

Diagram illustrating the components of a precast manhole with a concrete surround, showing the flow path and structural elements:

- PRECAST MANHOLE WITH CONCRETE SURROUND TO BE CONSTRUCTED IN ACCORDANCE WITH GOODS CODE OF PRACTICE FOR DRAINAGE WORKS FOR CONSTRUCTION & STANDARD MANHOLE/RAINAGE DRAWINGS
- PIPE FROM DRAINAGE/ATTENUATION
- INFLOW
- OUTFLOW
- PENSTOCK CONTROL VALVE FITTED ON INLET PIPE
- HYDROBRAKE OR EQUIVALENT FLOW CONTROL FITTED WITH PIVOTING BY-PASS DOOR AND FITTED TO CIRCULAR MANHOLE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
- FORMED SUMP

MIN 150mm WIDE  
CONCRETE APRON MIX ST4

150mm

150mm

GROUND LEVEL

MINIMUM 2 No BRICKS AS TYPE J MANHOLE DETAIL

600 x 600  
ACCESS OPE

TYP 540

INTAKE FLOW

TYP 540

TYP 540

FIXING LUGS WITH MASONRY STUD ANCHOR FIXING BOLTS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

PIVOTING BYPASS DOOR

MANHOLE COVER AND FRAME TO EN124 D400

GROUND LEVEL

150mm

150mm

PULL HANDLE

EYE BRACKET FOR OPERATING ROPE

600 x 600 ACCESS OPE

1500

PIVOTING BYPASS DOOR OPERATING STEEL ROPE

PENSTOCK CONTROL VALVE FITTED ON INLET PIPE

PRECAST MANHOLE WITH CONCRETE SURROUND TO BE CONSTRUCTED IN ACCORDANCE WITH GSDS CODE OF PRACTICE FOR DRAINAGE WORKS FOR CONSTRUCTION & STANDARD MANHOLE/DRAINAGE DRAWINGS

HYDROBRAKE OR EQUIVALENT FLOW CONTROL FITTED WITH PIVOTING BY-PASS DOOR AND FITTED TO CIRCULAR MANHOLE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

TYP 160

TYP 750

450

INFLOW

OUTFLOW

INTAKE (OPPOSITE SIDE)

SECTION B-B

450mm SUMP DEPTH TO BE VERIFIED WITH HYDROBRAKE MANUFACTURER

**Technical Drawing: Manhole Construction Details**

**Top View (Cross-section):**


- MORTAR HAUNCHING TO MH COVER AND FRAME
- TO IS EN124 HAVING 600mm MINIMUM CLEAR OPENING
- COVER FRAME TO BE BEDDED ON MORTAR
- SOLID ENGINEERING OR SPECIAL PURPOSE CONCRETE BRICKWORK 2 COURSE (MAX) 1 COURSE (MIN) AND/OR PRECAST CONCRETE COVER FRAME SEATING RINGS
- REINFORCED CONCRETE COVER AND REDUCING SLAB BEDDED, PROPRIETARY BITUMEN OR RESIN MASTIC SEALANT.
- SIZE VARIABLE SEE TABLE 1
- GALVANISED MILD STEEL RUNGS AT 250mm OR 300mm CENTERS THROUGHOUT
- IN-SITU S4 CONCRETE BASE SLAB WITH A393 MESH REINFORCEMENT TOP & BOTTOM
- 500 MIN BELOW LOWEST PIPE INVERT
- BOTTOM OF PRECAST CONCRETE MANHOLE RING TO BE BUILT INTO BASE CONCRETE MIN 75mm
- 150 MIN
- 500 MIN
- FLOW

**Bottom View (Plan View):**

- SHORT LENGTH OF PIPE TO BE SIMILAR LENGTH TO ROCKER PIPE
- FLOW
- ROCKER PIPE
- JOINT TO BE AS CLOSE AS PRACTICABLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT AND SUBSEQUENT MOVEMENT
- CHAMBER WITH OUTGOING PIPE GREATER THAN 800mm DIA SHALL BE FITTED WITH GUARD BARS SAFETY CHAINS OR OTHER SAFETY DEVICES
- THE SAFETY POLICY OF INDIVIDUAL SEWERAGE UNDERTAKERS MAY REQUIRE A LARGER MINIMUM CLEAR OPENING INTO MANHOLES AND THE FITTING OF GUARD BARS. SAFETY CHAINS OR OTHER SAFETY DEVICES IN MANHOLES WITH OUTGOING PIPES OF LESS THAN 600mm DIA

PIPE DIA	ROCKER PIPE LENGTH
150-450	0.5-0.75
451-750	0.75-1.0
750	SEEK GUIDANCE

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	CHAMBER SECTION DIAMETER (mm)
LESS THAN 375	1200 (1050 WHERE DEPTH TO SOFFIT IS 1.35m - 1.5m)
375 - 450	1350
500 - 700	1500
750 - 900	1800



The diagram shows two cross-sections of a kerb. The top section is labeled 'KERB' and shows a raised kerb with a 'DIRECTION OF TRAVEL' arrow pointing right. The bottom section is labeled 'KERB WITH KERB' and shows a kerb with a kerb. A dimension line indicates a distance of '20' between the two kerbs.

ROAD SURFACE

ROAD SURFACE

THROUGH WALL

150 TK. CONCRETE SURROUND. ST4

22.5° OR 45° BENDS

150 mm SADDLE PIECE

S.W. SEWER

GULLY WITH CONNECTION ON OPPOSITE SIDE OF ROAD

GULLY WITH ADJACENT CONNECTION

ROAD GULLY DETAILS

SCALE 1:25

SCALE 1:25



MISC	MS	AS SHOWN	AT
drawing no.			revision
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