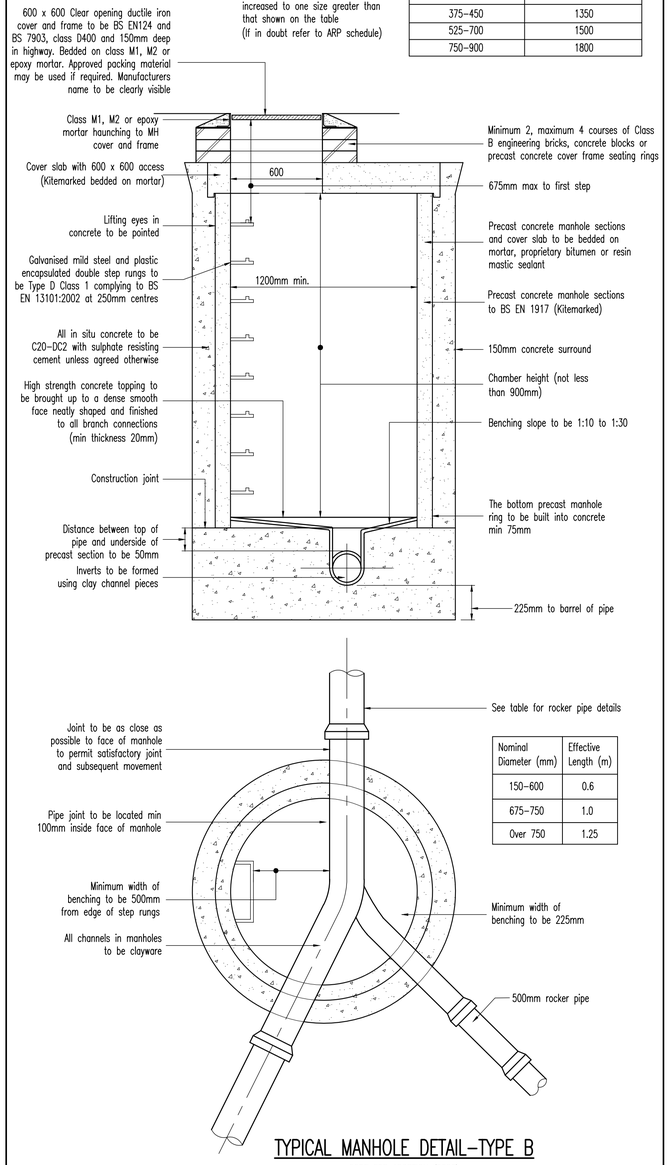
NOTE:
If 3 or more pipes enter the manhole the ring diameter should be increased to one size greater than that shown on the table
(If in doubt refer to ARP schedule)

| ø Of largest pipe in manhole (mm) | Minimum internal ø of manhole (mm) |
|---|---|
| Less than 375 | 1200 |
| 375–450 | 1350 |
| 525–700 | 1500 |
| 750–900 | 1800 |



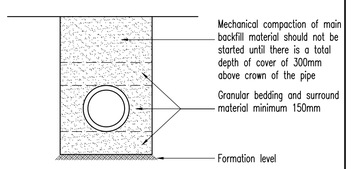

| Nominal Diameter (mm) | Effective Length (m) |
|---|---|
| 150–600 | 0.6 |
| 675–750 | 1.0 |
| Over 750 | 1.25 |

## TYPICAL MANHOLE DETAIL–TYPE B

CODE FOR ADOPTION (2020)
Max depth from ground level to soffit of pipe 3.0m
The design of the manhole will need to comply with the undertakers safety policy

Any trench box/sheeting to terminate 150mm above crown of pipe to prevent displacement of granular material. Boxing/sheeting to be removed progressively during placement of main backfill

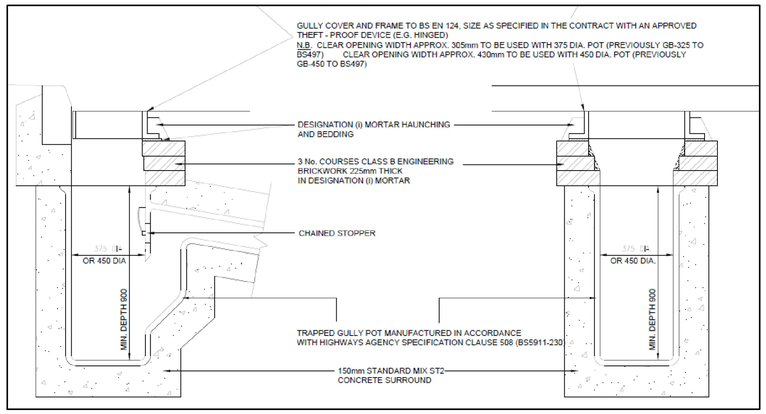
Sidefill material to be placed evenly on both sides of pipes taking care to work the material under the lower quadrant of the pipe ensuring the pipe is not lifted. Both sides of the trench should be filled simultaneously to avoid horizontal movement of the pipe



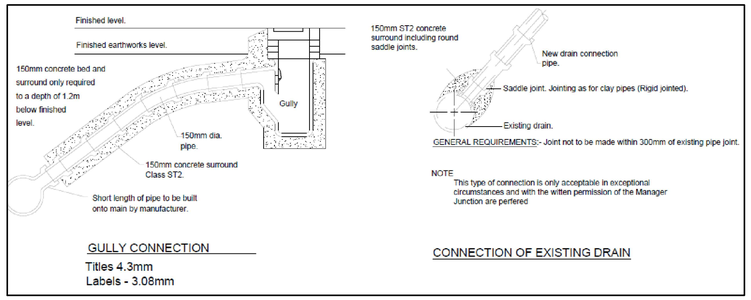

Trench width = pipe dia + 300mm

## TYPICAL DETAIL THROUGH CLASS S1 BEDDING (1:20)

Refer to Kirklees Council Standard Detail reference: HD/SD/12/04B




Refer to Kirklees Council Standard Detail reference: HD/SD/05/20B




Refer to Kirklees Council Standard Detail reference: HD/SD/05/03B

Processed granular bedding and sidefill materials for flexible pipes.

| Pipe nominal bore (mm) see note (d) | Nominal maximum particle size (mm) | Materials specified in British Standards see note (a) |
|---|---|---|
| 100 | 10 | 10mm nominal single size |
| Over 100 to 150 | 15 | 10–14mm nominal single size or 14mm to 5mm graded |
| Over 150 to 300 | 20 | 10–14mm or 20mm nominal single size or 14mm to 5mm graded or 20mm to 5mm graded |
| Over 300 to 500 | 20 | 14 or 20mm nominal single size or 14mm to 5mm graded or 20mm to 5mm graded |
| Over 550 | 40 | 14 – 20mm or 40mm nominal single size or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded |

Notes:

(a) Processed granular materials to include aggregates to BS 882, air–cooled blast furnace slag to BS1047 and lightweight aggregates to BS 3797

(b) For the purpose of this table, PE pipe of 630mm O.D. can be regarded as having nominal bores of over 550mm, irrespective of wall thickness.

(c) Nominal bore is used in preference to DN because of the different nominal size classifications for flexible pipes

## Minimum recommended trench widths for structured wall pipes in poor ground conditions

Native Soil Modulus between 3 and 4 Mpa
Typical Soil Classifications : Very loose gravel, loose sand, medium dense clayey silty sand, firm clay

| Nominal Pipe Diameter (mm) | 150 | 225 | 300 | 375 | 450 | 525 | 600 | 750 | 900 |
|---|---|---|---|---|---|---|---|---|---|
| Minimum Trench Width (mm)* | 450 | 525 | 600 | 750 | 900 | 1050 | 1200 | 1500 | 1800 |

* A vertical trench face has been assumed to allow a modulus of 7 Mpa to be achieved for the pipe bedding and sidefill material.

Other assumed values: Depth of cover = 6.0 metres (max)
Traffic Loading = Main Road
Pipe stiffness = SN8

Note. Where the native soil modulus is below 3Mpa or the depth of cover exceeds 6 metres guidance should be sought from the pipe manufacturer regarding structural design and installation details.

## N O T E S

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN.

ALL DESIGNS ARE SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

1. All highway works are to be constructed in accordance with the Kirklees Metropolitan Council Highways Standard Details.
2. All highway works are to be subject of a Section 38 Agreement of the Highways Act 1980.
3. Any coated base material in the carriageway left exposed for more than seven days to be sealed using bituminous sealing grit.
4. Highway boundary to be indicated by back edgings laid flush or change of material on private drives.
5. All vertical faces of joints involving flexible materials shall be treated with an approved joint sealant. This includes ironwork and precast products. Overbanding shall not be accepted.
6. Any final surfacing to be discussed with Kirklees Metropolitan Council.
7. Unsealed and loose material such as crushed stone, gravel or pebbles is not acceptable to the adoptable highway.
8. Do not scale from this drawing.

| Rev | By | Date | Revision | Chk |
|---|---|---|---|---|
| / | JC | 28.02.25 | Issued for approval | MI |

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ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 3771811, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE HIGHWAY DRAINAGE
SHEET 3 OF 3
HIGHWAY CONSTRUCTION

PROJECT
BLACKMOORFOOT ROAD,
HUDDERSFIELD

CLIENT
MILLER HOMES
YORKSHIRE

DRAWING STATUS
PRELIMINARY

| Scale | Date | Drawn | Chk. |
|---|---|---|---|
| 1:500 @ A1 | FEB 25 | DJG | MI |

Drg. No. 425/92/04.03
Rev /