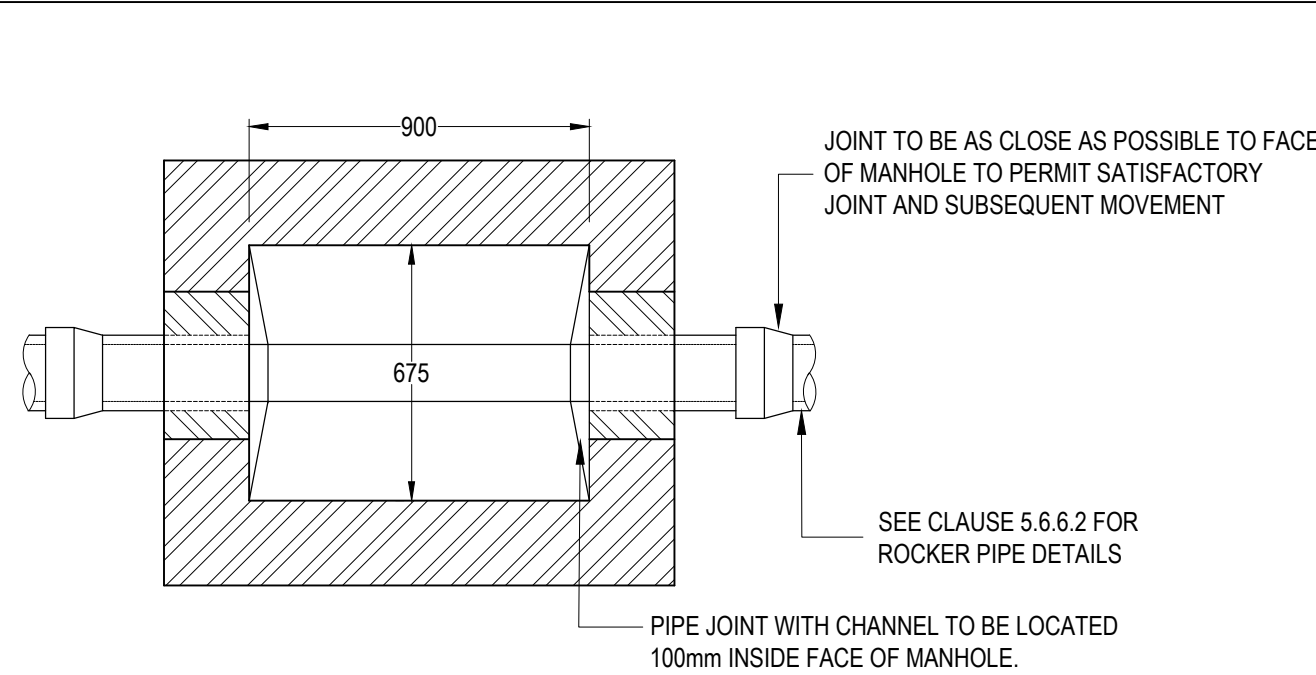




MANHOLE TYPE D

DEPTH TO SOFFIT LESS THAN 1.0m

NOT TO SCALE

675x675mm CLEAR OPENING
COVER COMPLYING WITH BS EN
124 AND BS 7903 SEE CLAUSE E2.32

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

MINIMUM CLEAR ACCESS 600mm

PRECAST CONCRETE MANHOLE
SECTIONS AND COVER SLAB TO
BE BEDDED WITH MORTAR,
ELASTOMETRIC OR
ELASTOMETRIC SEAL
CONFORMING TO BS EN 1917
AND BS 5911-3 SEE CLAUSE E2.29

150mm CONCRETE SURROUND

CHAMBER HEIGHT
(NOT LESS THAN 900mm)

BENCHING SLOPE TO BE 1:10 TO
1:30

THE BOTTOM PRECAST
MANHOLE RING TO BE BUILT
INTO BASE CONCRETE MINIMUM
75mm

DISTANCE BETWEEN TOP OF PIPE
AND UNDERSIDE OF PRECAST
SECTION TO BE MINIMUM 50mm
TO MAXIMUM 300mm

225mm TO UNDERSIDE OF CHANNEL

MINIMUM 2 COURSES OF CLASS
B ENGINEERING BRICKS AND
PRECAST CONCRETE COVER
FRAME SEATING RINGS

IN-SITU CONCRETE TO BE
GENS (DESIGNED TO BRE
SPECIAL DIGEST 1 CONCRETE
IN AGGRESSIVE GROUND)

HIGH-STRENGTH CONCRETE
TOPPING TO BE BROUGHT UP TO
A DENSE, SMOOTH FACE, NEATLY
SHAPED AND FINISHED TO ALL
BRANCH CONNECTIONS
(MINIMUM THICKNESS 20mm)

CONSTRUCTION JOINT

SELF CLEANING TOE HOLES TO
BE PROVIDED WHERE CHANNEL
EXCEEDS 600mm WIDE

INVERTS TO BE FORMED
USING CHANNEL PIPES

TYPICAL MANHOLE DETAIL TYPE 2

(REFER TO FIG. B.12 OF SEWERS FOR ADOPTION 7th ED)
(MAXIMUM DEPTH FROM COVER TO SOFFIT LEVEL OF PIPE - 3.0m)
SCALE 1:20

MAXIMUM DEPTH FROM COVER
TO SOFFIT LEVEL OF PIPE IN AREAS SUBJECT
TO NON-ENTRY. PLASTIC CHAMBER
COMPLY WITH BS EN 13501-1
HAVE EQUIVALENT IN

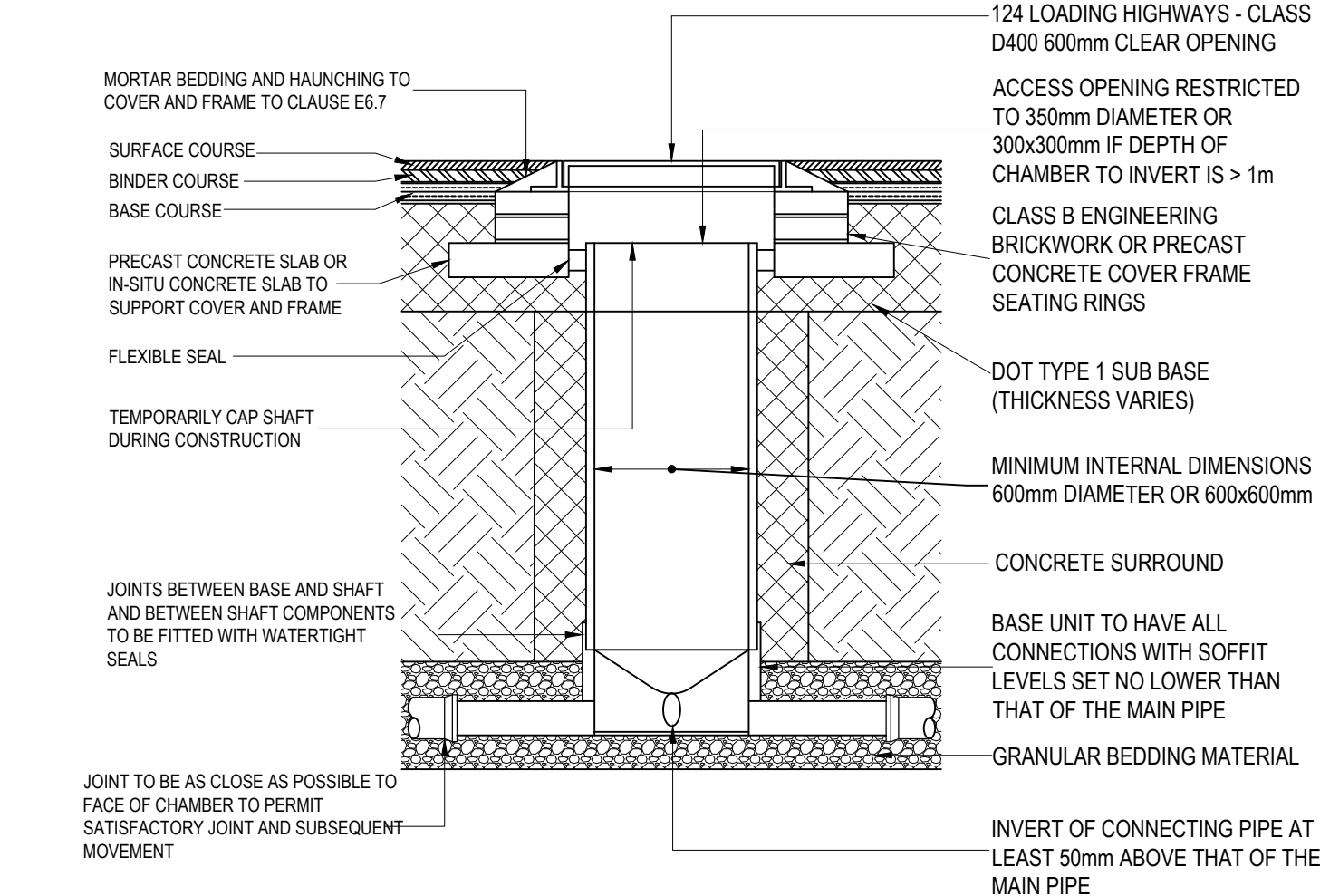


Diagram illustrating the connection of a chamber to a main channel. The chamber is shown with a main channel and two side inlets/outlets. The main channel is connected to the chamber via a 45° bend. The side inlets/outlets are connected via joints that must be as close as possible to the face of the chamber to permit satisfactory joint and subsequent movement. The diagram also shows a flexible inlet/outlet and/or bend (maximum angle 45°) and an unused inlet to be sealed and watertight.

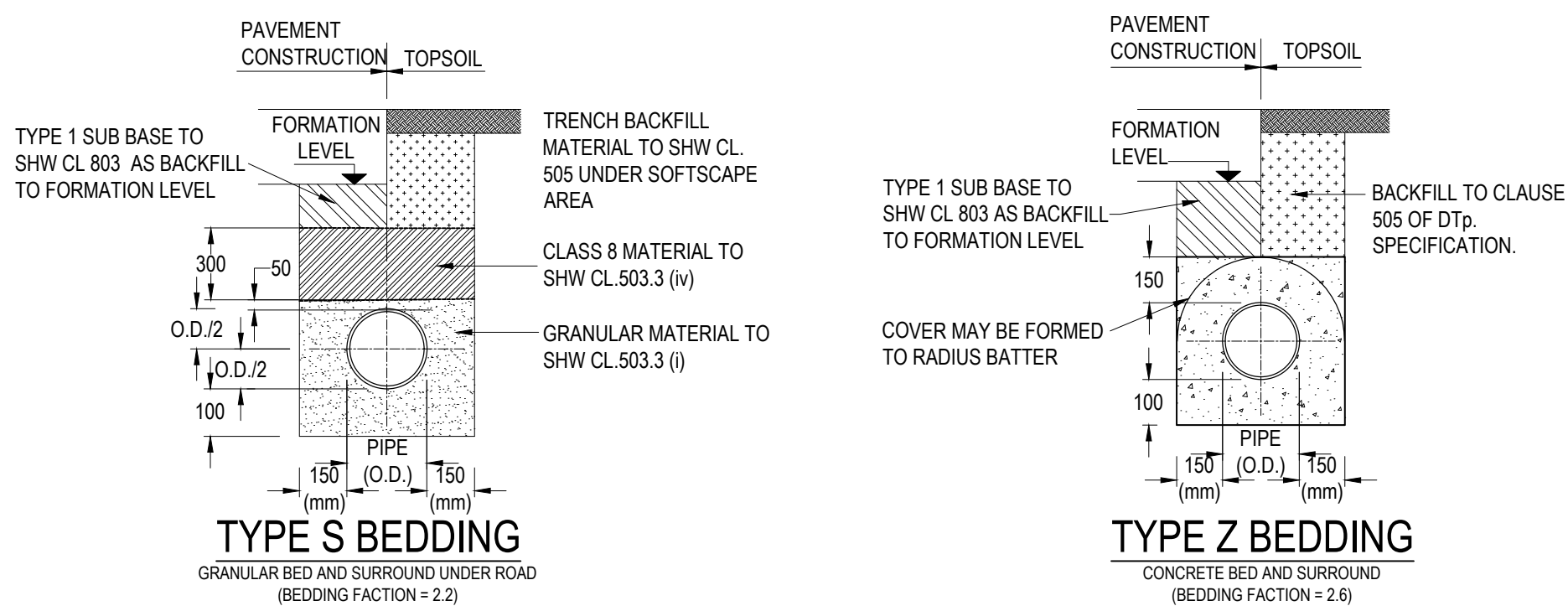
PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

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

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

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



NOTES:

1. REFER TO SHW TABLE 5/3 AND SHW TABLE 6/1
2. BEDDING BENEATH AND AT SIDES OF THE PIPE TO BE WELL COMPACTED IN ACCORDANCE WITH CL 505.
3. CONCRETE CRADLES AND ARCHES MAY BE EXTENDED TO THE SIDES OF THE TRENCH
4. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS EG. RUNNING SAND.
5. IN VERY WET CONDITIONS, WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAID WITHIN THE GRANULAR BED.

Technical drawing of a drainage channel installation. The drawing shows a cross-section of a concrete slab with a drainage channel (ACO DRAIN A15) embedded in it. The channel is 150mm wide and 150mm deep. The concrete is Class 2 Sulphate Resisting ST4. The surface of the grating is 3mm below the finished level. Arrows indicate the direction of flow (FALL) into the channel. A list of notes is provided on the right.

NOTES

1. DRAINAGE CHANNEL TO BE SIMILAR APPROVED MANUFACTURERS
2. GRATING TO BE GRATED
3. FOUNDATION FOR SUB-BASE OF 100mm
4. OUTLETS TO BE AC
5. DETAIL ONLY APPL

TO MATCH ADJACENT LEVELS

CAST IRON COVER AND FRAME

GROUND LEVEL

HEPSLEVE RODDING POINT (ALUMINIUM) WITH SEALING PLATE AND FRAME (INCLUDING SAFETY VALVE) TO HAVE AIRTIGHT "OPTION" ON F.W. DRAINS OR SIMILAR APPROVED.

1200 Min.

STANDARD COUPLING

PIPES AND COUPLINGS (LENGTH TO SUIT) SET AT 45°

ST4 CONCRETE SURROUND MIN 150mm THICK

2 No 45° BENDS

MINIMUM 2 SHORT ROCKER PIPES LENGTH NOT EXCEEDING 500mm.

FALL

GRADIENT AS SHOWN ON RELEVANT DRGS.

NOTE:

1. THE DEVELOPER MUST SELF VET AND CERTIFY THAT THE DESIGN CRITERIA, MATERIAL STANDARDS AND WORKMANSHIP SPECIFICATIONS FOR THE PROPOSED ADAPTATION SEWERS ARE IN ACCORDANCE WITH THOSE SET OUT IN 'SEWERS FOR ADOPTION' 7TH EDITION, THE WELSH MINISTERS STANDARDS AND THE REQUIREMENTS OF DCWW AS THE STATUTORY SEWERAGE UNDERTAKER.
2. SUBJECT TO A SECTION 104 ADOPTION AGREEMENT BEING COMPLETE, A SECTION 106 APPLICATION TO CONNECT MUST BE MADE TO DCWW, THE DEVELOPER SHALL GIVE 21 DAYS NOTICE PRIOR TO CONNECTION. THE WORKS MAY ONLY BE UNDERTAKEN BY A SIPS REGISTERED CONTRACTOR.
3. CONTRACTOR TO CONFIRM PRIOR TO THE ABANDONMENT OF SEWER THAT NO EXISTING CONNECTION UPSTREAM EXIST. (TO ENSURE NO EXISTING USERS ARE CUT OFF.)
4. COMPLIANCE WITH OBILITY & SAFETY MATTERS ON ANY TRENCHMANHOLE IS MANDATORY AND A PERMIT TO ENTER A CONFINED SPACE IS REQUIRED WHEN CONDUCTING SITE DRAINAGE TO THE EXISTING PUBLIC SEWERAGE SYSTEM. A PERMIT TO ENTER A CONFINED SPACE WILL BE OBTAINED FROM DWR CYMRU/WELSH WATER PRIOR TO THE WORKS COMMENCING ON ANY PUBLIC SEWERAGE SYSTEM.
5. MH COVER & FRAMES SHALL BE DUCTILE IRON WITH A MINIMUM SQUARE OPENING OF 675x675mm. COVERS SHALL BE DOUBLE TRIANGLE FOR 675mm SQUARE OPENINGS AND BE PROVIDED WITH LOOSE BOLTED CONNECTIONS. FRAME DEPTH SHALL BE 150mm.
6. ALL IRONWORK TO BE KITE MARKED BY BSI OR CERTIFIED BY EQUAL INSPECTION AUTHORITY.
7. PLANTING CLOUSE TO ADAPTABLE DRAINAGE RUNS INDICATED IS TO ACCORD WITH THE SPECIFICATIONS IN SFA 7th EDITION SECTION C13.1.13 TO COMPLY WITH THE REQUIREMENTS OF SFA 7th & THE WELSH MINISTERS STANDARDS.
8. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 18219-S104-01 SECTION 104 LAYOUT

PROJECT:
COMMERCIAL / RESIDENTIAL DEVELOPMENT
WATER STREET, NEATH TOWN CENTRE

TITLE:
DRAINAGE DETAILS
SHEET 2 OF 2

CLIENT:
HALE CONSTRUCTION

SCALE@A1:
AS SHOWN

PROJECT REF:
15112

DRAWING No: 505

REV: P1

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction