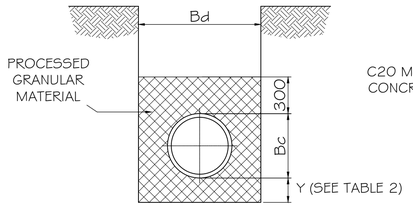
Revision -

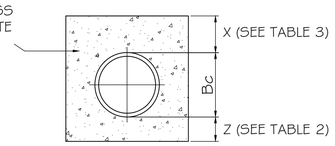
DRAWING No. A024/294/BR/57

| TABLE 2 EMBEDMENT DIMENSIONS FOR RIGID PIPES | | | | | |
|---|---|---|---|---|---|
| NOMINAL INT PIPE DIA | DIMENSION Y1 EVEN TRENCH BOTTOM (MIN) | DIMENSION Y2 ROCK OR UNEVEN TRENCH BOTTOM (MIN) | PROCESSED GRANULAR MATERIAL | DIMENSION Z (MIN) | PERMITTED TRENCH WIDTH (MAX) |
| 150 | 100 | 200 | 10mm SINGLE SIZED OR 14mm TO 5mm GRADED | 100 | 750 |
| 225 | 100 | 200 | | 100 | 825 |
| 300 | 100 | 200 | | 100 | 925 |
| 375 | 100 | 200 | 14mm SINGLE SIZED OR 14mm TO 5mm GRADED | 100 | 1050 |
| 450 | 150 | 200 | | 150 | 1150 |
| 525 | 150 | 250 | | 150 | 1200 |
| 600 | 150 | 250 | 20mm SINGLE SIZED OR 20mm TO 5mm GRADED | 150 | 1350 |
| 675 | 150 | 250 | | 225 | 1450 |
| 750 | 225 | 300 | | 225 | 1500 |
| 825 | 225 | 300 | | 225 | 1600 |
| 900 | 225 | 300 | | 225 | 1900 |
| 975 | 225 | 300 | | 300 | 2000 |
| 1050 | 225 | 300 | | 300 | 2100 |
| 1125 | 225 | 300 | | 300 | 2200 |
| 1200 | 250 | 350 | | 300 | 2300 |
| 1350 | 375 | 450 | | 375 | 2500 |
| 1500 | 375 | 450 | | 375 | 2700 |
| 1650 | 375 | 450 | | 450 | 2800 |
| 1800 | 375 | 500 | 40mm SINGLE SIZED OR 40mm TO 5mm GRADED | 450 | 3100 |
| 1950 | 400 | 500 | | 525 | 3200 |
| 2100 | 425 | 650 | | 525 | 3400 |
| 2400 | 450 | 675 | | 600 | 3700 |

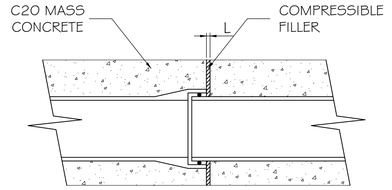
NOTE:
Bc = OUTSIDE DIAMETER OF PIPE
Bd = EFFECTIVE TRENCH WIDTH MEASURED 300mm ABOVE CROWN OF PIPE




TYPE 7
EMBEDMENT CLASS S

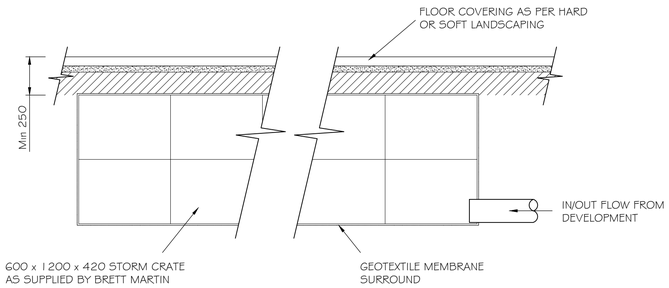



CONCRETE SURROUND
EMBEDMENT CLASS S

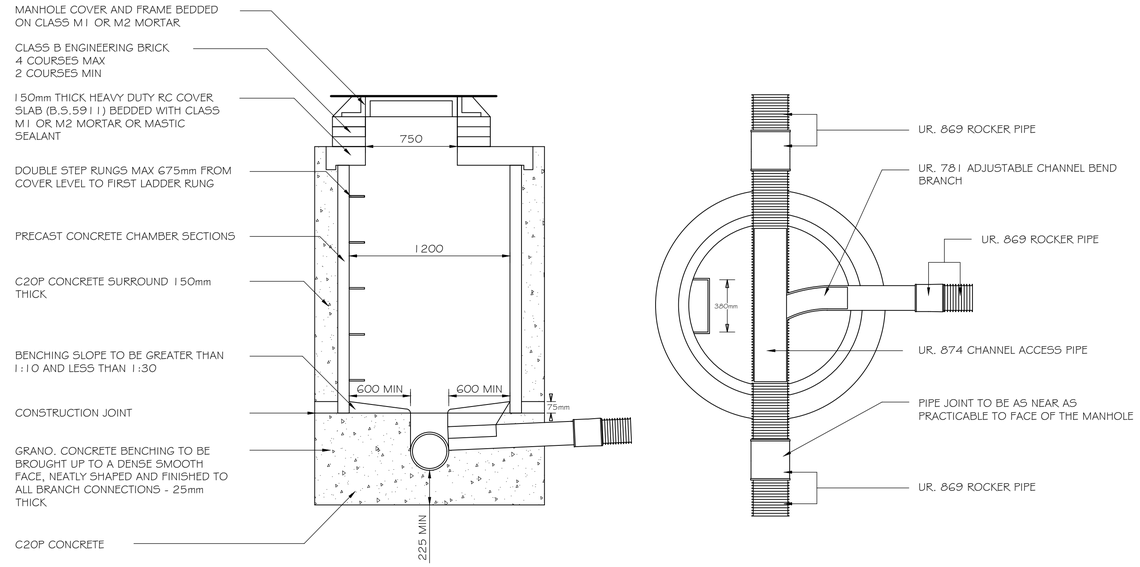



FLEXIBLE JOINT DETAILS FOR CONCRETE BED & SURROUND SPIGOT & SOCKET PIPES

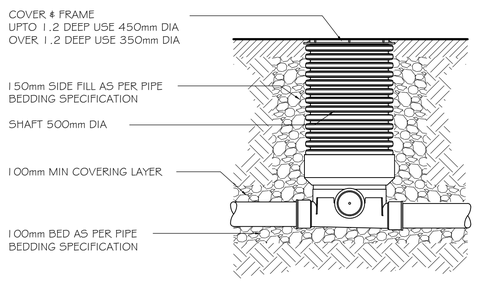
| TABLE 3 THICKNESS OF COMPRESSIBLE FILL (L) | | |
|---|---|---|
| NOMINAL INT PIPE DIA | DIMENSION Xmm | COMPRESSIBLE FILLER Lmm |
| <400 | 160 | 18 |
| 400-700 | 200 | 36 |
| 725-1200 | 300 | 36 |
| >1200 | 300 | 54 |



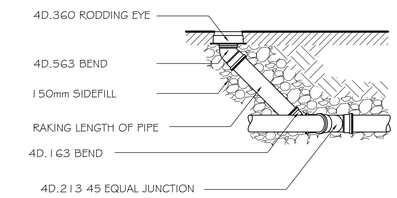

STORM WATER STORAGE DETAIL
(SCALE 1:20)



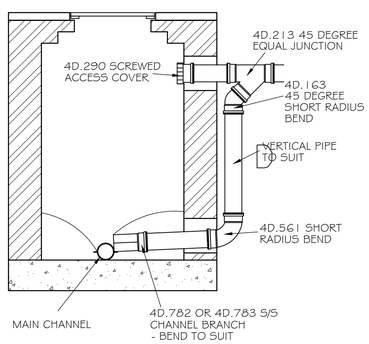

TYPICAL MANHOLE DETAIL TYPE 1
DEPTH FROM COVER LEVEL TO PIPE SOFFIT 1.35m TO 3m
SCALE 1:20



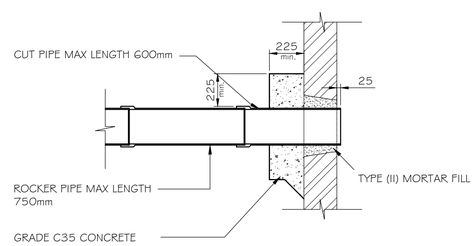

TYPICAL MANHOLE DETAIL TYPE 3
UNIVERSAL INSP CHAMBER DETAIL
SCALE 1:20




TYPICAL RODDING EYE DETAIL
SCALE 1:20




TYPICAL EXTERNAL BACKDROP DETAIL
SCALE 1:20




TYPICAL CONNECTION TO
MANHOLE CHAMBER DETAIL
SCALE 1:20

## NOTES

1. ALL DIMENSION ARE IN MILLIMETERS.
2. DO NOT SCALE FROM THIS DRAWING.
3. THIS DRAWINGS IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED DRAWINGS & DOCUMENTS. THE USER SHOULD CONSULT THE DRAWING ISSUE REGISTER FOR DETAILS.
4. THE CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS.
5. THE ENGINEER/ARCHITECT SHOULD BE CONTACTED IMMEDIATELY IF THE ASSUMPTIONS USED IN THE DESIGN DIFFER TO THAT FOUND ON SITE.

SPECIFICATION

Standards
All work to be in accordance with British Standards and to manufacturer's recommendations. If Contractor wishes to use manufacturers different to that specified they shall only be permitted if prior approval given by Architect/Supervising Officer.

Materials
Manufacturers/Supplier: Osma Soil pipes to BS4514 in PVC-U normal size 110mm. Wastes to BS5255/3493 as appropriate in ABS or PP nominal sizes 50mm, 40mm and 32mm. Traps to BS5255/3493 as appropriate in PP or PE Overflows to BS5255/3493 as appropriate in PVC-U or PE.

Workmanship
All to be installed to BS5572. All soil pipes to have rodding access points at changes of direction: all solvent welded wastes to have cleaning access points at changes of direction.

Finishes
Soil pipes to be self-colour or painted to specification Wastes and overflows self-colour but, to be painted when exposed to view or sunlight.
Hot water system to be confirmed & kitchen layout to be finalised.

Part G (Sanitation, Hot water safety & Water Efficiency
Water efficiency, 125 litres/head/day of wholesome water, resulting from the design of the cold and hot water systems, for each individual dwelling/flat, should be no greater than this target. Prevent the temperature of the water stored in the vessel/cylinder, at any time exceeding 100 degrees centigrade. Any discharge from safety devices, is safely conveyed to where it is visible, but will not cause danger to persons about the building, (to a tundish). The hot water to any fixed bath, must be designed and installed as to incorporate measures to ensure that the temperature of the water that can be delivered to that bath, does not exceed 48 degrees centigrade.

EXTERNAL DRAINAGE

1. All existing sewer information has been supplied by Client. The contractor should verify invert levels assumed prior to construction. Any variation should be reported to this office immediately.
2. All work shall comply with Roads for adoption edition No.4 and United Utilities standard document coupled with the CESWI spec., and the Building Regulations Approved document part H, in the event of conflicting req. the United Utilities spec. takes precedence.
3. All pipes are to be class M vitrified clay pipe to BS 65 with flexible sleeve connections or concrete pipes with spigot and socket joints to BS 5911: Prt 100 as detailed on the drawing.
4. Pipes are to be laid straight in trenches to gradients as detailed, where none are given defaults shall be:

| Diameter | Min | Max |
|---|---|---|
| 100 | 1:100 | 1:40 |
| 150 | 1:150 | 1:60 |

5. Pipes are to be bedded on single size "pea" gravel nominal diameter 10mm to BS 882, minimum thk 100mm with selected stone surround, nominal size 40mm. Backfill as detailed.
6. Where cover is less than 400mm or adjacent to foundations the surround and backfill is to be C20 concrete with flexcell at pipe joints.
7. All cut ends to be treated with epoxy resin.
8. Pipes to be tested using a standard air test allowing 38mm loss of head in any 3 minute period.
9. Connection to the main sewer to the satisfaction of the Local Authority.
10. Back drop connection to be made at soffit level, pipe diameter to be 150mm.
11. All manhole covers to be 'class A' heavy duty cast iron, minimum opening 600 x 600mm bedded on class 1 mortar and class B engineering brick, min 1 course max. 3 course. Note: Bricks shall not contain frogs or holes.
12. Manhole rings to BS 5911: Prt 200 sizes as:

| Pipe | Dia | Depth | MH Dia | Channel |
|---|---|---|---|---|
| 1 | 150 | 2.50 | 1200 | 950 |
| 2 | 150 | 3.00 | 1500 | 1050 |
| 3 | 225 | 2.50 | 1200 | 950 |
| 4 | 975 | 3.50 | 2400 | 1400 |

13. Manhole to have rocker pipes 750mm long with 18mm compressible filler.
14. Rings to have min 150mm C20 concrete surround. Base min 225mm thk C30 concrete with A142 mesh in btm. All manholes to have step irons as detailed safety chains where req.d in manhole S2, up stream of 975mm pipe. Connection of all pipes to be to at soffit level, unless detailed differently.
15. All rainwater good to be UPVC 112mm Half Round Gutter Systems Fascia brackets should be spaced no more than 1000mm apart on straight Gutter runs with 68mm down pipes.
16. All rainwater goods to be UPVC 112mm Half Round Gutter Systems Fascia brackets should be spaced no more than 1000mm apart on straight Gutter runs with 68mm down pipes.

| Rev. | Amendments | Date | By |
|---|---|---|---|


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PROJECT ADDRESS
LAND AT BILBERRY CLOSE AND ALBERT ROAD, WHITEFIELD, M45 8BL

PROJECT TITLE
RESIDENTIAL DEVELOPMENT

DRAWING TITLE
DRAINAGE DETAILS

| Client: | Scales @A1 |
|---|---|
| THOMPSONS | 1:20@A1 |

| Drawn By. | Checked By. | Date |
|---|---|---|
| LM | DWH | 10/02/25 |

| DRAWING No. | Revision |
|---|---|
| A025/005/BR/54 | - |


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