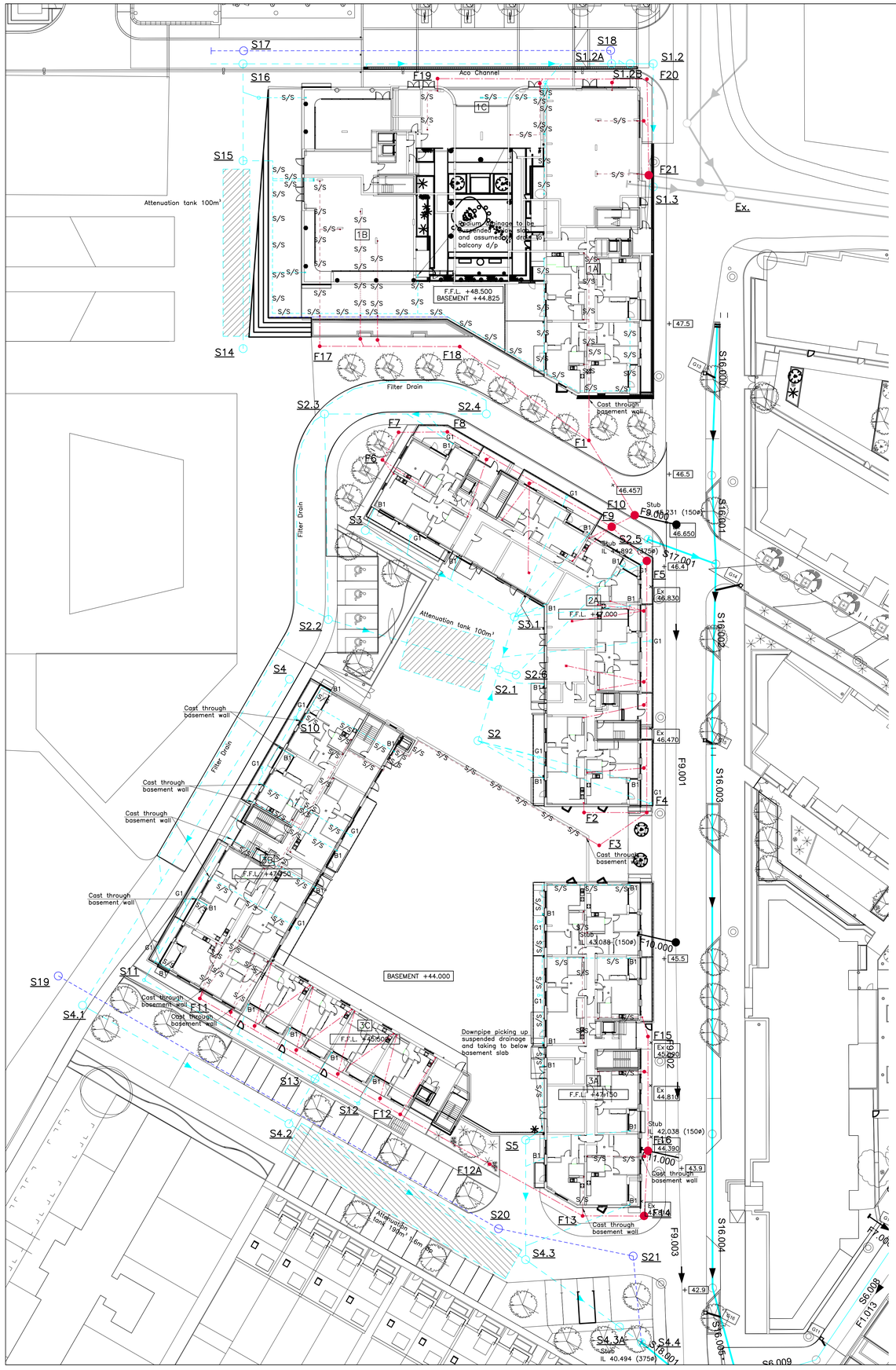


| Project Title: | Town Centre West, Uxbridge | | | | | | |
|---|---|---|---|---|---|---|---|
| Project No.: | 2016-281 | | | | | | |
| **Surface Water** | | | | | | | |
| M.H. No. | Cover level | Invert level | Size | Type | Largest pipe | Cover type | Notes |
| S1 | 48.500 | 46.000 | 1200 | CR | 150 | D400 | |
| S1.1 | 48.500 | 45.900 | 1200 | CR | 225 | D400 | |
| S1.2 | 48.400 | 46.518 | 1200 | CR | 225 | D400 | |
| S1.2A | 48.400 | 46.547 | 1200 | CR | 150 | D400 | Receiving chamber |
| S1.2B | 48.400 | 45.187 | | | | D400 | Pumping station |
| S1.3 | 48.500 | T.B.C. | 1200 | CR | 225 | D400 | Stub (I.L. To Be Confirmed) |
| S2 | 47.000 | 46.000 | 600 | Tegra | 225 | B125 | |
| S2.1 | 47.000 | 45.400 | 1200 | CRCP | 300 | B125 | Hydrobrake 5Lts/sec |
| S2.2 | 47.000 | 45.486 | 1200 | CR | 300 | D400 | |
| S2.3 | 47.100 | 45.462 | 1200 | CR | 225 | D400 | |
| S2.4 | 46.900 | 45.600 | 1200 | CR | 225 | D400 | |
| S2.5 | 46.500 | 44.892 | 1200 | CR | 300 | D400 | Atkins Stub156 |
| S2.6 | 47.000 | 45.393 | 600 | Tegra | 300 | B125 | |
| S3 | 47.000 | 46.000 | 600 | Tegra | 225 | B125 | |
| S3.1 | 47.000 | 45.850 | 600 | Tegra | 225 | B125 | |
| S4 | 46.900 | 45.500 | 1200 | CR | 225 | D400 | |
| S4.1 | 46.700 | 45.159 | 1200 | CR | 225 | D400 | |
| S4.2 | 44.100 | 42.600 | 1200 | CR | 375 | D400 | |
| S4.3 | 44.000 | 42.000 | 1200 | CRCP | 450 | D400 | |
| S4.3A | 43.000 | 41.965 | 1200 | CRCP | 450 | C250 | Hydrobrake 15Lts/sec |
| S4.4 | 43.000 | 40.494 | 1500 | CR | 375 | B125 | Atkins Stub158 |
| S5 | 44.100 | 42.700 | 1200 | CR | 225 | D400 | |
| S6 | 45.000 | 43.500 | 1200 | CR | 150 | D400 | |
| S6.1 | 44.100 | 42.600 | 1200 | CR | 150 | D400 | |
| S7 | 45.100 | 43.900 | 1200 | CR | 150 | B125 | |
| S7.1 | 44.200 | 42.200 | 1200 | CR | 150 | B125 | |
| S7.2 | 42.500 | 40.500 | 1200 | CR | 225 | B125 | |
| S7.3 | 41.800 | 40.200 | 1200 | CR | 225 | B125 | Stub (I.L. To Be Confirmed) |
| S8 | 45.100 | 44.000 | 600 | PPIC | 150 | B125 | |
| S8.1 | 42.700 | 41.700 | 600 | PPIC | 150 | B125 | |
| S8.2 | 42.600 | 41.500 | 600 | PPIC | 150 | B125 | |
| S9 | 45.100 | 44.000 | 600 | PPIC | 150 | B125 | |
| S10 | 47.000 | 45.700 | 600 | Tegra | 225 | B125 | |
| S11 | 47.000 | 45.355 | 600 | Tegra | 300 | C250 | |
| S12 | 45.500 | 44.500 | 475 | PPIC | 100 | C250 | |
| S13 | 45.500 | 44.225 | 600 | Tegra | 300 | C250 | |
| S14 | 47.400 | 45.600 | 1200 | CRCP | 300 | C250 | |
| S15 | 48.100 | 45.506 | 1200 | CRCP | 300 | C250 | |
| S16 | 48.500 | 45.445 | 1200 | CR | 300 | D400 | |
| S17 | 48.300 | 46.389 | 1200 | CR | 150 | D400 | |
| S18 | 48.400 | 45.913 | 1200 | CR | 150 | D400 | |
| S19 | 46.800 | 41.456 | 1200 | CR | 150 | D400 | |
| S20 | 43.900 | 40.929 | 1200 | CR | 150 | D400 | |
| S21 | 43.000 | 40.758 | 1200 | CR | 150 | D400 | |

**NOTES**

| | |
|---|---|
| C.R. | Concrete ring manhole see std. detail D1 or D15. |
| P.P.I.C | Polypropylene Inspection Chamber see std.detail D13 |
| Tegra | Tegra Inspection Chamber see std detail D49 |
| X | 600 sq. Medium duty recessed, air-tight, screw-down cover and frame eg Broadstel |
| D400 | 600sq. Heavy duty, ductile iron, cover and frame to BS EN 124:D400 |
| C250 | 600sq Medium duty, ductile iron, cover and frame to BS EN 124:C250 |
| B125 | 600sq Light duty, ductile iron, cover and frame to BS EN 124:B125 |
| C | proprietary light duty cover and frame |

ALL COVER LEVELS ARE APPROXIMATE.

| Project Title: | Town Centre West | | | | | | |
|---|---|---|---|---|---|---|---|
| Project No.: | 2021-189 | | | | | | |
| **Foul Water** | | | | | | | |
| M.H. No. | Cover level | Invert level | Size | Type | Largest pipe | Cover type | Notes |
| F1 | 46.900 | 45.550 | 1200 | CR | 150 | C250 | |
| F2 | 46.800 | 46.100 | 475 | PPIC | 150 | C250 | |
| F3 | 46.800 | 46.100 | 475 | PPIC | 150 | C250 | |
| F4 | 46.800 | 46.022 | 475 | PPIC | 150 | C250 | |
| F5 | 46.800 | 45.708 | 475 | PPIC | 150 | C250 | |
| F6 | 46.800 | 46.100 | 475 | PPIC | 150 | C250 | |
| F7 | 46.800 | 46.060 | 475 | PPIC | 150 | C250 | |
| F8 | 46.800 | 45.999 | 475 | PPIC | 150 | C250 | |
| F9 | 46.800 | 45.647 | 475 | PPIC | 150 | C250 | |
| F10 | 46.500 | 45.231 | 1200 | CR | 150 | D400 | Ex stub IL to be confirmed |
| F11 | 47.000 | 46.300 | 475 | PPIC | 150 | C250 | |
| F12 | 47.000 | 46.012 | 475 | PPIC | 150 | C250 | |
| F12A | 44.125 | 42.329 | 1200 | CR | 150 | C250 | |
| F13 | 44.200 | 42.196 | 1200 | CR | 150 | C250 | |
| F14 | 44.200 | 42.119 | 1200 | CR | 150 | C250 | |
| F15 | 44.675 | 43.925 | 475 | PPIC | 150 | C250 | |
| F16 | 44.100 | 42.038 | 1200 | CR | 150 | C250 | Ex stub IL to be confirmed |

**NOTES**

| | |
|---|---|
| C.R. | - Concrete ring manhole see std. detail D1 or D15. |
| P.P.I.C | - Polypropylene Inspection Chamber see std.detail D13 |
| A.C. | - Plastic Access Chamber |
| Tegra | - Tegra Inspection Chamber see std detail D49 |
| X | 600 sq. Medium duty recessed, air-tight, screw-down cover and frame eg Broadstel |
| D400 | - 600sq. Heavy duty, ductile iron, cover and frame to BS EN 124:D400 |
| C250 | - 600sq Medium duty, ductile iron, cover and frame to BS EN 124:C250 |
| B125 | - 600sq Light duty, ductile iron, cover and frame to BS EN 124:B125 |
| C | proprietary light duty cover and frame |

## LEGEND

- Surface Water Manhole and Sewer
- Existing SW Manhole and Sewer
- SW from future phase
- S/S — S/S Suspended surface drainage
- S/S — S/S Foul drainage suspended below ground floor slab / above basement
- Permeable paving
- G1 Ground floor balcony gully
- B1 Downpipe at ground floor balcony picking up all balconys above.

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## NOTES.

1. This drawing is to be read in conjunction with all relevant Architect's, Engineer's, Specialists details and the Specification.
2. All surface water pipes sizes as stated.
3. All foul water pipes sizes as stated.
4. All drainage pipes to BS EN 295 (clayware) or BS EN 1401 (plastic) U.N.O. Other materials may be permitted subject to the approval of the Engineer.
5. Pipes to BS EN 295 with more than 900mm cover between pipe soffit and finished surface to be in Type 'B' bedding. Pipes to BS EN 1401 with more than 900mm between pipe soffit and finished surface to be in Type 'S' bedding.
6. All pipes under external paved areas with less than 900mm cover to be in Type 'A5' bedding.
7. All manholes, trenches, culverts etc to be backfilled with imported granular fill to Class 6F1 (capping material) compacted to a maximum of 95% of maximum dry density of BS.1377: Part 4 (Vibrating Hammer method).
8. The Contractor is responsible for ensuring that full and adequate temporary works are provided to maintain safety and stability of the existing structure whilst the new works are being carried out. The propping is to remain in position until such time that the new works can adequately sustain the intended loads. Details of the proposed temporary works are to be forwarded to the Engineer for comment prior to commencement of works being carried out. Reference should also be made to Nolan Associates Standard detail – Pipes near buildings. (D22)
9. Polypropylene Access Chambers (denoted A.C.) are to be no deeper than 600,mm.
10. Pipe Gradients:

    Pipes are to be laid to the levels and gradients shown. Pipe branches are to be laid no flatter than the following table:

| | 100ø | 150ø |
|---|---|---|
| Gullies, sinks and basins | 1:40 | 1:40 |
| Pipes draining 1 or more WC's | 1:80 | – |
| Pipes draining 5 or more WC's | 1:80 | 1:150 |

11. For Manhole covers see schedule.
12. The Contractor is to enter into all necessary legal agreements with the drainage authority for all connections to the Public Sewer Network.
13. The Contractor is to survey all drainage outfalls and determine the levels of any Utility Apparatus that might affect the levels of drainage connections, prior to commencing any drainage works on site.
14. The Contractor is to obtain the consent of the Highway Authority to any works within the highway and enter into any necessary legal agreements.
15. Rising main to be BS EN 13244–2, all joints electrofusion welded to provide continuous main.

Stub levels are based on Atkins as–built drawings and to be confirmed prior to any works commencing.

Pop–ups and RWP's to be confirmed by specialist design. Suspended drainage routes are shown indicatively and to be confirmed by M&E consultant. All drainage routes, manholes and levels in–abeyance pending pop–up confirmation.

NOLAN ASSOCIATES

**PRELIMINARY DRAWING**

NOT TO BE USED FOR CONSTRUCTION

| REV | DESCRIPTION | BY | CHKD | DATE |
|---|---|---|---|---|
| P2 | Drainage revised to suit pop–ups | MH | JJG | 02.11.21 |
| P1 | Preliminary issue | MH | JJG | 30.09.21 |

Uxbridge – Town Centre West

Drainage Layout

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| Drawn by | Date | Plot Date | Scale |
|---|---|---|---|
| MH | 09.07.21 | 02.11.21 | 1:250@A0 |
| **Checked by** | **Project No** | | **Dwg No** |
| JJG | 2021–189 | | 100 P2 |

Bim Ref: R9110–NOL–21–ZZ–DR–C–0100