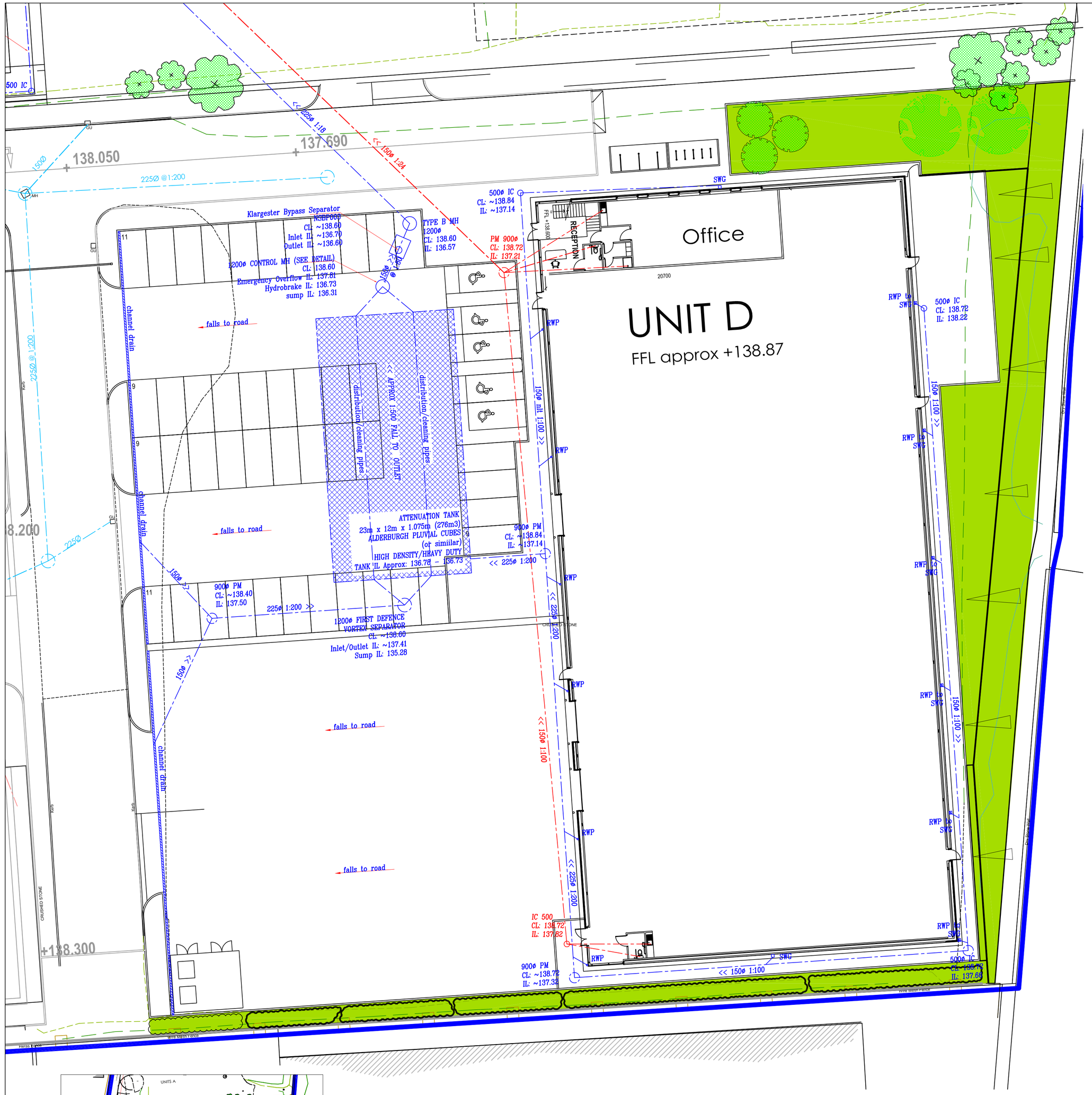
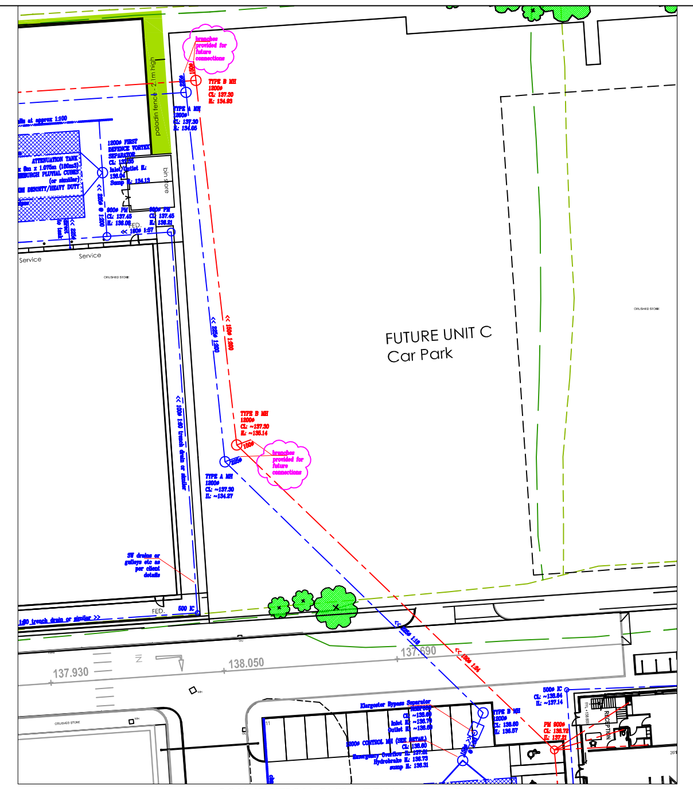
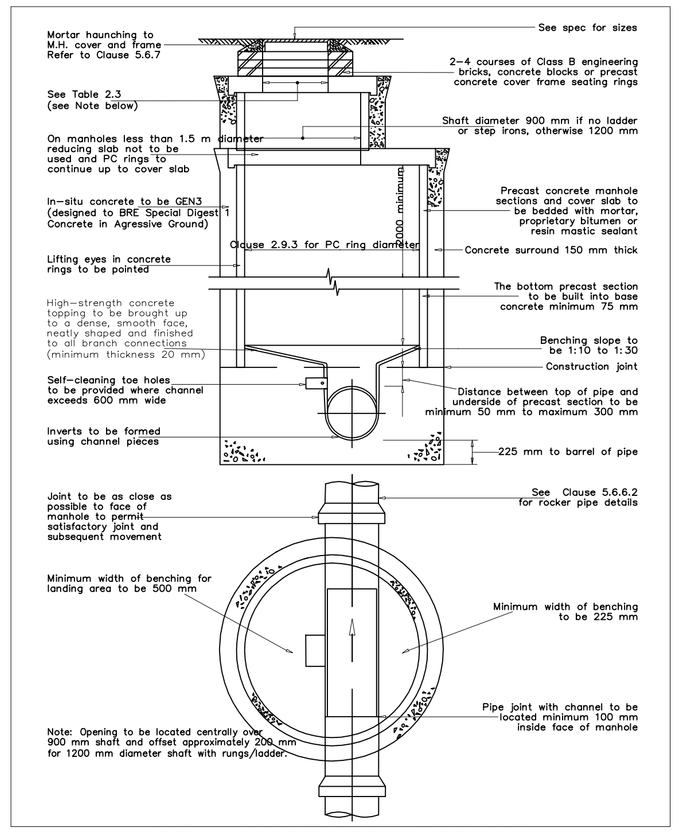
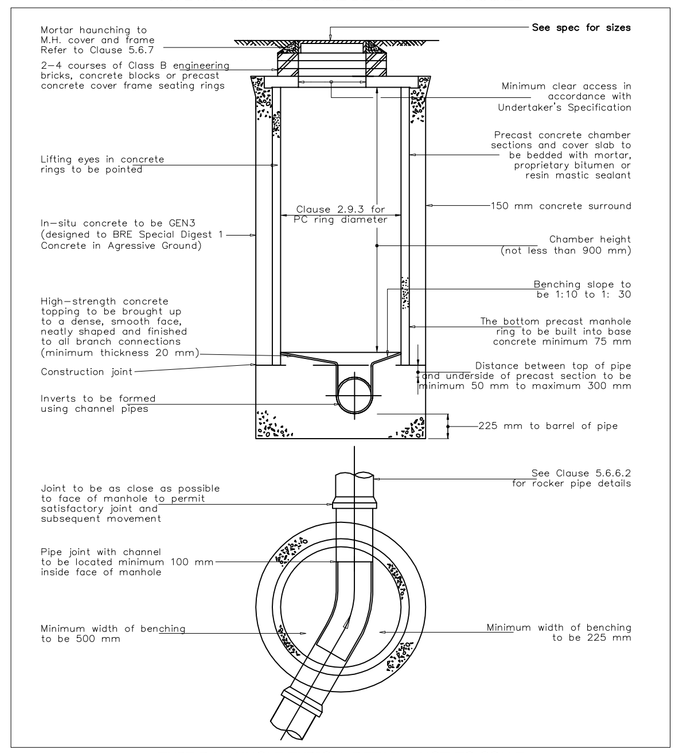



CONNECTION OVERVIEW PLAN 1:500




TYPE A MANHOLE TYPICAL DETAIL - NOT TO SCALE




TYPE B MANHOLE TYPICAL DETAIL - NOT TO SCALE

## GENERAL NOTES

0.0 THIS DRAWING IS COPYRIGHT & IS SENT TO YOU IN CONFIDENCE.IT MUST NOT BE COPIED, USED OR DISCLOSED, IN WHOLE OR IN PART, TO THIRD PARTIES WITHOUT WRITTEN PERMISSION. IT REMAINS THE PROPERTY OF TJBA AND MUST BE RETURNED ON REQUEST.
0.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTUAL DOCUMENTS.
0.2 All dims in mm unless o/w stated.
0.3 All levels in m aOD unless o/w stated.
0.4 Refer to architects details for SBM.
0.5 Contractor to confirm SOP/SOL's prior to ordering material/ construction.
0.6 Do not scale, the contractor must verify all dims prior to commencing shop drawings or work on site.
0.7 All work to be carried out in accordance with CDM 2015.

1.0 HIGHWAYS
1.1 N/A.

2.0 DRAINAGE.
2.1 To be read in conjunction with T J Booth Associates drainage calculations ref: rep-condale-TBP, darwen, UNIT D-detailed drainage design-271017.
2.2Manhole cover levels indicative only, to be adjusted to suit final finish site levels.
2.3 Sewers/manholes to be constructed in accordance with the wafer authorities sewers for adoption (edition as applicable) & B. Regs. Approved Doc. H, and BS EN 752-4.
2.4 Class b granular bed and surround to all new sewers.
2.5 Any sewers or drains with less than 1.2m of cover under adoptable highways (either during or after construction); Or with less than 900mm of cover under private access/driveways; to be protected with min 150mm thick. conc surround unless otherwise specified.
2.6 All conc including pipes and manholes to be sulphate resisting unless otherwise agreed in writing by eng.

3.0 FOUL WATER DRAINAGE
3.1 Foul water system laid as indicated and in line with the following: 100Ø at gradients not less than 1:80 where at least 1 WC is connected and not less than 1:40 where no WC is connected. 150Ø foul drain gradients as indicated. Guidance in line with current b.regs and SFA.
3.2 Foul system to connect in to UU sewer network via existing FW manhole to W side of site.

4.0 SURFACE WATER DRAINAGE
4.1 SW drainage to attenuate up to 100yr + 30% and ngt 6.61/s by use of modular attenuation crates c/w Hydro-brake Optimum vortex control unit at max 1.075m head.
4.2 Control Manhole to have emergency overflow in case of blockage to hydrobrake, see plan & sect.
4.3 Attenuation crates to be constructed in line with Alderburgh Ltd construction details & sequence of works. Cover to be not less than 550mm. No construction or any other traffic until final finishes have been constructed. Crates to be provided with self cleansing/distribution pipes and air vents to manufacturers details.
4.4 All roof and rear access path SW to be routed direct to attenuation tank.
4.5 All SW from yards, car park, and loading areas available to vehicular activity to be routed through Hydro International First Defence 1200Ø Hydrodynamic Separator (or similar unit); installed and maintained as per manufacturers details.
4.6 Oil bypass separator to be Klargester NSBP003 or similar, insfalled and maintained as per manufacturers details.

5.0 MANHOLES
5.1 Manhole diameters to be in accordance with SFA clause 2.9.3, and according to largest manhole pipe diameter:

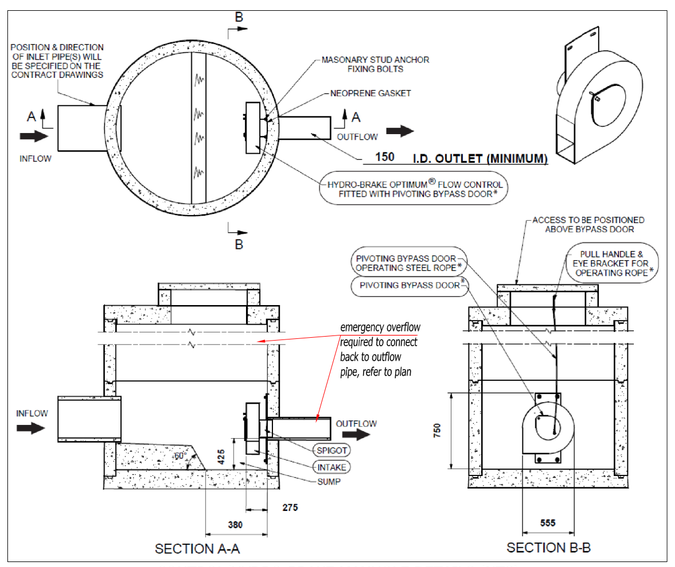
| Pipe dia | MH dia |
|---|---|
| <375 | 1200; |
| 375–700 | 1500; |
| 750–900 | 1800. |

5.2 Rocker pipes (clause 5.6.6.2) to be the following lengths:
150–600Ø:0.6m;
>600–700Ø:1.0m;
>750Ø:1.25m.
5.3 Inspection chambers/manholes to have min 150granular surround in soft landscaping areas and not less than 150 conc surround to driveways/car parks.
5.4 Manhole covers and frames shall comply with the relevant provisions of bs. en 124 and shall be of non-rocking design which does not rely on the use of cushion inserts.
5.5 Cover sizes and access in accord with SFA Table 2.3 & to be 600x600 in United Utilities & Yorkshire Water areas.
5.6 Cover strength (clause 5.7.1.1) comprising minimum strength for location as follows:

| | | |
|---|---|---|
| Road | D400 | Vehicle Impact; |
| Footway/Driveway | B125 | Occasional vehicle loading; |
| Gardens | A15 | Pedestrian & cyclist ONLY. |

5.7 All manhole covers shall be the non-venting type (unless indicated otherwise) and shall have closed keyways.
5.8 Manhole frames (clause 5.6.7) to be set to level, bedded and haunched externally over the base and sides of the frame in mortar, in accordance with the manufacturers instructions. The frame shall be seated on not less than 2 courses of class B engineering brick, on precast concrete masonry units or on precast concrete cover frame seating rings to regulate the distance between the top of the cover and the top rung to no greater than 675mm. A mortar fillet shall be provided where the corners to an opening in a slab are chamfered and the brickwork is not flush with the edges of the opening.

6.0 GENERAL FINISHES
6.1 As per Condale Ltd details.




CONTROL/HYDRO-BRAKE MANHOLE DETAILS (NTS)

PLANNING

| AMENDMENTS/ ISSUES | | | |
|---|---|---|---|
| | | | |
| p0 | original for planning | dec 2017 | ds |
| REVISION | REASON/ CHANGE | DATE | BY |

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OL16 1DH
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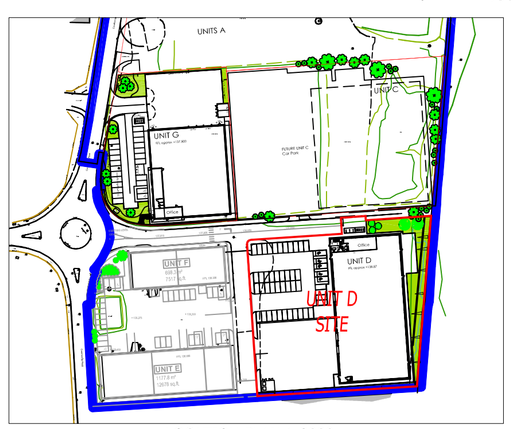
CONDALE / TOWER BUSINESS PARK, DARWEN

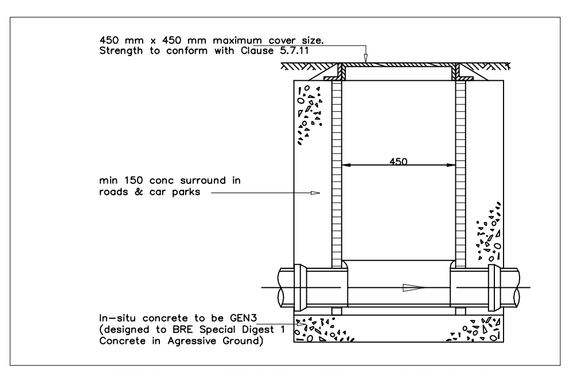
UNIT D - PROPOSED DRAINAGE PLAN

FILE NAME: dwg-tjba-condale-tower BP, darwen-050417

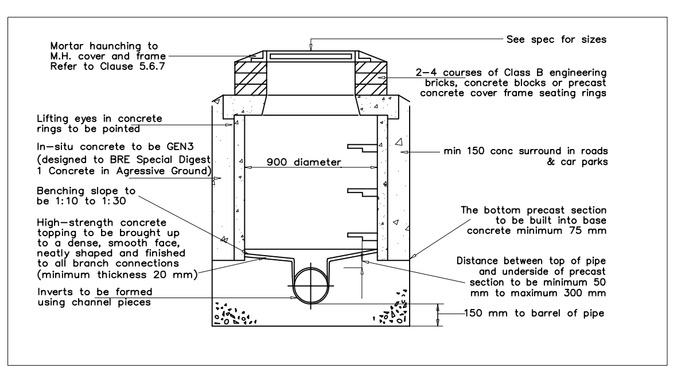
SCALE: 1 : 200 & as indicated @ A1




LOCATION PLAN 1:2000




INSPECTION CHAMBER TYPICAL DETAIL - NOT TO SCALE




PRIVATE MANHOLE 900Ø TYPICAL DETAIL - NOT TO SCALE