

NOTE: 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 B1.7

SURFACE COURSE
BRICKER 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 CHAMBER TO PERMIT SATISFACTORY JOINT AND SUBSEQUENT MOVEMENT

MANHOLE COVER TO SUIT BS EN 124 LOAD HIGHWAYS - CLASS D400
600 MM CLEAR OPENING

ACCESS OPENING RESTRICTED TO 300 MM DIAMETER OR 400 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

150mm thick DOT TYPE 1 SUB BASE OR CONCRETE SURROUND

BASE LIMIT TO HAVE ALL CONCRETE FINISHING LEVELS SET NO LOWER THAN THAT OF THE MAIN PIPE

GRANULAR BEDDING MATERIAL

INVERT OF CONNECTING PIPE SHALL BE AT LEAST 50mm ABOVE THAT OF THE MAIN PIPE

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

MOUNTAIN BEDDING AND HAUNCHING TO COVER AND FRAME TO SLUICE (E)

150 mm DEEP CONCRETE COLLAR

TEMPORARILY CAP SHAFT DURING CONSTRUCTION

FLEXIBLE LINING

ACCESS OPENING RESTRICTED TO 300 MM DIAMETER OR 300 MM X 300 MM IF DEPTH OF CHAMBER TO INVERT > 1 M
SEE CLAUSE E2.32

COVER COMPLYING WITH BS EN 124 AND BS EN 12410 FOR FOOTWAYS AND LAD LANE AREAS - CLASS B2.75

MINIMUM INTERNAL DIMENSIONS:
450 MM DIAMETER OR
450 MM X 450 MM

150mm thick DOT TYPE 1 OR CONCRETE SUBGRADE

JOINTS BETWEEN BASE AND SHAFT AND BETWEEN SHAFT COMPONENTS TO BE FITTED WITH WATER-TIGHT SEALS

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

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

GRAVEL BEDDING MATERIAL

INVERT OF CONNECTING PIPE SHALL BE AT LEAST 50mm ABOVE THAT OF THE MAIN PIPE

134 AND B5 7903
GLASSING GLASS
SEE CLAUSE E.3.32

TOP SURF

ACCESS OPENING RESTRICTED
TO 300 MM DIAMETER OR
300 MM X 300 MM IF DEPTH
OF CHAMFER TO INVERT ≥ 15

TEMPORARILY CAP SHAFT
DURING CONSTRUCTION

FLEXIBLE SEAL

MINIMUM INTERNAL DIMENSION
450 MM DIAMETER OR
450 MM X 450 MM

150mm THICK DOT TYPE
OR CONCRETE SURROUND

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

BASE (UNIT) TO HAVE ALL
CONNECTIONS WITH SURFACE
LEVELS SET NO LOWER THAN
THAT OF THE MAIN PIP

JOINT TO BE AS CLOSE
AS POSSIBLE TO FACE OF
CHAMFER TO PREVENT
WATER/DUST OFF JOINT AND
SUBSEQUENT MOVEMENT

GRANULAR BEDDING MATERIAL

INVERT OF CONNECTING PIPE SHALL BE
AT LEAST 50mm ABOVE THAT OF THE MAIN PIP

COVER AND FRAME TO CLAUSE 66.7

1.4 PRECAST CONCRETE COVER
FRAME SEATING RINGS WITH
330 MM DIAMETER OR
350 MM x 350 MM OPENING
OR CLASS B ENGINEERING BRICKS

TEMPORARILY CAP MANHOLE
SHAFT DURING CONSTRUCTION

DOT TYPE 1 SUB BASE
(THICKNESS VARIES)

GRAVEL BEDDING MATERIAL

PIPES BUILT INTO CHAMBER
WALL OR JOINT FORMING WITH
WATERTIGHT SEALS

330 mm PRECAST BASE
OR 150 mm IN SITU FORMED

MANHOLE COVER TO SUIT BE EN 124 LOAD
CLASS B305 mm x 300 mm CLEAR OPENING

SURFACE COURSE
BINDER COURSE
BASE COURSE

COVER SLAB WITH
ACCESS OPENING RESTRICTED
TO 350 mm DIAMETER OR
300 mm x 300 mm IF DEPTH
OF CHAMBER TO INVERT IS 5-1 m

PRECAST CONCRETE SECTIONS TO
BE JOINTED WITH ELASTOMERIC
OR PLASTOMERIC SEALS

MINIMUM INTERNAL DIMENSIONS
450 mm DIAMETER
OR 450 mm x 450 mm

330mm thick DOT TYPE 1 SUB
OR CONCRETE SURROUND

BASE JOINT TO HAVE ALL
CONCRETING WITH JOINT
LEVELS SET NO LOWER THAN
THAT OF THE MAIN PIPE

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

REFER TO NOTE 6

INVERT OF CONNECTING PIPE SHALL BE
AT LEAST 50mm ABOVE THAT OF THE MAIN PIPE

NOTE: PLACING CHAIRS AND RINGS SHALL COMPLY WITH BS EN 13058-1 AND BS EN 12058-1, OR HAVE BEEN TESTED TO INDEPENDENT APPROVAL.

MINOR EDCING AND HAUNCHING TO COVER AND FRAME TO CLAUSE 6.7.

150mm DEEP CONCRETE COLLAR

MINIMUM INTERNAL DIMENSIONS

180mm MIN. CONCRETE COLLAR

150mm THICK DOT PIPE 150mm BASE

225mm x 150mm

BASE ONT TO HAVE A CONNECTION WITH SUFFICIENT LEVELS SET NO LOWER THAN THAT OF MAIN PIPE

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

GRANULAR BEDDING MATERIAL

COVER COMPLYING WITH BS EN 124 AND BS 7903
GARFLOOR - CLASS A15
SEE CLAUSE E1.32

TOPSOIL

CONCRETE COLLAR

MINIMUM INTERNAL DRAINAGE CHANNEL
180 mm DIAMETER OR
225 mm x 100 mm

MINIMUM RADII TO BE 500 mm
FOR A 150 mm DIAMETER PIPE
AND 400 mm FOR A 150 mm DIAMETER
PIPE TO ALLOW PIPES OR
JOINTS BETWEEN BASE AND SHAFT
AND SHAFT COMPONENTS TO BE
FITTED WITH WATER-TIGHT SEALS

150mm thick DPT TYPE 3 SUB BASE
OR CONCRETE SURROUND

BASE UNIT TO HAVE ALL CONNECTION
WITH SHIFTL LINES SET NO LOWER
THAN THAT OF MAIN PIPE

GRAVEL CAP
BEDDING MATERIAL

A cross-sectional diagram of a shaft-hub assembly. A shaft, labeled 'SHAFT', passes through a hub. The hub has a top section with a dotted pattern and a bottom section with a hexagonal pattern. A 'COLLAR' is positioned on the shaft within the dotted section. A 'COVER' is mounted on top of the hub, and a 'FLEXIBLE SEAL' is located between the cover and the shaft. An 'INSET A' is shown at the top right, providing a magnified view of the seal area where the cover meets the shaft.

Technical drawing of a manhole assembly showing a vertical shaft with a concrete collar, a 150mm thick DOT Type 1 pipe, and a concrete surround. The drawing includes labels for mortar bedding, minimum radii, and internal dimensions.

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE 12.7

150 mm DEEP CONCRETE COLLAR

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

MINIMUM INTERNAL DIMENSIONS
 150 mm DIAMETER OR
 225 mm x 100 mm

150mm thick DOT TYPE 1 OR CONCRETE SURROUND

GRANULAR BEDDING MATERIAL

**BS EN 124 AND BS 7903
 DRAIN WAYS, 100mm WAYS AND
 LANDSCAPE AREAS - CLASS B125
 SEE CLAUSE 12.32**

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

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

NOTE:
WHERE A BEND IS USED IMMEDIATELY OUTSIDE THE MANHOLE, THIS MAY BE USED AS THE ROCKER PIPE

1. All dimensions are in millimetres unless otherwise stated.
2. All details in accordance with Sewers for Adoption 7th edition.
3. All manhole covers within proposed adoptable highway to have a proven SKI Resistance Value (SRV) of ≥ 45 in accordance with Hampshire County Council Specification.
4. Proposed adoptable sewers are only permitted to have other sewer connections and other services laid at an angle of between 45 degrees and 90 degrees across the line with a vertical clearance in excess of 300mm.
5. The minimum size of sewer where guide bars, safety chains or other safety devices are required in manholes shall be 375mm.
6. Compliance with health & safety matter on any trench/manhole is obligatory and a permit to enter a confined space is required when connecting site drainage to the existing public sewerage system. A permit to enter a confined space will be obtained from SSW Ltd prior to commencing on any public sewerage system.
7. All ironwork to be kite marked BE BSI or certified by equal Inspection Authority
8. All type 1&2 MHs should have concrete surround. Concrete rings shall be sealed using "Tokstrip" and lifting eyes pointed with resin modified mortar.
9. The use of ladders or steps in manholes, wet wells and access chambers shall comply with the following: Steel plastic encapsulated single steps shall not be used in manholes of greater depth than 1.0m. Steel plastic encapsulated double steps may be provided in manholes up to 3.0m in depth. Ladders shall be provided in accordance with BS4211 in MHs between 3.0 and 6.0m deep. MHs greater than 6.0m deep shall be specially designed and have intermediate landings. Access holes in intermediate landings shall be provided with galvanised mild steel gratings to prevent persons falling through. The design of deep MHs shall permit the use of a winch or lifting gear mounted at ground level in case of emergencies.
10. Only low carbon steel or stainless steel ladders for vertical fixing to MHs will be acceptable
11. Best coloured plastic marker tape at least 150mm wide shall be laid at a minimum of 200mm above soffit of the pipe. The tape shall be printed with the words gwyser in red capital letters throughout its length and at intervals not exceeding 700mm and shall incorporate a corrosion resistant tracing system for non metallic pipes.
12. Minimum backdrop height shall be 1m where possible

REV	DATE	DESCRIPTION	CR
-	27.07.20	Initial Issue	H

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DRAINAGE STANDARD DETAILS
SHEET 1

SCALE @ A1:	CHECKED:	DATE:
NTS	HG	JULY 2020
PROJECT No:	DRAWING No:	REV:
J007	SD-302	-