

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7  
SURFACE COURSE  
BINDER COURSE  
BASE COURSE

PRECAST CONCRETE SLAB OR IN-SITU CONCRETE SLAB TO SUPPORT COVER AND FRAME  
FLEXIBLE SEAL

TEMPORARILY CAP SHAFT DURING CONSTRUCTION

JOINTS BETWEEN BASE AND SHAFT AND BETWEEN SHAFT COMPONENTS TO BE FITTED WITH WATERTIGHT SEALS

JOINT TO BE AS CLOSE AS POSSIBLE TO FACE OF CHAMBER TO PERMIT SATISFACTORY JOINT AND SUBSEQUENT MOVEMENT

MANHOLE COVER TO SUIT BS EN 124 LOADING  
HIGHWAYS - CLASS D400  
600 MM CLEAR OPENING  
ACCESS OPENING RESTRICTED TO 350 MM DIAMETER OR 300 MM X 300 MM IF DEPTH OF CHAMBER TO INVERT IS > 1 M

CLASS B ENGINEERING BRICKWORK OR PRECAST CONCRETE COVER FRAME SEATING RINGS  
DOT TYPE 1 SUB BASE (THICKNESS VARIES)

MINIMUM INTERNAL DIMENSIONS  
450 MM DIAMETER OR 450 MM X 450 MM  
DOT TYPE 1 SUB BASE (THICKNESS VARIES) OR CONCRETE SURROUND

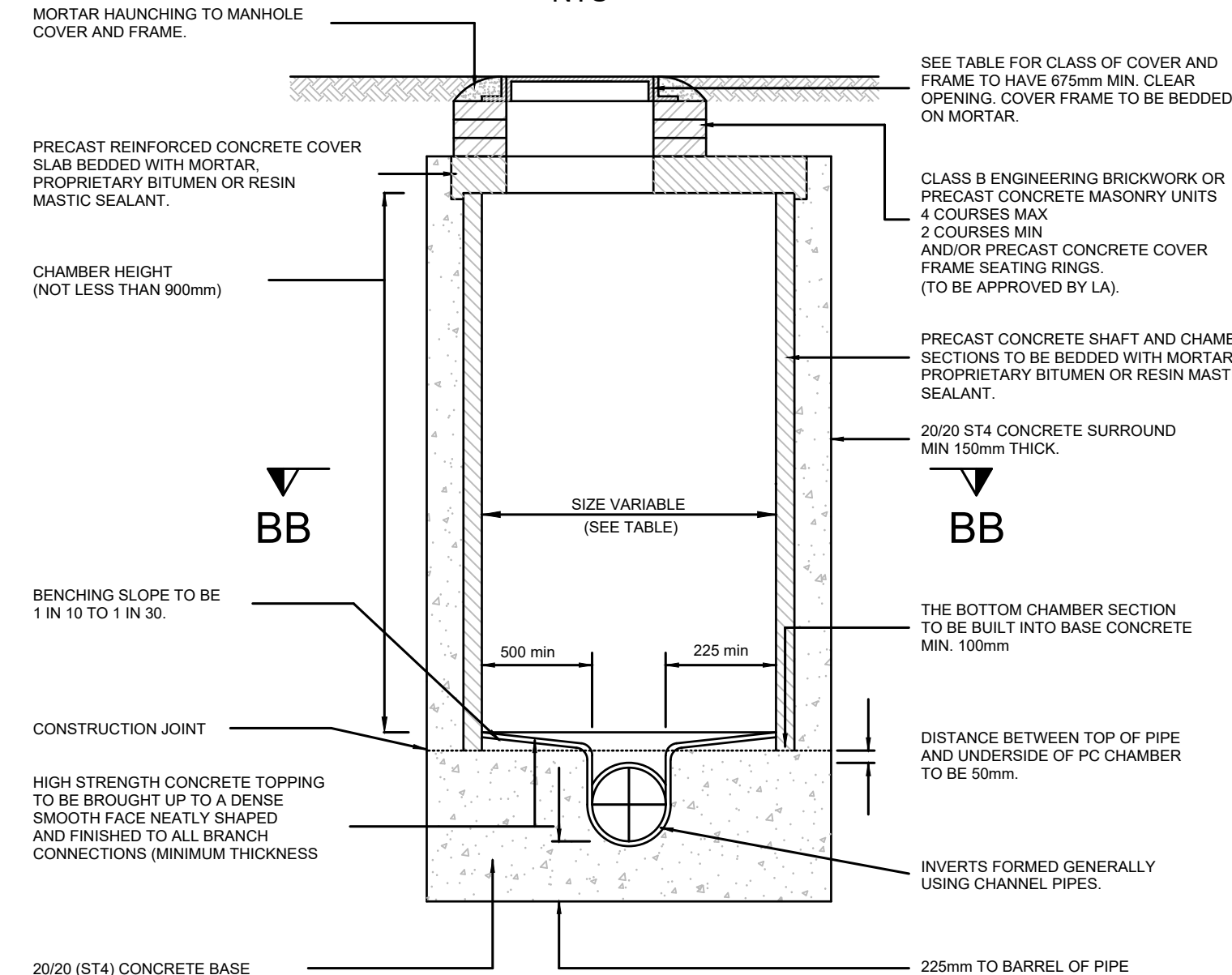
BASE UNIT TO HAVE ALL CONNECTIONS WITH SOFFIT LEVELS SET NO LOWER THAN THAT OF THE MAIN PIPE

GRANULAR BEDDING MATERIAL

INVERT OF CONNECTING PIPE AT LEAST 50 MM ABOVE THAT OF THE MAIN PIPE

**TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (FLEXIBLE MATERIAL DETAIL)**

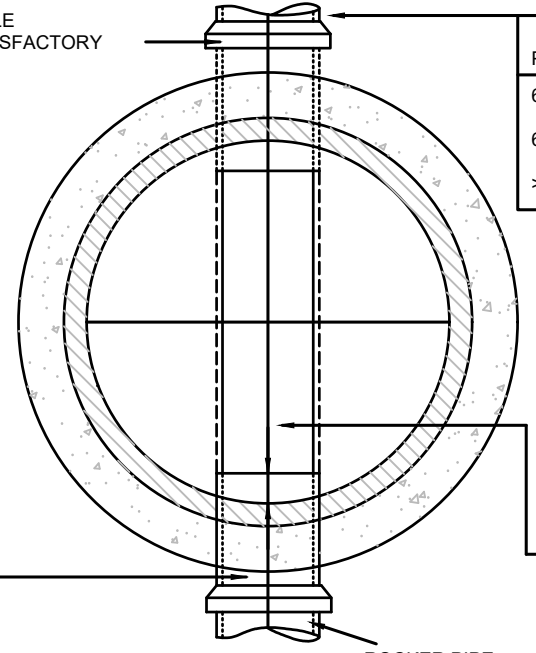
MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3 M, NON-ENTRY NTS



**SECTION B-B**

JOINT TO BE AS CLOSE AS PRACTICABLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT AND SUBSEQUENT MOVEMENT.

B



**SECTION BB-BB**

**MANHOLE TYPE B.**

depth to soffit 1.35m to 3.0m

SCALE 1:25

**SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS**

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7

150 MM DEEP CONCRETE COLLAR TEMPORARILY CAP SHAFT DURING CONSTRUCTION  
FLEXIBLE SEAL

**SITED IN DOMESTIC GARDENS**

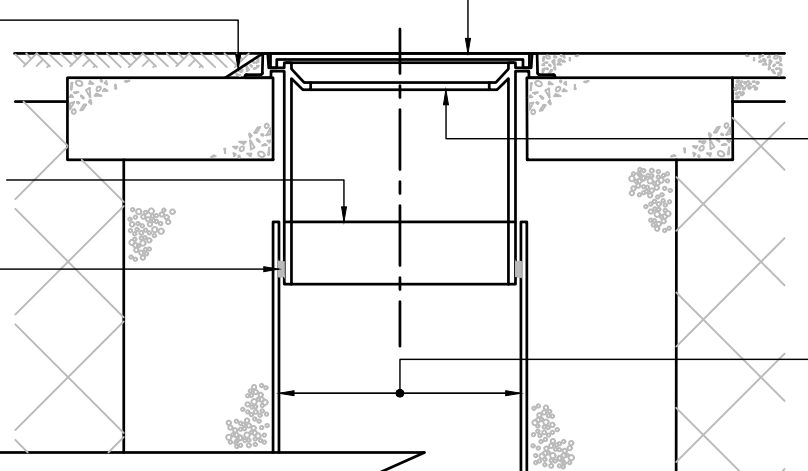
MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7

TEMPORARILY CAP SHAFT DURING CONSTRUCTION

FLEXIBLE SEAL

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

**SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS**



COVER COMPLYING WITH BS EN 124 AND BS 7903 DRIVEWAYS, FOOTWAYS AND LANDSCAPED AREAS - CLASS B125 SEE CLAUSE E2.32

ACCESS OPENING RESTRICTED TO 350mm DIAMETER OR 300mm X 300mm IF DEPTH OF CHAMBER TO INVERT IS > 1m

MINIMUM INTERNAL DIMENSIONS 450mm DIAMETER OR 450mm X 450mm

COVER COMPLYING WITH BS EN 124 AND BS 7903 GARDENS - CLASS A15 SEE CLAUSE E2.32

ACCESS OPENING RESTRICTED TO 350mm DIAMETER OR 300mm X 300mm IF DEPTH OF CHAMBER TO INVERT IS > 1m

MINIMUM INTERNAL DIMENSIONS 450mm DIAMETER OR 450mm X 450mm

NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

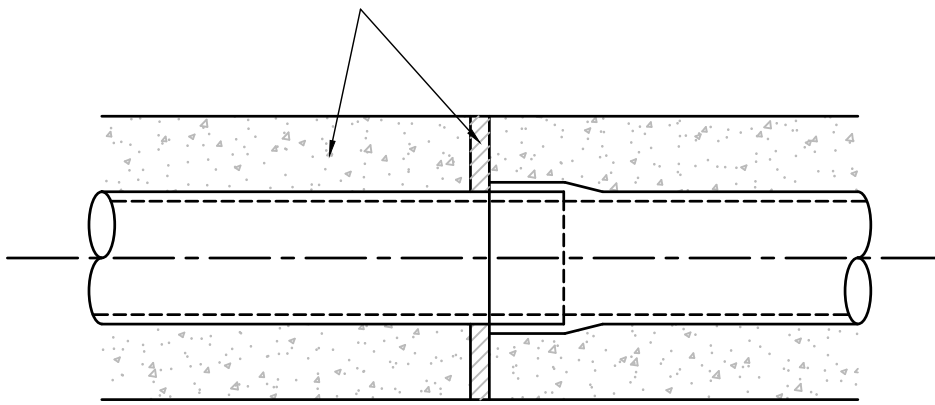
**ALTERNATIVE TOP DETAILS FOR LIGHT VEHICLE LOADING AND LANDSCAPED AREAS - TYPE 3 NTS**

**MINIMUM DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS**

| TYPE OF ACCESS                                                           | DEPTH TO INVERT FROM COVER LEVEL (m)            | MINIMUM INTERNAL DIMENSIONS (1) |               | MINIMUM CLEAR OPENING SIZE (1) |                                  |
|--------------------------------------------------------------------------|-------------------------------------------------|---------------------------------|---------------|--------------------------------|----------------------------------|
|                                                                          |                                                 | LENGTH x WIDTH (mm x mm)        | CIRCULAR (mm) | LENGTH x WIDTH (mm x mm)       | CIRCULAR (mm)                    |
| ROODING EYE                                                              | -                                               | AS DRAIN BUT MINIMUM 100mm.     | -             | -                              | SAME SIZE AS PIPEWORK            |
| ACCESS FITTING<br>SMALL 150mm DIA.<br>SMALL 150x100mm<br>LARGE 225x100mm | 0.6m OR LESS EXCEPT WHERE SITUATED IN A CHAMBER | 150 x 100<br>225 x 100          | 150<br>225    | 150 x 100 (1)<br>225 x 100 (1) | SAME SIZE AS ACCESS FITTING      |
| INSPECTION CHAMBER                                                       |                                                 |                                 |               |                                |                                  |
| SHALLOW                                                                  | 0.6m OR LESS                                    | 225 x 100                       | 190 (2)       |                                | 190 (1)                          |
| MEDIUM                                                                   | 1.2m OR LESS                                    | 450 x 450                       | 450           | MIN 430 x 430                  | 430                              |
| DEEP                                                                     | GREATER THAN 1.2m                               | 450 x 450                       | 450           | MAX 300 x 300 (3)              | ACCESS RESTRICTED TO MAX 350 (3) |

NOTES:  
(1) THE CLEAR OPENING MAY BE REDUCED BY 20mm IN ORDER TO PROVIDE PROPER SUPPORT FOR THE COVER AND FRAME.  
(2) DRAINS UPTO 150mm DIAMETER.  
(3) A LARGER CLEAR OPENING COVER MAY BE USED IN CONJUNCTION WITH A RESTRICTED ACCESS. THE SIZE IS RESTRICTED FOR HEALTH AND SAFETY REASONS TO DETER ENTRY.

\*100mm MINIMUM CONCRETE (SEE NOTE 8.) SURROUND DIVIDED WITH 25mm THICK COMPRESSIBLE BOARD AT EACH JOINT. PROTECT PIPE FROM INGRESS OF CONCRETE BY WRAPPING JOINT WITH POLYTHENE SHEET AND ADHESIVE TAPE.

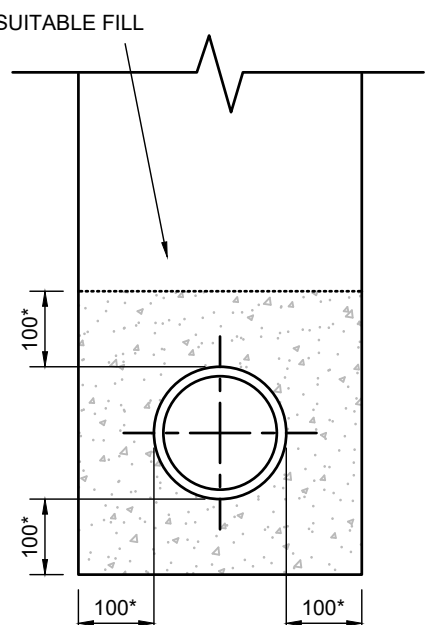


**SIDE ELEVATION TYPE Z BEDDING (CONCRETE ENCASED PIPES) FOR PIPES WITH LESS THAN 1.2m COVER**

NOT TO SCALE

\* FOR HEAVY DUTY/INDUSTRIAL APPLICATIONS INCLUDING MAIN ROADS OR ADAPTABLE ROADS INCREASE CONCRETE TO 150mm

NOTE : ALL PIPE BEDDING MATERIAL TO BE IMPORTED GRANULAR MATERIAL.



**CROSS SECTION**

**TYPE Z BEDDING (CONCRETE ENCASED PIPES) FOR PIPES WITH LESS THAN 1.2m COVER**

NOT TO SCALE

\* FOR HEAVY DUTY/INDUSTRIAL APPLICATIONS INCLUDING MAIN ROADS OR ADAPTABLE ROADS INCREASE CONCRETE TO 150mm

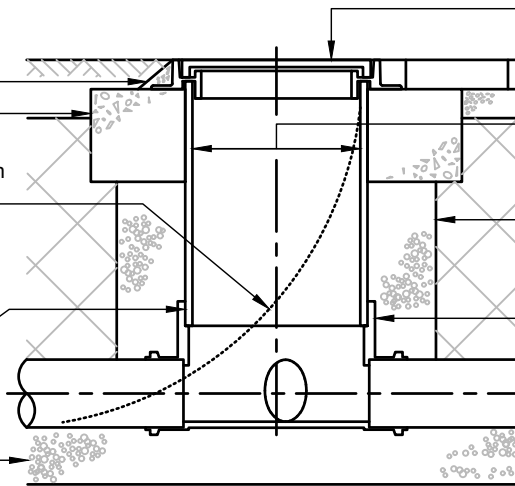
NOTE : ALL PIPE BEDDING MATERIAL TO BE IMPORTED GRANULAR MATERIAL.

**SITED IN DRIVEWAYS/PAVED AREAS**

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7  
150mm DEEP CONCRETE COLLAR  
MINIMUM RADIUS TO BE 500mm FOR A 100mm DIAMETER PIPE AND 600mm FOR A 150mm DIAMETER PIPE TO ALLOW ENTRY OF MAINTENANCE EQUIPMENT

JOINTS BETWEEN BASE AND SHAFT AND SHAFT COMPONENTS TO BE FITTED WITH WATERTIGHT SEALS

GRANULAR BEDDING MATERIAL



COVER COMPLYING WITH BS EN 124 AND BS 7903 DRIVEWAYS, FOOTWAYS AND LANDSCAPED AREAS - CLASS B125 SEE CLAUSE E2.32  
MINIMUM INTERNAL DIMENSIONS 180mm DIAMETER OR 225mm X 100mm

DOT TYPE 1 SUB BASE (THICKNESS VARIES) OR CONCRETE SURROUND

BASE UNIT TO HAVE ALL CONNECTIONS WITH A DIAMETER GREATER THAN 150mm SET AT SOFFITS LEVEL

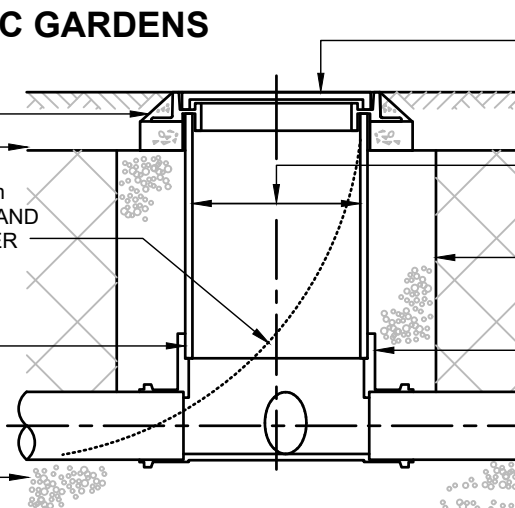
**SITED IN DOMESTIC GARDENS**

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7  
TOPSOIL

MINIMUM RADIUS TO BE 500mm FOR A 100mm DIAMETER PIPE AND 600mm FOR A 150mm DIAMETER PIPE TO ALLOW ENTRY OF MAINTENANCE EQUIPMENT

JOINTS BETWEEN BASE AND SHAFT AND SHAFT COMPONENTS TO BE FITTED WITH WATERTIGHT SEALS

GRANULAR BEDDING MATERIAL



COVER COMPLYING WITH BS EN 124 AND BS 7903 GARDENS - CLASS A15 SEE CLAUSE E2.32  
MINIMUM INTERNAL DIMENSIONS 180mm DIAMETER OR 225mm X 100mm

DOT TYPE 1 SUB BASE (THICKNESS VARIES) OR CONCRETE SURROUND

BASE UNIT TO HAVE ALL CONNECTIONS WITH SOFFIT LEVELS SET NO LOWER THAN THAT OF THE MAIN PIPE

FLEXIBLE INLET/OUTLET AND/OR BEND (MAXIMUM ANGLE 45°)

UNUSED INLET TO BE SEALED AND WATERTIGHT

WHERE CHAMBERS ARE POSITIONED ON 90° CORNERS, ALWAYS USE THE MAIN CHANNEL BY FITTING A 45° BEND ON THE INLET AND OUTLET

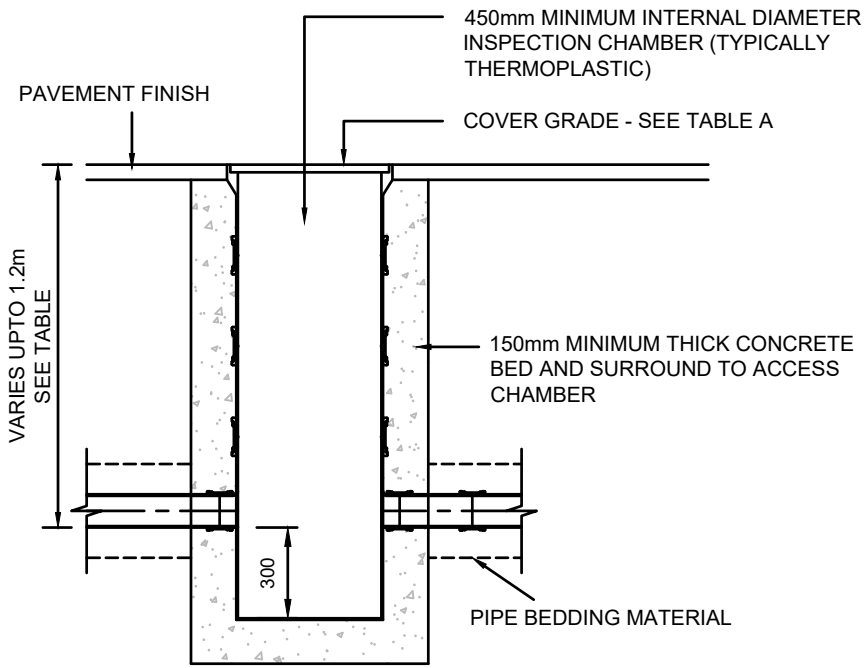
PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

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NOTE: WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

**TYPICAL INSPECTION CHAMBER DETAIL TYPE 4 (FLEXIBLE MATERIAL DETAIL)**

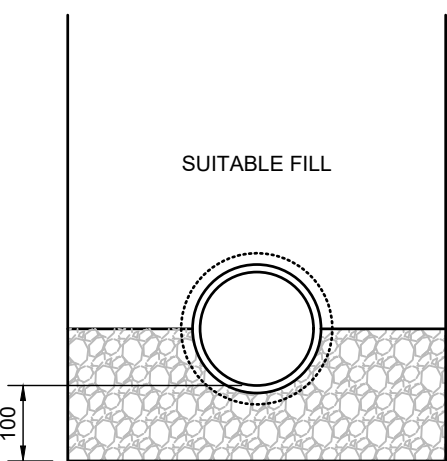
MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 2, NON-ENTRY NTS



**TYPICAL MEDIUM DEPTH PPIC SILT TRAP DETAIL FOR USE IN DRIVEWAYS/CAR PARKING AREAS (NOT SUBJECT TO HEAVY VEHICLE LOADING)**

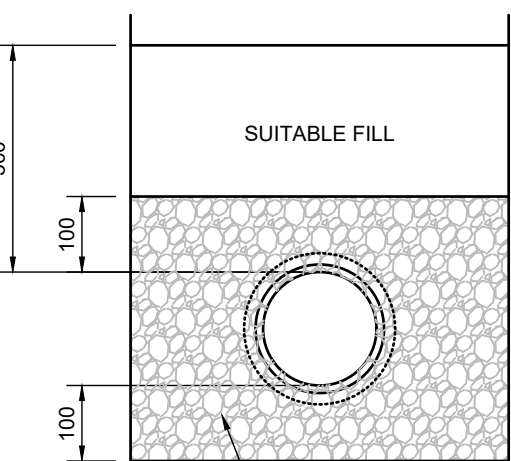
SCALE 1:25

FOR RIGID PIPES: eg. CLAYWARE, CONC.



**CLASS B PIPE BEDDING**

FOR FLEXIBLE PIPES: eg. THERMOPLASTIC



**TYPE S PIPE BEDDING**

**TYPICAL PIPE BEDDING DETAILS**

SUITABLE FILL - THE SUITABLE FILL SHALL BE SUITABLE FOR THE LOCATION AND SHALL BE CAREFULLY COMPACTED TO PROVIDE A STABLE FILL WITHOUT DAMAGING THE PIPE. FILL UNDER CAR PARKING AREAS, SHARED DRIVES AND PRIVATE ROADS SHALL BE WELL COMPACTED GRADED GRANULAR MATERIAL. FILL UNDER ADAPTABLE ROADS MAY NEED TO BE TYPE 1 GRANULAR SUB-BASE MATERIAL - CHECK WITH HIGHWAY AUTHORITY IF APPROPRIATE.

GRANULAR MATERIAL - FOR RIGID PIPES THE GRANULAR MATERIAL SHOULD CONFORM TO BS EN: 1610 Annex B Table B.15 AND SHOULD BE SINGLE SIZE MATERIAL OR GRADED MATERIAL FROM 5mm UPTO A MAXIMUM SIZE OF 10mm FOR 100mm DIAMETER PIPES, 14mm FOR 150mm DIAMETER PIPES, 20mm FOR PIPES FROM 150mm TO 600mm DIAMETER AND 40mm FOR PIPES MORE THAN 600mm DIAMETER.

**NOTES**

CONTRACTORS MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK ON SHOP DRAWINGS

DO NOT SCALE FROM THIS DRAWING

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**NOTES**

- ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
- DRAWING TO BE FOLLOWED IN CONJUNCTION WITH ALL ACCOMPANYING DRAWINGS AND SPECIFICATIONS AS LISTED IN THE CONTRACT DOCUMENTS.
- ALL BUILDING DRAINAGE TO BE INSTALLED AND TESTED IN COMPLIANCE WITH THE BUILDING REGULATIONS 2000 DRAINAGE AND WASTE DISPOSAL APPROVED DOCUMENT H 2002 EDITION.
- ALL COMPONENTS AND MATERIALS ARE TO BE MANUFACTURED AND SUPPLIED IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, AND LAID AND BACKFILLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND THE RELEVANT BRITISH STANDARDS.
- THE CONTRACTOR SHALL, BEFORE COMMENCING THE WORKS, VERIFY ALL SITE AND SETTING OUT DIMENSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRUE AND PROPER SETTING OUT OF THE WORKS AND FOR THE CORRECTNESS OF THE POSITION, LEVELS, DIMENSIONS, AND ALIGNMENT OF ALL PARTS OF THE WORKS.
- SMALL LIGHTWEIGHT ACCESS COVERS SHOULD BE SECURED (FOR EXAMPLE WITH SCREWS) TO DETER UNAUTHORISED ACCESS.
- INSPECTION CHAMBERS AND MANHOLES IN BUILDINGS TO HAVE MECHANICALLY FIXED AIRTIGHT COVERS UNLESS THE DRAIN ITSELF HAS WATERTIGHT ACCESS COVERS.
- MANHOLES DEEPER THAN 1m TO HAVE GALVANISED STEEL STEP IRONS OR FIXED LADDERS.
- ALL ABOVE GROUND DRAINAGE TO INCORPORATE RODDING ACCESS FACILITIES.
- INSITU CONCRETE FOR USE IN GENERAL DRAINAGE WORKS, GRADE TO BS: 5328, USE AS FOLLOWS:

| CLASS 1 SULFATE CONDITIONS:                                                    |                                    |
|--------------------------------------------------------------------------------|------------------------------------|
| ADAPTABLE STANDARD WORKS AND AREAS SUBJECT TO HEAVY LOADING                    | GEN 3 or ST4                       |
| AREAS SUBJECT TO LIGHT LOADING eg. HOUSING AND PRIVATE DRIVES, SMALL CAR PARKS | GEN1 or ST2                        |
| FOR BURIED CONCRETE EXPOSED TO OTHER SULFATE CONDITIONS:                       |                                    |
| CLASS 2<br>CLASS 3<br>CLASS 4A<br>CLASS 4B                                     | FND 2<br>FND 3<br>FND 4A<br>FND 4B |

|     |                   |            |      |
|-----|-------------------|------------|------|
| P1  | PRELIMINARY ISSUE | 23.05.2025 | RAC  |
| REV | AMENDMENT         | DATE       | CHKD |

DRAWING STATUS

PRELIMINARY

RCD

RCD CONSULTANTS LTD  
EMAIL: ray@rcd-consultants.com

CLIENT

PROJECT  
PROPOSED RESIDENTIAL DEVELOPMENT  
SCHOOL ROAD  
HURST

DRAWING TITLE  
DRAINAGE  
CONSTRUCTION DETAILS  
SHEET 1 OF 2

CIVILS

SCALE 1:25 @ A1  
1:50 @ A3  
DRAWN BY STC  
CHECKED RAC  
DATE MAY 2025

DRAWING NUMBER 1111-2530-CIV-51  
REVISION P1