

| FOUL WATER MANHOLE SCHEDULE |             |              |                 |              |              |                               |            |            |
|-----------------------------|-------------|--------------|-----------------|--------------|--------------|-------------------------------|------------|------------|
| MANHOLE REFERENCE           | COVER LEVEL | INVERT LEVEL | DEPTH TO INVERT | MANHOLE TYPE | MANHOLE SIZE | SEWERS FOR ADOPTION FIG. REF. | COVER TYPE | NORTHINGS  |
| F01                         | 13.890      | 10.285       | 3.6050          | TYPE 1A      | 1200         | FIG B.6                       | D400       | 507865.437 |
| F02                         | 13.605      | 10.327       | 3.2780          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507874.787 |
| F03                         | 13.745      | 10.384       | 3.3610          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507874.462 |
| F04                         | 13.692      | 10.519       | 3.1730          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507867.680 |
| F05                         | 14.387      | 10.828       | 3.5590          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507835.024 |
| F06                         | 14.791      | 11.080       | 3.7110          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507827.081 |
| F07                         | 14.980      | 11.202       | 3.7780          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507819.595 |
| F08                         | 15.340      | 11.436       | 3.9030          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507807.181 |
| F09                         | 15.458      | 11.534       | 3.9240          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507803.343 |
| F10                         | 15.256      | 11.851       | 3.4050          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507535.402 |
| F11                         | 15.275      | 12.046       | 3.2290          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507508.412 |
| F12                         | 15.220      | 12.387       | 2.8330          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507472.096 |
| F13                         | 14.185      | 12.885       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507436.858 |
| F14                         | 13.588      | 11.679       | 1.9090          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507674.894 |
| F15                         | 14.068      | 12.184       | 1.8740          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507684.234 |
| F16                         | 13.917      | 12.817       | 1.1000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507745.267 |
| F17                         | 14.750      | 12.056       | 2.6930          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507846.745 |
| F18                         | 14.776      | 12.388       | 2.4080          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507893.180 |
| F19                         | 14.887      | 12.615       | 2.2720          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507715.326 |
| F20                         | 14.805      | 12.085       | 2.7200          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507721.050 |
| F21                         | 15.238      | 12.882       | 2.3560          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507705.319 |
| F22                         | 15.426      | 13.189       | 2.2370          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507700.117 |
| F23                         | 14.049      | 13.608       | 1.4410          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507698.089 |
| F24                         | 14.878      | 13.678       | 1.2000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507692.829 |
| F25                         | 15.352      | 14.069       | 1.2830          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507665.721 |
| F26                         | 16.196      | 14.806       | 1.3900          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507698.626 |
| F27                         | 15.475      | 13.553       | 1.9220          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507698.843 |
| F28                         | 15.545      | 13.644       | 1.9010          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507694.180 |
| F29                         | 15.830      | 13.843       | 1.9860          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507691.548 |
| F30                         | 15.986      | 14.127       | 1.8590          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507592.185 |
| F31                         | 15.788      | 14.408       | 1.3800          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507591.723 |
| F32                         | 15.828      | 14.528       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507596.351 |
| F33                         | 15.306      | 13.809       | 1.4960          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507684.052 |
| F34                         | 15.607      | 14.195       | 1.4120          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507618.946 |
| F35                         | 15.732      | 14.382       | 1.3500          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507647.042 |
| F36                         | 14.972      | 12.824       | 2.1480          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507525.132 |
| F37                         | 14.954      | 13.672       | 1.2820          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507465.353 |
| F38                         | 14.990      | 13.690       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507465.258 |
| F39                         | 15.640      | 13.663       | 1.9770          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507591.135 |
| F40                         | 15.883      | 14.023       | 1.8600          | TYPE 1A      | 1200         | FIG B.8                       | D400       | 507520.302 |
| F41                         | 15.773      | 14.311       | 1.4620          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507542.726 |
| F42                         | 15.900      | 14.800       | 1.1000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507585.803 |

| HIGHWAY MANHOLE SCHEDULE |             |              |                 |              |              |                               |            |            |
|--------------------------|-------------|--------------|-----------------|--------------|--------------|-------------------------------|------------|------------|
| MANHOLE REFERENCE        | COVER LEVEL | INVERT LEVEL | DEPTH TO INVERT | MANHOLE TYPE | MANHOLE SIZE | SEWERS FOR ADOPTION FIG. REF. | COVER TYPE | NORTHINGS  |
| HW01                     | 13.700      | 12.400       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507427.112 |
| HW02                     | 14.973      | 13.673       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507458.074 |
| HW03                     | 15.615      | 14.510       | 1.1000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507642.147 |
| HW04                     | 15.688      | 14.388       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507659.277 |
| HW05                     | 15.043      | 13.743       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507699.880 |
| HW06                     | 14.402      | 13.525       | 0.8770          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507637.258 |
| HW07                     | 13.876      | 12.570       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507737.508 |
| HW08                     | 15.288      | 13.980       | 1.3000          | TYPE 2       | 1200         | FIG B.12                      | D400       | 507674.891 |

| HIGHWAY PRECAST CONCRETE RING SOAKAWAY SCHEDULE |           |       |                            |          |            |
|-------------------------------------------------|-----------|-------|----------------------------|----------|------------|
| SOAKAWAY REFERENCE                              | TOTAL No. | DEPTH | MAX DEPTH TO LOWEST INVERT | DIAMETER | COVER TYPE |
| HWSA1                                           | 1         | 3.4m  | 2m                         | 1200     | D400       |
| HWSA2                                           | 7         | 3.4m  | 2m                         | 1350     | D400       |
| HWSA3                                           | 2         | 3.4m  | 2m                         | 1500     | D400       |
| HWSA4                                           | 1         | 3.4m  | 2m                         | 1800     | D400       |
| HWSA5                                           | 8         | 3.4m  | 2m                         | 2100     | D400       |

| FOUL WATER INSPECTION CHAMBER SCHEDULE |              |           |                 |           |            |
|----------------------------------------|--------------|-----------|-----------------|-----------|------------|
| REF.                                   | CHAMBER TYPE | TOTAL No. | DEPTH TO INVERT | SIZE (mm) | COVER TYPE |
| F3                                     | TYPE 3       | 41        | <950mm          | 450       | B125       |
| F3                                     | TYPE 3       | 13        | <1300mm         | 450       | B125/D400  |
| F4                                     | TYPE 4       | 182       | <950mm          | 180       | B125       |

| SURFACE WATER INSPECTION CHAMBER SCHEDULE |              |           |                 |           |            |
|-------------------------------------------|--------------|-----------|-----------------|-----------|------------|
| REF.                                      | CHAMBER TYPE | TOTAL No. | DEPTH TO INVERT | SIZE (mm) | COVER TYPE |
| S3                                        | TYPE 3       | 8         | <950mm          | 450       | B125       |
| S4                                        | TYPE 4       | 182       | <950mm          | 180       | B125       |

| PRIVATE PRECAST CONCRETE RING SOAKAWAY SCHEDULE |                                     |       |                            |          |            |            |            |  |
|-------------------------------------------------|-------------------------------------|-------|----------------------------|----------|------------|------------|------------|--|
| REF.                                            | MAX. DRAINED AREA (m <sup>2</sup> ) | DEPTH | MAX DEPTH TO LOWEST INVERT | Diameter | COVER TYPE | EASTINGS   | NORTHINGS  |  |
| PSA01                                           | 273                                 | 3.300 | 1.000                      | 900      | B125       | 507461.861 | 104108.803 |  |
| PSA02                                           | 321                                 | 3.200 | 1.000                      | 900      | B125       | 507465.985 | 104121.404 |  |
| PSA03                                           | 435                                 | 2.781 | 1.000                      | 1200     | B125       | 507485.103 | 104149.444 |  |
| PSA04                                           | 463                                 | 2.271 | 1.000                      | 1500     | B125       | 507519.354 | 104172.283 |  |
| PSA05                                           | 384                                 | 2.230 | 1.000                      | 1350     | B125       | 507571.353 | 104175.885 |  |
| PSA06                                           | 244                                 | 2.500 | 1.000                      | 900      | B125       | 507542.922 | 104173.113 |  |
| PSA07                                           | 281                                 | 3.000 | 1.000                      | 900      | B125       | 507530.705 | 104117.233 |  |
| PSA08                                           | 853                                 | 3.327 | 1.000                      | 1200     | B125       | 507639.211 | 104098.272 |  |
| PSA09                                           | 441                                 | 3.229 | 1.000                      | 1050     | B125       | 507517.974 | 104083.043 |  |
| PSA10                                           | 120                                 | 3.180 | 1.000                      | 800      | B125       | 507543.888 | 104088.821 |  |
| PSA11                                           | 365                                 | 3.278 | 1.000                      | 900      | B125       | 507529.180 | 104095.917 |  |
| PSA12                                           | 346                                 | 3.144 | 1.000                      | 900      | B125       | 507453.840 | 104053.020 |  |
| PSA13                                           | 378                                 | 3.370 | 1.000                      | 900      | B125       | 507489.928 | 104054.542 |  |
| PSA14                                           | 267                                 | 2.584 | 1.000                      | 900      | B125       | 507505.320 | 104028.491 |  |
| PSA15                                           | 219                                 | 2.800 | 1.000                      | 900      | B125       | 507474.562 | 104039.713 |  |
| PSA16                                           | 187                                 | 2.800 | 1.000                      | 900      | B125       | 507487.833 | 104047.091 |  |
| PSA17                                           | 026                                 | 3.200 | 1.000                      | 1350     | B125       | 507623.246 | 104177.245 |  |
| PSA18                                           | 680                                 | 4.989 | 1.000                      | 1350     | B125       | 507685.149 | 104177.489 |  |
| PSA19                                           | 473                                 | 3.500 | 1.000                      | 1050     | B125       | 507621.231 | 104131.179 |  |
| PSA20                                           | 249                                 | 3.400 | 1.000                      | 900      | B125       | 507841.931 | 104132.962 |  |
| PSA21                                           | 428                                 | 3.500 | 1.000                      | 1050     | B125       | 507683.880 | 104131.890 |  |
| PSA22                                           | 278                                 | 3.100 | 1.000                      | 900      | B125       | 507680.310 | 104109.533 |  |
| PSA23                                           | 314                                 | 3.300 | 1.000                      | 900      | B125       | 507036.134 | 104124.548 |  |
| PSA24                                           | 268                                 | 3.500 | 1.000                      | 900      | B125       | 507633.658 | 104122.345 |  |
| PSA25                                           | 271                                 | 3.400 | 1.000                      | 900      | B125       | 507619.857 | 104118.847 |  |
| PSA26                                           | 165                                 | 2.300 | 1.000                      | 900      | B125       | 507638.258 | 104079.088 |  |
| PSA27                                           | 256                                 | 2.200 | 1.000                      | 1050     | B125       | 507655.201 | 104080.787 |  |
| PSA28                                           | 053                                 | 2.411 | 1.000                      | 1050     | B125       | 507679.121 | 104075.714 |  |
| PSA29                                           | 280                                 | 2.500 | 1.000                      | 1050     | B125       | 507684.147 | 104073.386 |  |
| PSA30                                           | 222                                 | 2.400 | 1.000                      | 900      | B125       | 507643.504 | 104072.872 |  |
| PSA31                                           | 389                                 | 2.583 | 1.000                      | 1200     | B125       | 507829.830 | 104072.368 |  |
| PSA32                                           | 355                                 | 2.500 | 1.000                      | 1200     | B125       | 507638.851 | 104027.840 |  |
| PSA33                                           | 206                                 | 2.600 | 1.000                      | 900      | B125       | 507659.310 | 104028.334 |  |
| PSA34                                           | 214                                 | 2.700 | 1.000                      | 900      | B125       | 507672.508 | 104028.854 |  |
| PSA35                                           | 185                                 | 2.600 | 1.000                      | 900      | B125       | 507682.984 | 104030.605 |  |
| PSA36                                           | 263                                 | 2.317 | 1.000                      | 1050     | B125       | 507686.413 | 104022.883 |  |
| PSA37                                           | 442                                 | 2.460 | 1.000                      | 1350     | B125       | 507690.883 | 104024.404 |  |
| PSA38                                           | 317                                 | 2.513 | 1.000                      | 1050     | B125       | 507648.549 | 104022.159 |  |
| PSA39                                           | 278                                 | 2.907 | 1.000                      | 1200     | B125       | 507701.580 | 103997.829 |  |

| PRIVATE PRECAST CONCRETE RING SOAKAWAY SCHEDULE |                                     |                           |              |             |
|-------------------------------------------------|-------------------------------------|---------------------------|--------------|-------------|
| REF.                                            | MAX. DRAINED AREA (m <sup>2</sup> ) | DEPTH (From Ground Level) | TRENCH DEPTH | SIZE        |
| PSA51                                           | 154                                 | 2.300                     | 1.100        | 4.10 x 1.20 |
| PSA52                                           | 274                                 | 2.300                     | 1.100        | 6.90 x 1.20 |
| PSA53                                           | 109                                 | 2.300                     | 1.100        | 2.14 x 1.20 |
| PSA54                                           | 186                                 | 2.500                     | 1.100        | 4.45 x 1.20 |
| PSA55                                           | 178                                 | 2.500                     | 1.100        | 4.23 x 1.20 |
| PSA56                                           | 373                                 | 2.300                     | 1.100        | 9.48 x 1.20 |
| PSA57                                           | 101                                 | 2.300                     | 1.100        | 2.18 x 1.2  |
| PSA58                                           | 317                                 | 2.300                     | 1.100        | 7.88 x 1.20 |
| PSA59                                           | 143                                 | 2.300                     | 1.100        | 3.29 x 1.20 |
| PSA60                                           | 143                                 | 2.500                     | 1.100        | 3.29 x 1.20 |
| PSA61                                           | 200                                 | 2.300                     | 1.100        | 4.82 x 1.20 |
| PSA62                                           | 200                                 | 2.300                     | 1.100        | 4.82 x 1.20 |
| PSA63                                           | 238                                 | 2.300                     | 1.100        | 6.63 x 1.20 |
| PSA64                                           | 230                                 | 2.300                     | 1.100        | 6.63 x 1.20 |
| PSA65                                           | 215                                 | 2.300                     | 1.100        | 3.64 x 2.00 |
| PSA66                                           | 273                                 | 2.300                     | 1.100        | 8.78 x 1.20 |

- NOTES:
- All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
  - This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
  - The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.
  - Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.
  - All pipes, bends and junctions shall be verified clay to BS EN 285-1, with flexible joints and kilnmark certified. Alternatively all pipes and fittings can be UPVC conforming to BS EN 1421-1 and shall be laid in accordance with the manufacturers specification. If UPVC pipes are to be used then the manufacturer shall be approved by the Engineer prior to construction.
  - All adoptable sewers shall be in strict accordance with the current edition of Sewers For Adoption. Unless otherwise stated, adoptable sewers shall be 150mm diameter and shall be laid in a class 3 bedding. Where the depth to soffit is less than 1.2m under a public highway or 0.9m elsewhere the pipe shall be laid with a class 2 bedding.
  - All private building drainage shall be constructed in strict accordance with BS EN 752:1996. Unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of 1 in 40 for foul drains and 1 in 80 for surface water drains. All building drains shall be laid in class B bedding unless otherwise specified.
  - Where a pipe is within 1m of a foundation the trench shall be filled with class GEN 3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN 3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN 3 concrete.
  - Where pipes, external to the structures, have a depth 1 m or more from ground level of less than 450mm they shall have a class GEN 3 concrete encasement (150mm thick). In all other cases the pipes shall be bedded and surrounded with 100mm thick granular material.
  - In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible joints (fibreglass or polyethylene) shall be provided at a maximum of 8m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 30mm for pipes over 450mm nominal diameter.

- All sags shall have rodding access plates fitted at their bases (ground floor level).
- Where existing pipes are to be abandoned they shall be dug out together with any abandoned manholes.

C: 06.08.14 [AJD] Drainage updated to suit 'Value Engineering' comments  
B: 22.07.14 [AJD] Highway manhole and soakaway schedules updated to suit new design, private trench soakaway size updated  
A: 17.08.14 [AJD] Drainage updated

| REV | DATE | BY | DESCRIPTION | CHK |
|-----|------|----|-------------|-----|
|-----|------|----|-------------|-----|

Issue Status

TENDER

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the

Civil

Engineering

Practice

|          |                                  |             |       |
|----------|----------------------------------|-------------|-------|
| CLIENT   | Barratt David Wilson Southampton |             |       |
| PROJECT  | Swanbourne Park<br>Angmering     |             |       |
| TITLE    | Manhole Schedule                 |             |       |
| DESIGNER | DATE                             | PROJECT NO. | 22067 |
| A Davis  | June 2014                        |             |       |
| CHECKED  |                                  |             |       |
| A French |                                  |             |       |
| SCALE    |                                  |             | 226   |
| NTS      |                                  |             | C     |