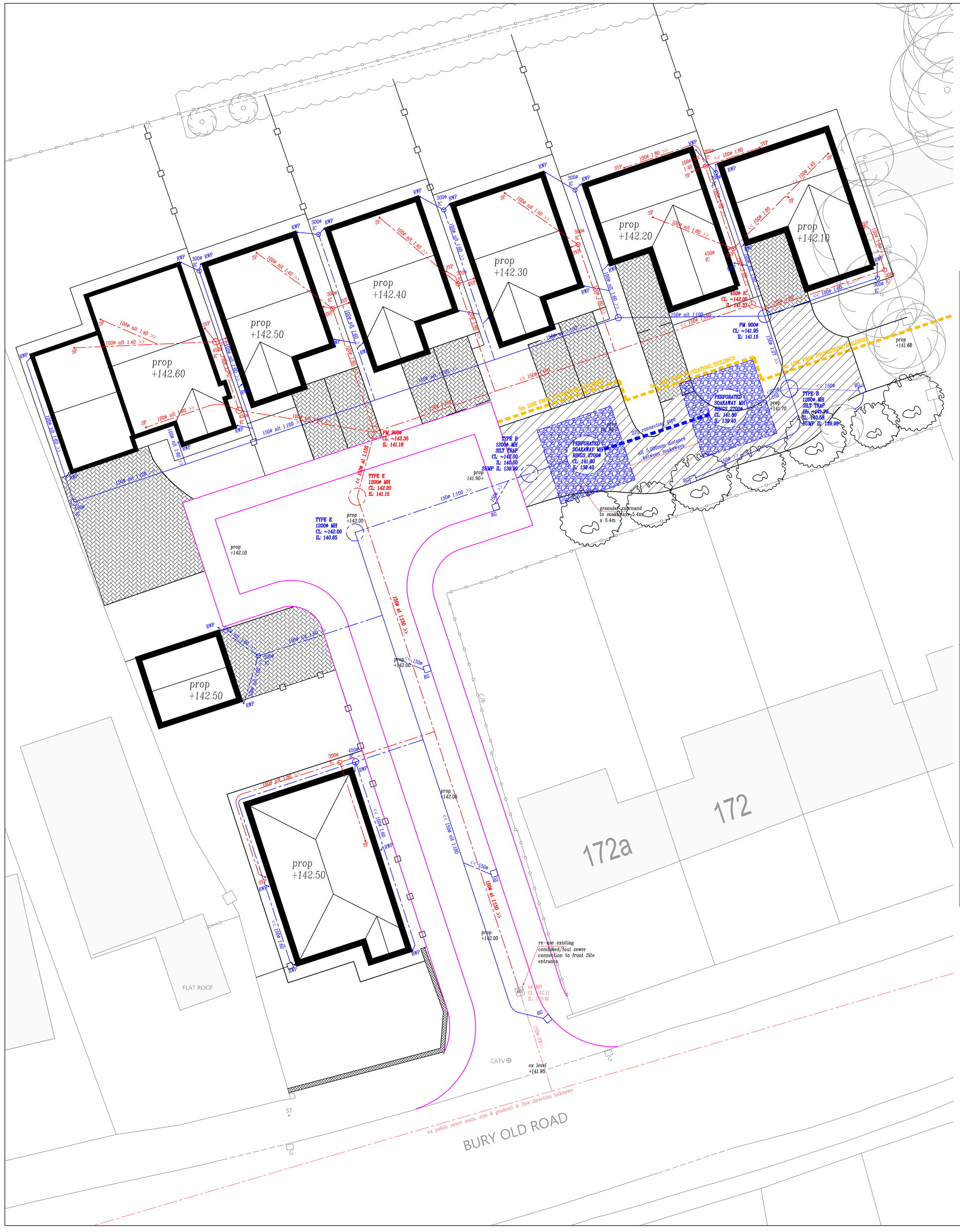
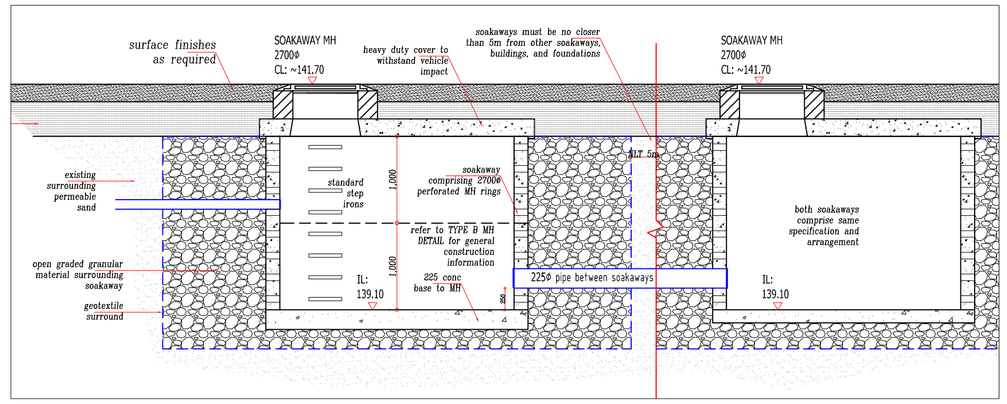



SOAKAWAY GENERAL ARRANGEMENT DETAIL 1:50

**TYPICAL MANHOLE DETAIL - TYPE B**
Maximum depth from cover level to soffit of pipe 3.0 m
For steps and access arrangements see Table 2.3

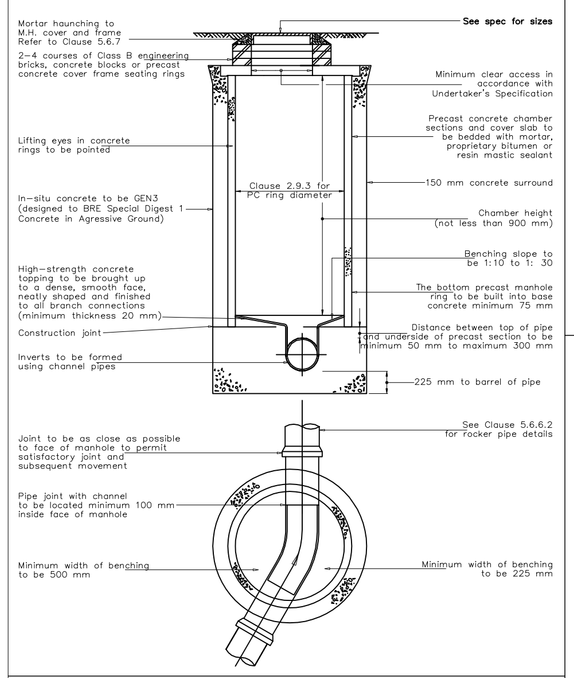
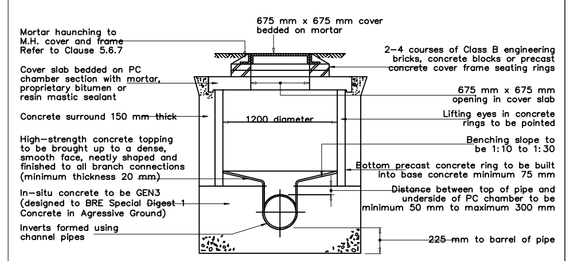



**FIGURE 2.8**
**TYPICAL MANHOLE DETAIL - TYPE E**
Depth from cover level to soffit of pipe 1.0 m to 1.5 m
Maximum sewer diameter 375 mm

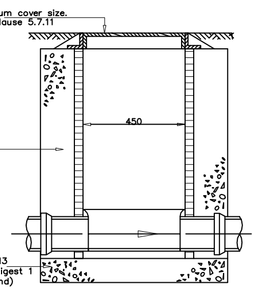
Approval of the Undertaker must be given for installation of this type of manhole.




Note: All precast concrete sections / slab and in-situ concrete to be GEN3 (designed to BRE Special Digest 1 Concrete in Agressive Ground).

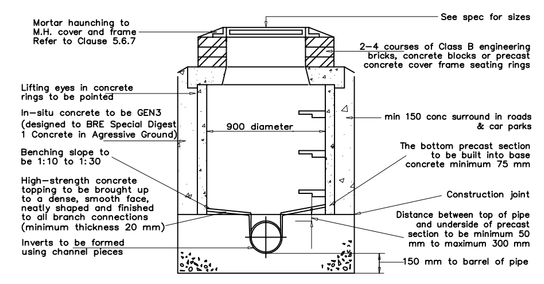
Not to scale, dimensions in millimetres

**TYPICAL INSPECTION CHAMBER DETAIL**
Depth from cover level to invert of pipe chamber less than 1.2 m
Maximum lateral drain diameter 150 mm

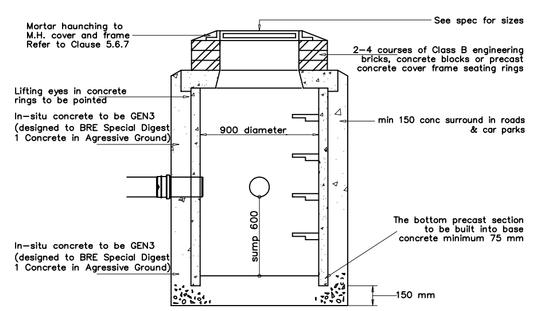


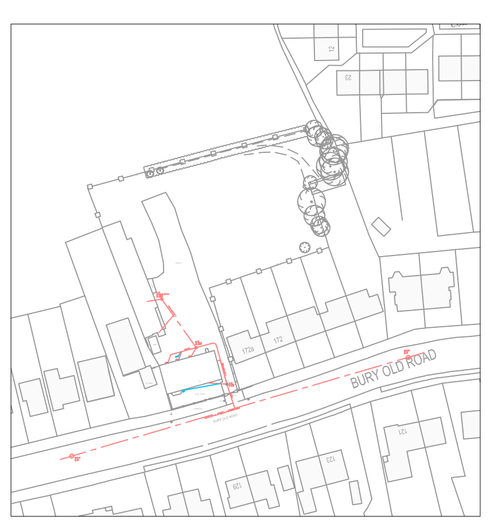

Not to scale, dimensions in millimetres
The design of chambers will need to comply with the Undertaker's safety policy.

**TYPICAL PRIVATE MANHOLE DETAIL**
Depth from cover level to invert of pipe chamber less than 1.5 m
Maximum lateral drain diameter 225 mm




**TYPICAL PRIVATE MANHOLE/SILT TRAP DETAIL**
Depth from cover level to invert of pipe chamber less than 1.5 m
Maximum lateral drain diameter 225 mm




SITE LOCATION PLAN 1:1250

*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/ROADS EXTERNAL WORKS.
1.1 ADOPTABLE, road construction profile as per crass section details & to comprise:
Wearing course – 40th 10/14mm Dense Bitumen Macadam.
Binder Course – 60th 20/28mm Dense Bitumen Macadam.
Base course – 100th 28mm Dense Bitumen Macadam.
Sub-base – DOT Type 1 sub-base, clean/inert, laid down & compacted in layers NLT 150th.
Capping – 6F2 or similar material compliant with MCHW 600 series, clause 613.
Sub-grade CBR test required to confirm thickness of capping/sub-base in road construction. Sub-grade CBR % – capping/sub-base thickness as follows:

| | | | |
|---|---|---|---|
| subgrade CBR 2% | capping layer 450mm | subbase 150mm | overall thickness 600mm; |
| subgrade CBR 2.5% | capping layer 400mm | subbase 150mm | overall thickness 550mm; |
| subgrade CBR 3% | capping layer 350mm | subbase 150mm | overall thickness 500mm; |
| subgrade CBR 4% | capping layer 300mm | subbase 150mm | overall thickness 450mm; |
| subgrade CBR 5%; | capping layer 250mm | subbase 150mm | overall thickness 400mm; |
| subgrade CBR 8% | capping layer 210mm | subbase 150mm | overall thickness 360mm |
| subgrade CBR 10% | capping layer 180mm | subbase 150mm | overall thickness 330mm; |
| subgrade CBR 15% | capping layer 150mm | subbase 150mm | overall thickness 300mm; |
| subgrade CBR>15% | capping layer 0mm | subbase 150mm | overall thickness 150mm |

General Fill – Granular fill, nominal size 63-10mm clean/inert stone, laid down & compacted in layers NGT 150th.
1.2 Permanent road markings to comprise thermoplastic road marking material or paint in accordance with BS EN 1871.
1.3 Road signs installed to MCWH Series 1200.
1.4 PRIVATE ACCESS ROAD.
To architects details.
Assumed impermeable for the purposes of the drainage assessment.
1.5 PRIVATE DRIVEWAYS.
To architects details.
Assumed impermeable for the purposes of the drainage assessment.
2.0 DRAINAGE.
2.1 To be read in conjunction with T J Booth Associates drainage calculations ref: calc-tjba-brooks-174 bury old road-SW soakaway design-rev0.
2.2 Manhole cover levels indicative only, to be adjusted to suit final finish site levels.
2.3 Sewers/manholes to be constructed in accordance with the water 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 to be not less than 1:150 with all least 5 WCs connected. Guidance in line with current b-regs and SFA 6.
3.2 Foul system to connect in to UU sewer network via existing FW manhole to Site entrance in access road.
4.0 SURFACE WATER DRAINAGE.
4.1 SW drainage to soakaway up to 100yr + climate change event.
4.2 Infiltration rate coefficient based upon Site investigation analysis of soil types - rates to be confirmed following soakaway test at later date and size of soakaway optimised accordingly if required.
4.5 All private patio/paths to be permeable and have general falls to soft landscaping.
5.0 SOAKAWAY MAINTENANCE
5.1 Maintenance to be undertaken by adopting body OR by Site maintenance agreement as necessary. Should maintenance responsibility become part of a Site maintenance agreement, a copy of this plan should be included in the deed pack.
5.2 Construction Stage: soakaway must be isolated from flows during the construction phase of the development to ensure it remains free from silt and larger construction debris which will limit performance. It should only be brought in to use after the drainage system has been flushed accordingly.
5.3 Habitation Phase: 2No. Pre treatment silt traps (located main road, and to N private road) included to remove silt prior to soakaway. Pre treatments silt trap sumps to be checked annually for silt/sediment and removed if required. Soakaway base to be checked annually for silt/sediment and removed if required.
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:

| | | |
|---|---|---|
| Roads/Highways | D400 | Vehicle Impact; |
| Car Parks | C250 | Light Vehicle loading |
| 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 Client/Architect details.

PLANNING

| AMENDMENTS/ ISSUES | | | |
|---|---|---|---|
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| | | | |
| p0 | original for planning | apr 2019 | ds |
| REVISION | REASON/ CHANGE | DATE | BY |

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# BROOKS / 174 BURY OLD ROAD, ROCHDALE

## PROPOSED DRAINAGE PLAN & DETAILS

FILE NAME: dwg-tjba-brooks-174 bury old rd-090518

SCALE: 1 : 150 & as indicated @ A1