circular     | 15.670       | 15.001       | 0.569           | 15.625       | 14.991       | 0.534           |
| 3.000  | 9.670         | 99.7           | 100         | Circular     | 15.723       | 15.069       | 0.554           | 15.658       | 14.972       | 0.586           |
| 3.001  | 2.488         | 99.5           | 100         | Circular     | 15.658       | 14.972       | 0.586           | 15.620       | 14.947       | 0.573           |
| 3.002  | 2.863         | 100.0          | 100         | Circular     | 15.620       | 14.947       | 0.573           | 15.625       | 14.918       | 0.607           |
| 7.000  | 2.314         | 100.6          | 100         | Circular     | 15.708       | 15.003       | 0.605           | 15.650       | 14.980       | 0.570           |
| 7.001  | 1.000         | 100.0          | 100         | Circular     | 15.650       | 14.980       | 0.570           | 15.625       | 14.970       | 0.555           |
| 1.004  | 2.500         | 166.7          | 225         | Circular     | 15.625       | 14.793       | 0.607           | 15.615       | 14.778       | 0.612           |
| 9.000  | 12.365        | 99.7           | 100         | Circular     | 15.568       | 15.068       | 0.400           | 15.568       | 14.944       | 0.524           |
| 9.001  | 2.508         | 100.3          | 100         | Circular     | 15.568       | 14.944       | 0.524           | 15.590       | 14.919       | 0.571           |
| 9.002  | 1.000         | 100.0          | 100         | Circular     | 15.590       | 14.919       | 0.571           | 15.530       | 14.909       | 0.521           |
| 8.000  | 21.111        | 100.1          | 100         | Circular     | 15.522       | 15.123       | 0.299           | 15.564       | 14.912       | 0.552           |
| 8.001  | 2.508         | 100.3          | 100         | Circular     | 15.564       | 14.912       | 0.552           | 15.560       | 14.887       | 0.573           |
| 8.002  | 1.000         | 100.0          | 100         | Circular     | 15.560       | 14.887       | 0.573           | 15.530       | 14.877       | 0.553           |
| 11.000 | 2.327         | 97.0           | 100         | Circular     | 15.664       | 14.955       | 0.609           | 15.600       | 14.931       | 0.569           |
| 11.001 | 1.000         | 100.0          | 100         | Circular     | 15.600       | 14.931       | 0.569           | 15.530       | 14.921       | 0.509           |
| 10.000 | 2.508         | 100.3          | 100         | Circular     | 15.569       | 14.918       | 0.551           | 15.675       | 14.893       | 0.682           |
| 10.001 | 1.000         | 100.0          | 100         | Circular     | 15.675       | 14.893       | 0.682           | 15.530       | 14.883       | 0.547           |
| 1.006  | 2.500         | 100.0          | 300         | Circular     | 15.530       | 14.677       | 0.553           | 15.530       | 14.652       | 0.578           |
| 19.000 | 5.529         | 22.4           | 100         | Circular     | 15.160       | 15.010       | 0.050           | 15.301       | 14.763       | 0.438           |
| 19.001 | 1.998         | 153.7          | 100         | Circular     | 15.301       | 14.763       | 0.438           | 15.275       | 14.750       | 0.425           |
| 19.002 | 1.000         | 100.0          | 100         | Circular     | 15.275       | 14.750       | 0.425           | 15.250       | 14.740       | 0.410           |

| Link   | US Node    | Dia (mm) | Node Type | MH Type   | DS Node            | Dia (mm) | Node Type | MH Type   |
|--------|------------|----------|-----------|-----------|--------------------|----------|-----------|-----------|
| 4.002  | PS47       |          | Junction  |           | Junction 1         |          | Junction  |           |
| 5.000  | PS53       | 450      | Manhole   | Adoptable | PS54               |          | Junction  |           |
| 5.001  | PS54       |          | Junction  |           | Junction 1         |          | Junction  |           |
| 6.000  | PS37       | 450      | Manhole   | Adoptable | PS38               |          | Junction  |           |
| 6.001  | PS38       |          | Junction  |           | Junction 1         |          | Junction  |           |
| 3.000  | PS56       | 450      | Manhole   | Adoptable | PS57               | 450      | Manhole   | Adoptable |
| 3.001  | PS57       | 450      | Manhole   | Adoptable | PS58               |          | Junction  |           |
| 3.002  | PS58       |          | Junction  |           | Junction 1         |          | Junction  |           |
| 7.000  | PS34       | 450      | Manhole   | Adoptable | PS35               |          | Junction  |           |
| 7.001  | PS35       |          | Junction  |           | Junction 1         |          | Junction  |           |
| 1.004  | Junction 1 |          | Junction  |           | Permeable Paving 1 |          | Junction  |           |
| 9.000  | PS27       | 450      | Manhole   | Adoptable | PS28               | 450      | Manhole   | Adoptable |
| 9.001  | PS28       | 450      | Manhole   | Adoptable | PS29               |          | Junction  |           |
| 9.002  | PS29       |          | Junction  |           | Junction 2         |          | Junction  |           |
| 8.000  | PS20       | 450      | Manhole   | Adoptable | PS21               | 450      | Manhole   | Adoptable |
| 8.001  | PS21       | 450      | Manhole   | Adoptable | PS22               |          | Junction  |           |
| 8.002  | PS22       |          | Junction  |           | Junction 2         |          | Junction  |           |
| 11.000 | PS31       | 450      | Manhole   | Adoptable | PS32               |          | Junction  |           |
| 11.001 | PS32       |          | Junction  |           | Junction 2         |          | Junction  |           |
| 10.000 | PS24       | 450      | Manhole   | Adoptable | PS25               |          | Junction  |           |
| 10.001 | PS25       |          | Junction  |           | Junction 2         |          | Junction  |           |
| 1.006  | Junction 2 |          | Junction  |           | Permeable Paving 2 |          | Junction  |           |
| 19.000 | ACO        |          | Junction  |           | PS65               | 450      | Manhole   | Adoptable |
| 19.001 | PS65       | 450      | Manhole   | Adoptable | PS66               |          | Junction  |           |
| 19.002 | PS66       |          | Junction  |           | Junction 4         |          | Junction  |           |



Pipeline Schedule

| Link   | Length<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | Link<br>Type | US CL<br>(m) | US IL<br>(m) | US Depth<br>(m) | DS CL<br>(m) | DS IL<br>(m) | DS Depth<br>(m) |
|--------|---------------|----------------|-------------|--------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
| 1.011  | 2.658         | 59.1           | 300         | Circular     | 15.250       | 14.508       | 0.442           | 15.250       | 14.463       | 0.487           |
| 1.000  | 9.607         | 76.9           | 100         | Circular     | 16.050       | 15.350       | 0.600           | 16.025       | 15.225       | 0.700           |
| 15.000 | 4.464         | 101.4          | 100         | Circular     | 15.509       | 14.849       | 0.560           | 15.475       | 14.805       | 0.570           |
| 1.008  | 1.000         | 20.0           | 300         | Circular     | 15.470       | 14.600       | 0.570           | 15.370       | 14.550       | 0.520           |
| 1.005  | 1.000         | 38.5           | 300         | Circular     | 15.615       | 14.703       | 0.612           | 15.530       | 14.677       | 0.553           |
| 1.007  | 1.000         | 11.8           | 300         | Circular     | 15.530       | 14.675       | 0.555           | 15.470       | 14.590       | 0.580           |
| 1.010  | 1.000         | 58.8           | 300         | Circular     | 15.370       | 14.525       | 0.545           | 15.250       | 14.508       | 0.442           |

| Link   | US<br>Node                 | Dia<br>(mm) | Node<br>Type | MH<br>Type | DS<br>Node                 | Dia<br>(mm) | Node<br>Type | MH<br>Type |
|--------|----------------------------|-------------|--------------|------------|----------------------------|-------------|--------------|------------|
| 1.011  | Junction 4                 |             | Junction     |            | Permeable Paving 5         |             | Junction     |            |
| 1.000  | PS40                       | 450         | Manhole      | Adoptable  | PS41                       | 450         | Manhole      | Adoptable  |
| 15.000 | PS63                       | 450         | Manhole      | Adoptable  | PS64                       |             | Junction     |            |
| 1.008  | Permeable Paving 3 (Lined) |             | Junction     |            | Junction 3                 |             | Junction     |            |
| 1.005  | Permeable Paving 1         |             | Junction     |            | Junction 2                 |             | Junction     |            |
| 1.007  | Permeable Paving 2         |             | Junction     |            | Permeable Paving 3 (Lined) |             | Junction     |            |
| 1.010  | Permeable Paving 4         |             | Junction     |            | Junction 4                 |             | Junction     |            |

Manhole Schedule

| Node | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Connections                                                                         | Link     | IL<br>(m) | Dia<br>(mm) |
|------|----------------|-----------------|-----------|--------------|-------------|-------------------------------------------------------------------------------------|----------|-----------|-------------|
| PS61 | 495197.651     | 106108.942      | 15.520    | 0.668        | 1200        |  | 1 14.000 | 14.852    | 100         |
|      |                |                 |           |              |             |  | 0 14.001 | 14.852    | 100         |
| PS18 | 495202.891     | 106103.111      | 15.500    | 0.669        |             |  | 1 12.001 | 14.831    | 100         |
|      |                |                 |           |              |             |  | 0 12.002 | 14.831    | 100         |
| PS14 | 495202.479     | 106097.581      | 15.485    | 0.670        |             |  | 1 13.001 | 14.815    | 100         |
|      |                |                 |           |              |             |  | 0 13.002 | 14.815    | 100         |
| PS64 | 495199.091     | 106094.323      | 15.475    | 0.670        |             |  | 1 15.000 | 14.805    | 100         |
|      |                |                 |           |              |             |  | 0 15.001 | 14.805    | 100         |
| PS10 | 495203.611     | 106079.770      | 15.430    | 0.671        |             |  | 1 16.001 | 14.759    | 100         |
|      |                |                 |           |              |             |  | 0 16.002 | 14.759    | 100         |
| PS6  | 495203.964     | 106078.102      | 15.425    | 0.671        |             |  | 1 18.000 | 14.754    | 100         |
|      |                |                 |           |              |             |  | 0 18.001 | 14.754    | 100         |
| PS3  | 495204.771     | 106065.434      | 15.385    | 0.669        |             |  | 1 17.000 | 14.716    | 100         |
|      |                |                 |           |              |             |  | 0 17.001 | 14.716    | 100         |

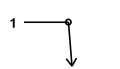
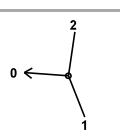
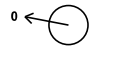
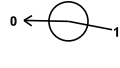
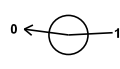


**Manhole Schedule**

| Node               | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm)                                                                           | Connections                          | Link                                                                 | IL<br>(m)                                                                    | Dia<br>(mm)                                          |
|--------------------|----------------|-----------------|-----------|--------------|---------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------|
| Junction 3         | 495200.951     | 106059.660      | 15.370    | 0.820        |    | 1<br>2<br>3<br>4<br>0                | 18.001<br>17.001<br>16.002<br>1.008<br>1.009                         | 14.744<br>14.706<br>14.749<br>14.550<br>14.550                               | 100<br>100<br>100<br>300<br>300                      |
| Permeable Paving 4 | 495203.451     | 106059.660      | 15.370    | 0.845        |     | 1<br>0                               | 1.009<br>1.010                                                       | 14.525<br>14.525                                                             | 300<br>300                                           |
| PS43               | 495155.308     | 106135.984      | 15.685    | 0.665        |     | 1<br>0                               | 1.002<br>1.003                                                       | 15.020<br>15.020                                                             | 100<br>100                                           |
| PS47               | 495154.708     | 106132.126      | 15.685    | 0.666        |     | 1<br>0                               | 4.001<br>4.002                                                       | 15.019<br>15.019                                                             | 100<br>100                                           |
| PS51               | 495158.427     | 106131.687      | 15.675    | 0.667        |   | 1<br>0                               | 2.001<br>2.002                                                       | 15.008<br>15.008                                                             | 100<br>100                                           |
| PS38               | 495161.300     | 106134.826      | 15.670    | 0.669        |  | 1<br>0                               | 6.000<br>6.001                                                       | 15.001<br>15.001                                                             | 100<br>100                                           |
| PS54               | 495160.375     | 106131.078      | 15.670    | 0.669        |  | 1<br>0                               | 5.000<br>5.001                                                       | 15.001<br>15.001                                                             | 100<br>100                                           |
| PS35               | 495168.211     | 106133.133      | 15.650    | 0.670        |  | 1<br>0                               | 7.000<br>7.001                                                       | 14.980<br>14.980                                                             | 100<br>100                                           |
| PS58               | 495177.127     | 106125.913      | 15.620    | 0.673        |  | 1<br>0                               | 3.001<br>3.002                                                       | 14.947<br>14.947                                                             | 100<br>100                                           |
| Junction 1         | 495176.094     | 106128.583      | 15.625    | 0.832        |   | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>0 | 7.001<br>6.001<br>5.001<br>4.002<br>3.002<br>2.002<br>1.003<br>1.004 | 14.970<br>14.991<br>14.991<br>15.009<br>14.918<br>14.998<br>15.010<br>14.793 | 100<br>100<br>100<br>100<br>100<br>100<br>100<br>225 |
| Permeable Paving 1 | 495178.594     | 106128.583      | 15.615    | 0.912        |   | 1<br>0                               | 1.004<br>1.005                                                       | 14.778<br>14.703                                                             | 225<br>300                                           |
| PS32               | 495182.870     | 106128.284      | 15.600    | 0.669        |  | 1<br>0                               | 11.000<br>11.001                                                     | 14.931<br>14.931                                                             | 100<br>100                                           |

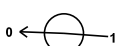
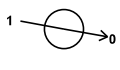
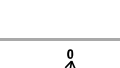


**Manhole Schedule**

| Node               | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Connections                                                                           | Link     | IL<br>(m) | Dia<br>(mm) |
|--------------------|----------------|-----------------|-----------|--------------|-------------|---------------------------------------------------------------------------------------|----------|-----------|-------------|
| PS29               | 495201.120     | 106131.656      | 15.590    | 0.671        |             |    | 1 9.001  | 14.919    | 100         |
|                    |                |                 |           |              |             |    | 0 9.002  | 14.919    | 100         |
| PS25               | 495196.484     | 106123.101      | 15.675    | 0.782        |             |    | 1 10.000 | 14.893    | 100         |
|                    |                |                 |           |              |             |    | 0 10.001 | 14.893    | 100         |
| PS22               | 495196.661     | 106121.324      | 15.560    | 0.673        |             |    | 1 8.001  | 14.887    | 100         |
|                    |                |                 |           |              |             |    | 0 8.002  | 14.887    | 100         |
| Junction 2         | 495196.773     | 106113.347      | 15.530    | 0.853        |             |     | 1 11.001 | 14.921    | 100         |
|                    |                |                 |           |              |             |                                                                                       | 2 10.001 | 14.883    | 100         |
|                    |                |                 |           |              |             |                                                                                       | 3 9.002  | 14.909    | 100         |
|                    |                |                 |           |              |             |                                                                                       | 4 8.002  | 14.877    | 100         |
|                    |                |                 |           |              |             |                                                                                       | 5 1.005  | 14.677    | 300         |
|                    |                |                 |           |              |             |                                                                                       | 0 1.006  | 14.677    | 300         |
| Permeable Paving 2 | 495199.273     | 106113.347      | 15.530    | 0.878        |             |    | 1 1.006  | 14.652    | 300         |
|                    |                |                 |           |              |             |  | 0 1.007  | 14.675    | 300         |
| PS66               | 495203.867     | 106053.148      | 15.275    | 0.525        |             |  | 1 19.001 | 14.750    | 100         |
|                    |                |                 |           |              |             |  | 0 19.002 | 14.750    | 100         |
| Permeable Paving 5 | 495200.216     | 106055.859      | 15.250    | 0.787        |             |  | 1 1.011  | 14.463    | 300         |
| Junction 4         | 495202.867     | 106055.671      | 15.250    | 0.742        |             |   | 1 19.002 | 14.740    | 100         |
|                    |                |                 |           |              |             |                                                                                       | 2 1.010  | 14.508    | 300         |
|                    |                |                 |           |              |             |                                                                                       | 0 1.011  | 14.508    | 300         |
| PS16               | 495223.295     | 106099.579      | 15.514    | 0.476        | 450         |   | 0 12.000 | 15.038    | 100         |
| PS17               | 495204.926     | 106103.070      | 15.492    | 0.641        | 450         |   | 1 12.000 | 14.851    | 100         |
|                    |                |                 |           |              |             |   | 0 12.001 | 14.851    | 100         |
| PS12               | 495221.935     | 106098.150      | 15.477    | 0.467        | 450         |   | 0 13.000 | 15.010    | 100         |
| PS13               | 495204.498     | 106097.320      | 15.477    | 0.642        | 450         |   | 1 13.000 | 14.835    | 100         |
|                    |                |                 |           |              |             |   | 0 13.001 | 14.835    | 100         |

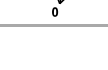


**Manhole Schedule**

| Node | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Connections                                                                               | Link   | IL<br>(m) | Dia<br>(mm) |
|------|----------------|-----------------|-----------|--------------|-------------|-------------------------------------------------------------------------------------------|--------|-----------|-------------|
| PS60 | 495193.190     | 106109.094      | 15.550    | 0.653        | 450         | <br>0   | 14.000 | 14.897    | 100         |
| PS8  | 495220.037     | 106078.629      | 15.463    | 0.539        | 450         | <br>0    | 16.000 | 14.924    | 100         |
| PS9  | 495206.058     | 106079.670      | 15.481    | 0.698        | 450         | <br>0   | 16.000 | 14.783    | 100         |
| PS5  | 495207.941     | 106077.940      | 15.494    | 0.700        | 450         | <br>0    | 16.001 | 14.783    | 100         |
| PS2  | 495208.759     | 106065.171      | 15.477    | 0.721        | 450         | <br>0    | 18.000 | 14.794    | 100         |
| PS49 | 495154.573     | 106110.436      | 15.920    | 0.696        | 450         | <br>0  | 2.000  | 15.224    | 100         |
| PS50 | 495157.989     | 106129.290      | 15.739    | 0.707        | 450         | <br>0  | 2.000  | 15.032    | 100         |
| PS41 | 495141.957     | 106138.421      | 16.025    | 0.800        | 450         | <br>0 | 2.001  | 15.032    | 100         |
| PS42 | 495152.868     | 106136.427      | 15.820    | 0.776        | 450         | <br>0 | 1.000  | 15.225    | 100         |
| PS45 | 495141.355     | 106134.563      | 16.050    | 0.700        | 450         | <br>0 | 1.001  | 15.225    | 100         |
| PS46 | 495152.189     | 106132.582      | 15.803    | 0.758        | 450         | <br>0 | 1.001  | 15.044    | 100         |
| PS53 | 495159.935     | 106128.629      | 15.707    | 0.681        | 450         | <br>0  | 1.002  | 15.044    | 100         |
| PS37 | 495161.718     | 106137.102      | 15.759    | 0.735        | 450         | <br>0  | 4.000  | 15.350    | 100         |
|      |                |                 |           |              |             | <br>0 | 4.000  | 15.045    | 100         |
|      |                |                 |           |              |             | <br>0 | 4.001  | 15.045    | 100         |
|      |                |                 |           |              |             | <br>0  | 5.000  | 15.026    | 100         |
|      |                |                 |           |              |             | <br>0  | 6.000  | 15.024    | 100         |

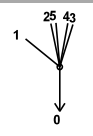


**Manhole Schedule**

| Node | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Connections                                                                          | Link | IL<br>(m) | Dia<br>(mm) |     |
|------|----------------|-----------------|-----------|--------------|-------------|--------------------------------------------------------------------------------------|------|-----------|-------------|-----|
| PS56 | 495176.585     | 106113.795      | 15.723    | 0.654        | 450         |     | 0    | 3.000     | 15.069      | 100 |
| PS57 | 495176.686     | 106123.464      | 15.658    | 0.686        | 450         |     | 1    | 3.000     | 14.972      | 100 |
|      |                |                 |           |              |             |     | 0    | 3.001     | 14.972      | 100 |
| PS34 | 495168.629     | 106135.409      | 15.708    | 0.705        | 450         |     | 0    | 7.000     | 15.003      | 100 |
| PS27 | 495211.150     | 106141.189      | 15.568    | 0.500        | 450         |     | 0    | 9.000     | 15.068      | 100 |
| PS28 | 495203.613     | 106131.386      | 15.568    | 0.624        | 450         |   | 1    | 9.000     | 14.944      | 100 |
|      |                |                 |           |              |             |   | 0    | 9.001     | 14.944      | 100 |
| PS20 | 495220.207     | 106119.485      | 15.522    | 0.399        | 450         |   | 0    | 8.000     | 15.123      | 100 |
| PS21 | 495199.154     | 106121.053      | 15.564    | 0.652        | 450         |  | 1    | 8.000     | 14.912      | 100 |
|      |                |                 |           |              |             |  | 0    | 8.001     | 14.912      | 100 |
| PS31 | 495183.408     | 106130.548      | 15.664    | 0.709        | 450         |   | 0    | 11.000    | 14.955      | 100 |
| PS24 | 495198.977     | 106122.831      | 15.569    | 0.651        | 450         |   | 0    | 10.000    | 14.918      | 100 |
| PS65 | 495205.846     | 106052.871      | 15.301    | 0.538        | 450         |   | 1    | 19.000    | 14.763      | 100 |
|      |                |                 |           |              |             |   | 0    | 19.001    | 14.763      | 100 |
| ACO  | 495201.551     | 106049.389      | 15.160    | 0.150        |             |  | 0    | 19.000    | 15.010      | 100 |
| PS40 | 495143.672     | 106147.874      | 16.050    | 0.700        | 450         |   | 0    | 1.000     | 15.350      | 100 |
| PS63 | 495194.630     | 106094.475      | 15.509    | 0.660        | 450         |  | 0    | 15.000    | 14.849      | 100 |



### Manhole Schedule

| Node                       | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Connections                                                                         | Link | IL<br>(m) | Dia<br>(mm) |     |
|----------------------------|----------------|-----------------|-----------|--------------|-------------|-------------------------------------------------------------------------------------|------|-----------|-------------|-----|
| Permeable Paving 3 (Lined) | 495200.979     | 106092.788      | 15.470    | 0.880        |             |  | 1    | 15.001    | 14.795      | 100 |
|                            |                |                 |           |              |             |                                                                                     | 2    | 14.001    | 14.842      | 100 |
|                            |                |                 |           |              |             |                                                                                     | 3    | 13.002    | 14.805      | 100 |
|                            |                |                 |           |              |             |                                                                                     | 4    | 12.002    | 14.821      | 100 |
|                            |                |                 |           |              |             |                                                                                     | 5    | 1.007     | 14.590      | 300 |
|                            |                |                 |           |              |             |                                                                                     | 0    | 1.008     | 14.600      | 300 |

### Simulation Settings

|                      |          |                            |        |                         |   |
|----------------------|----------|----------------------------|--------|-------------------------|---|
| Rainfall Methodology | FEH-22   | Analysis Speed             | Normal | Starting Level (m)      |   |
| Rainfall Events      | Singular | Skip Steady State          | x      | Check Discharge Rate(s) | x |
| Summer CV            | 1.000    | Drain Down Time (mins)     | 240    | Check Discharge Volume  | x |
| Winter CV            | 1.000    | Additional Storage (m³/ha) | 20.0   |                         |   |

### Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

| Return Period<br>(years) | Climate Change<br>(CC %) | Additional Area<br>(A %) | Additional Flow<br>(Q %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 30                       | 0                        | 0                        | 0                        |
| 30                       | 40                       | 10                       | 0                        |
| 100                      | 45                       | 10                       | 0                        |

### Node Permeable Paving 3 Online Orifice Control

|                          |       |                   |       |                       |       |
|--------------------------|-------|-------------------|-------|-----------------------|-------|
| Flap Valve               | x     | Design Depth (m)  | 0.600 | Discharge Coefficient | 0.600 |
| Replaces Downstream Link | x     | Design Flow (l/s) | 1.0   |                       |       |
| Invert Level (m)         | 0.000 | Diameter (m)      | 0.025 |                       |       |

### Node Permeable Paving 1 Carpark Storage Structure

|                             |         |                           |        |               |       |
|-----------------------------|---------|---------------------------|--------|---------------|-------|
| Base Inf Coefficient (m/hr) | 2.86560 | Invert Level (m)          | 14.745 | Slope (1:X)   | 325.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |        | Depth (m)     | 0.650 |
| Safety Factor               | 5.0     | Width (m)                 | 6.000  | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 25.100 |               |       |

### Node Permeable Paving 2 Carpark Storage Structure

|                             |         |                           |        |               |       |
|-----------------------------|---------|---------------------------|--------|---------------|-------|
| Base Inf Coefficient (m/hr) | 2.86560 | Invert Level (m)          | 14.660 | Slope (1:X)   | 265.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |        | Depth (m)     | 0.650 |
| Safety Factor               | 5.0     | Width (m)                 | 10.000 | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 21.900 |               |       |

### Node Permeable Paving 3 (Lined) Carpark Storage Structure

|                             |         |                           |        |               |       |
|-----------------------------|---------|---------------------------|--------|---------------|-------|
| Base Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 14.600 | Slope (1:X)   | 325.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |        | Depth (m)     | 0.650 |
| Safety Factor               | 2.0     | Width (m)                 | 5.500  | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 20.900 |               |       |



**Node Permeable Paving 4 Carpark Storage Structure**

|                             |         |                           |        |               |       |
|-----------------------------|---------|---------------------------|--------|---------------|-------|
| Base Inf Coefficient (m/hr) | 2.86560 | Invert Level (m)          | 14.500 | Slope (1:X)   | 325.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |        | Depth (m)     | 0.650 |
| Safety Factor               | 2.0     | Width (m)                 | 5.500  | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 32.700 |               |       |

**Node Permeable Paving 5 Carpark Storage Structure**

|                             |         |                           |        |               |       |
|-----------------------------|---------|---------------------------|--------|---------------|-------|
| Base Inf Coefficient (m/hr) | 2.86560 | Invert Level (m)          | 14.380 | Slope (1:X)   | 325.0 |
| Side Inf Coefficient (m/hr) | 0.00000 | Time to half empty (mins) |        | Depth (m)     | 0.650 |
| Safety Factor               | 5.0     | Width (m)                 | 5.500  | Inf Depth (m) |       |
| Porosity                    | 0.30    | Length (m)                | 6.180  |               |       |