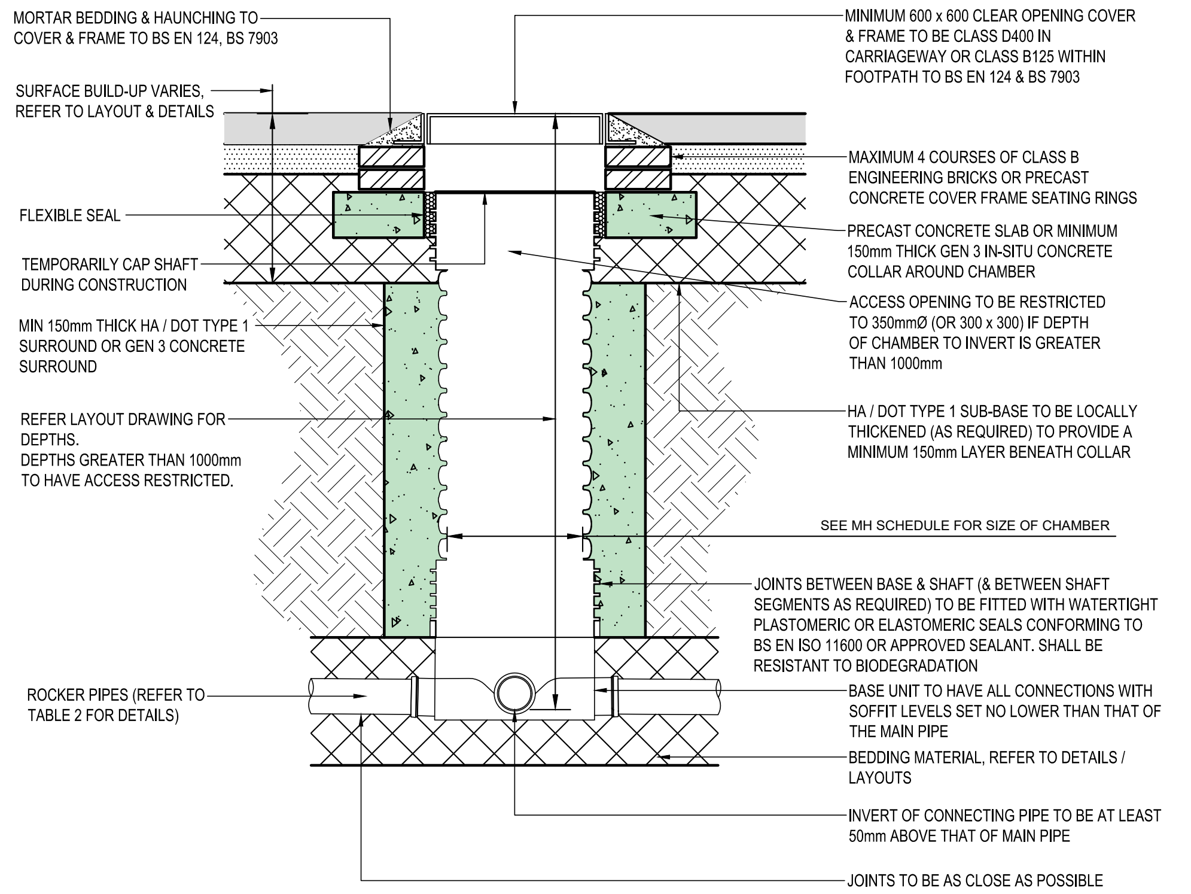
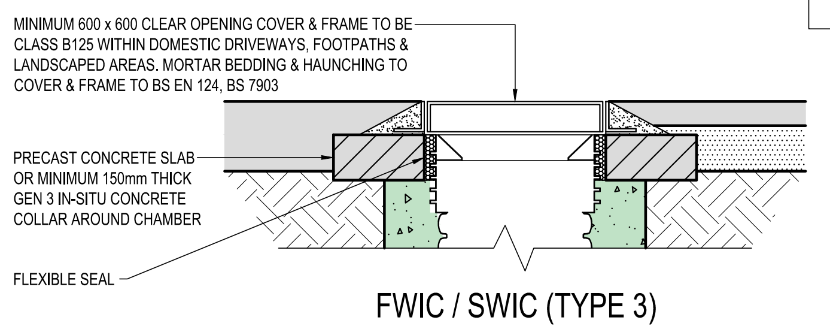

MORTAR BEDDING & HAUNCHING TO COVER & FRAME TO BS EN 124, BS 7903
SURFACE BUILD-UP VARIES, REFER TO LAYOUT & DETAILS
FLEXIBLE SEAL
TEMPORARILY CAP SHAFT DURING CONSTRUCTION
MIN 150mm THICK HA / DOT TYPE 1 SURROUND OR GEN 3 CONCRETE SURROUND
REFER LAYOUT DRAWING FOR DEPTHS. DEPTHS GREATER THAN 1000mm TO HAVE ACCESS RESTRICTED.
ROCKER PIPES (REFER TO TABLE 2 FOR DETAILS)
MINIMUM 600 x 600 CLEAR OPENING COVER & FRAME TO BE CLASS D400 IN CARRIAGEWAY OR CLASS B125 WITHIN FOOTPATH TO BS EN 124 & BS 7903
MAXIMUM 4 COURSES OF CLASS B ENGINEERING BRICKS OR PRECAST CONCRETE COVER FRAME SEATING RINGS
PRECAST CONCRETE SLAB OR MINIMUM 150mm THICK GEN 3 IN-SITU CONCRETE COLLAR AROUND CHAMBER
ACCESS OPENING TO BE RESTRICTED TO 350mmØ (OR 300 x 300) IF DEPTH OF CHAMBER TO INVERT IS GREATER THAN 1000mm
HA / DOT TYPE 1 SUB-BASE TO BE LOCALLY THICKENED (AS REQUIRED) TO PROVIDE A MINIMUM 150mm LAYER BENEATH COLLAR
SEE MH SCHEDULE FOR SIZE OF CHAMBER
JOINTS BETWEEN BASE & SHAFT (& BETWEEN SHAFT SEGMENTS AS REQUIRED) TO BE FITTED WITH WATERTIGHT PLASTOMERIC OR ELASTOMERIC SEALS CONFORMING TO BS EN ISO 11600 OR APPROVED SEALANT. SHALL BE RESISTANT TO BIODEGRADATION
BASE UNIT TO HAVE ALL CONNECTIONS WITH SOFFIT LEVELS SET NO LOWER THAN THAT OF THE MAIN PIPE
BEDDING MATERIAL, REFER TO DETAILS / LAYOUTS
INVERT OF CONNECTING PIPE TO BE AT LEAST 50mm ABOVE THAT OF MAIN PIPE
JOINTS TO BE AS CLOSE AS POSSIBLE TO THE FACE OF THE CHAMBER TO PERMIT SATISFACTORY JOINT & SUBSEQUENT MOVEMENT

FWIC / SWIC (TYPE 3)

SECTION SHOWING REQUIREMENTS FOR NON-ENTRY CHAMBER SUBJECT TO VEHICLE LOADING OR SITED WITHIN HIGHWAY OR FOOTPATH
0.60 m -3.00 m COVER LEVEL TO INVERT
(1:20 AT A1)

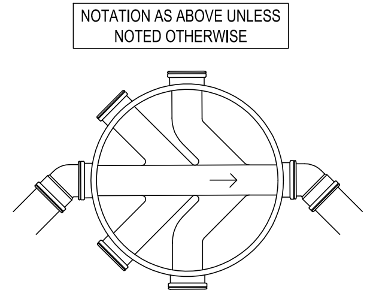
PLASTIC CHAMBERS & RINGS SHALL COMPLY WITH BS EN 13598-1 & BS EN 13598-2 OR HAVE AN EQUIVALENT INDEPENDENT APPROVAL


MINIMUM 600 x 600 CLEAR OPENING COVER & FRAME TO BE CLASS B125 WITHIN DOMESTIC DRIVEWAYS, FOOTPATHS & LANDSCAPED AREAS. MORTAR BEDDING & HAUNCHING TO COVER & FRAME TO BS EN 124, BS 7903
PRECAST CONCRETE SLAB OR MINIMUM 150mm THICK GEN 3 IN-SITU CONCRETE COLLAR AROUND CHAMBER
FLEXIBLE SEAL

FWIC / SWIC (TYPE 3)

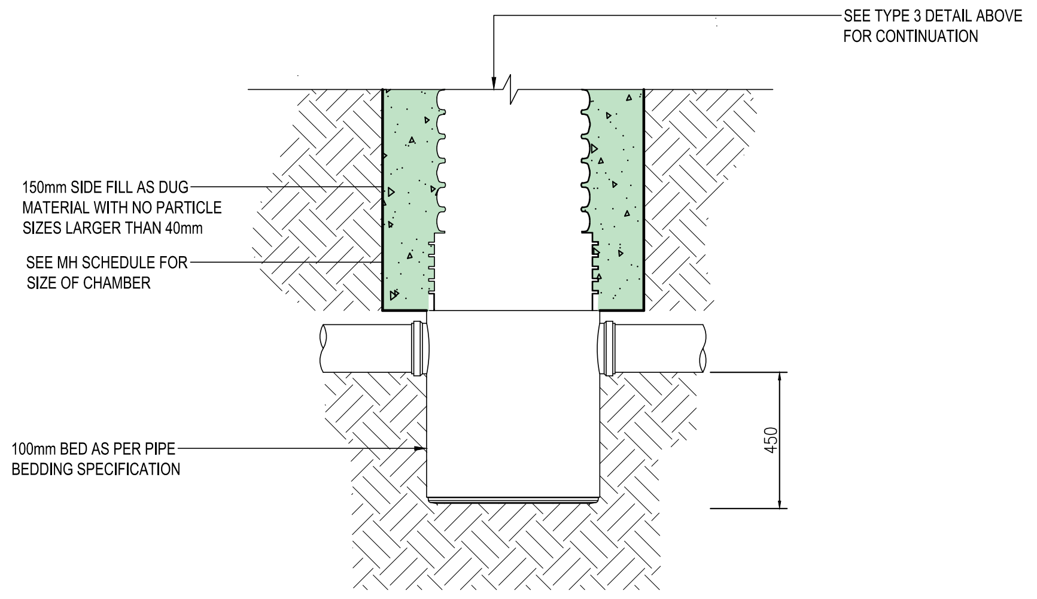
ALTERNATIVE CHAMBER HEAD CONSTRUCTION DETAIL WHERE SITED IN DOMESTIC DRIVEWAYS, FOOTPATHS & LANDSCAPED AREAS
(1:20 AT A1)

NOTATION AS ABOVE UNLESS NOTED OTHERWISE



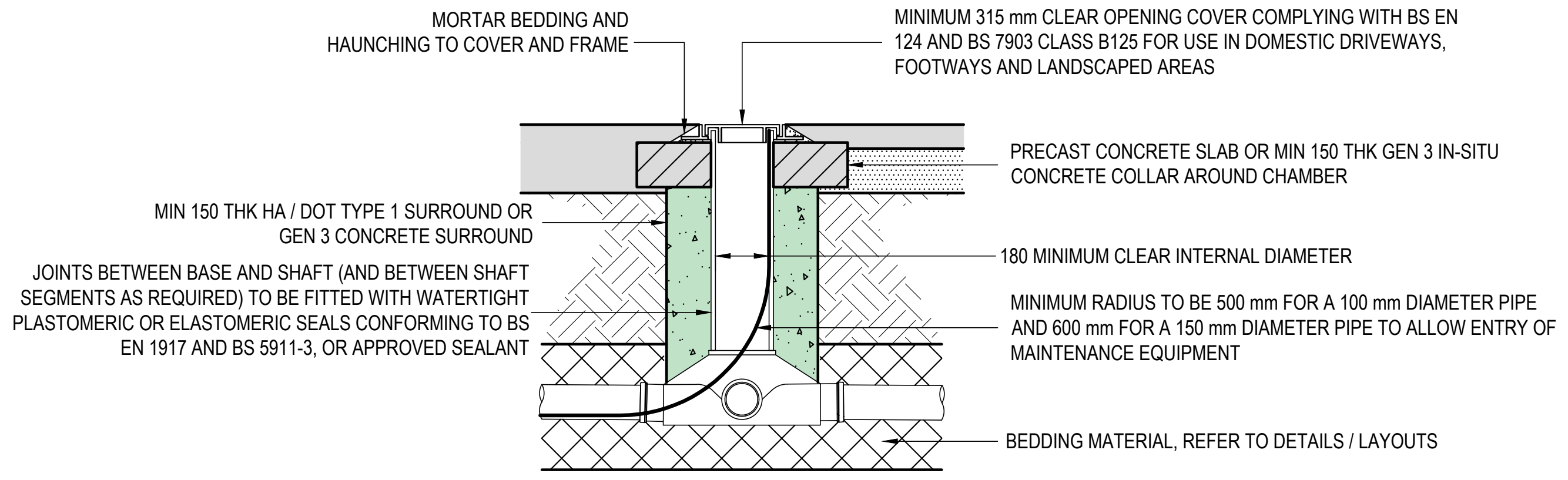
TYPICAL INSPECTION CHAMBER BASE

(MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 2.0m)
SCALE : 1 : 20


SEE TYPE 3 DETAIL ABOVE FOR CONTINUATION
150mm SIDE FILL AS DUG MATERIAL WITH NO PARTICLE SIZES LARGER THAN 40mm
SEE MH SCHEDULE FOR SIZE OF CHAMBER
100mm BED AS PER PIPE BEDDING SPECIFICATION
450

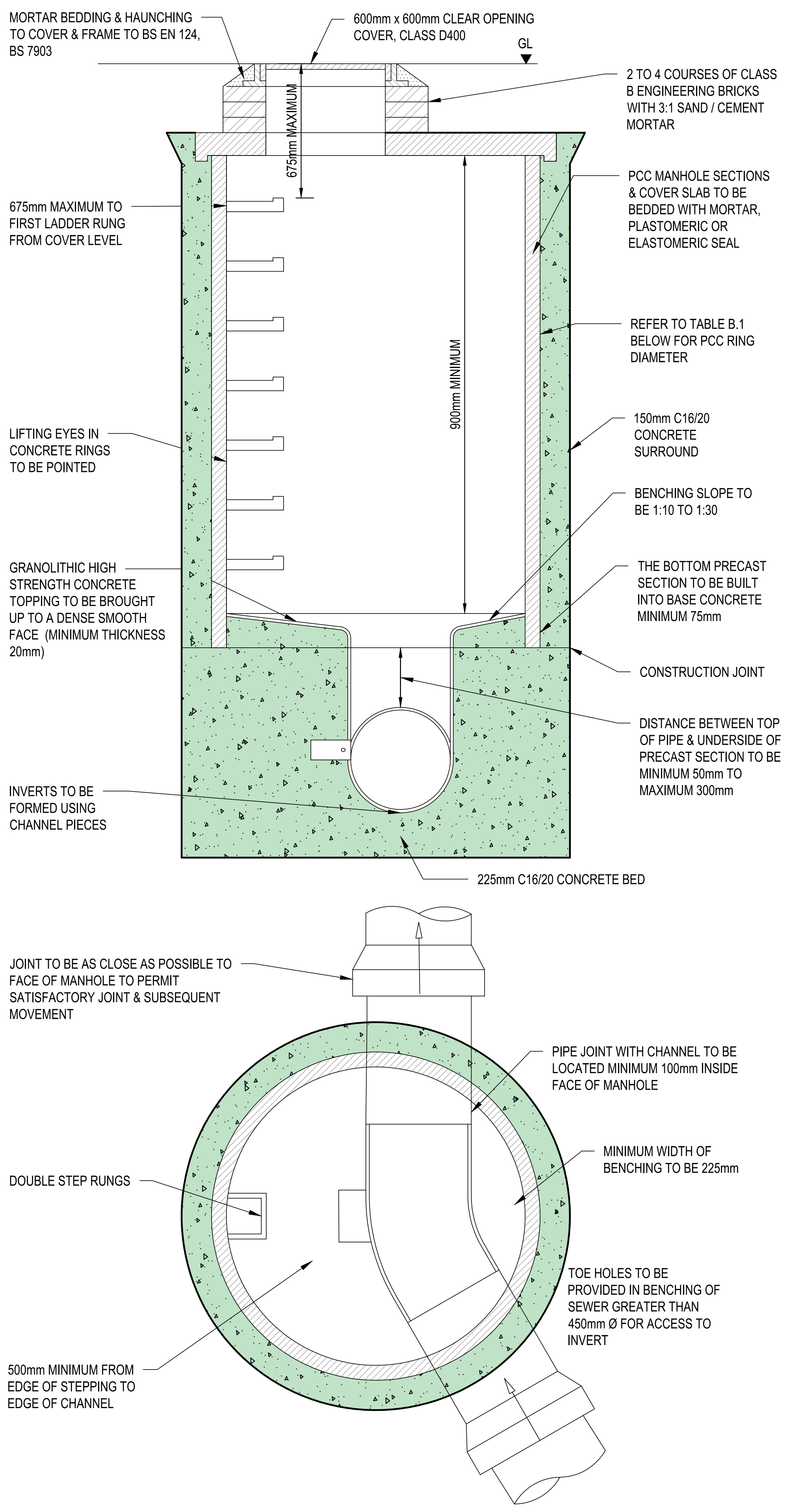
TYPE 3 CATCHPIT

(MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m)
SCALE : 1 : 20


MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME
MINIMUM 315 mm CLEAR OPENING COVER COMPLYING WITH BS EN 124 AND BS 7903 CLASS B125 FOR USE IN DOMESTIC DRIVEWAYS, FOOTWAYS AND LANDSCAPED AREAS
PRECAST CONCRETE SLAB OR MIN 150 THK GEN 3 IN-SITU CONCRETE COLLAR AROUND CHAMBER
MIN 150 THK HA / DOT TYPE 1 SURROUND OR GEN 3 CONCRETE SURROUND
180 MINIMUM CLEAR INTERNAL DIAMETER
JOINTS BETWEEN BASE AND SHAFT (AND BETWEEN SHAFT SEGMENTS AS REQUIRED) TO BE FITTED WITH WATERTIGHT PLASTOMERIC OR ELASTOMERIC SEALS CONFORMING TO BS EN 1917 AND BS 5911-3, OR APPROVED SEALANT
MINIMUM RADIUS TO BE 500 mm FOR A 100 mm DIAMETER PIPE AND 600 mm FOR A 150 mm DIAMETER PIPE TO ALLOW ENTRY OF MAINTENANCE EQUIPMENT
BEDDING MATERIAL, REFER TO DETAILS / LAYOUTS

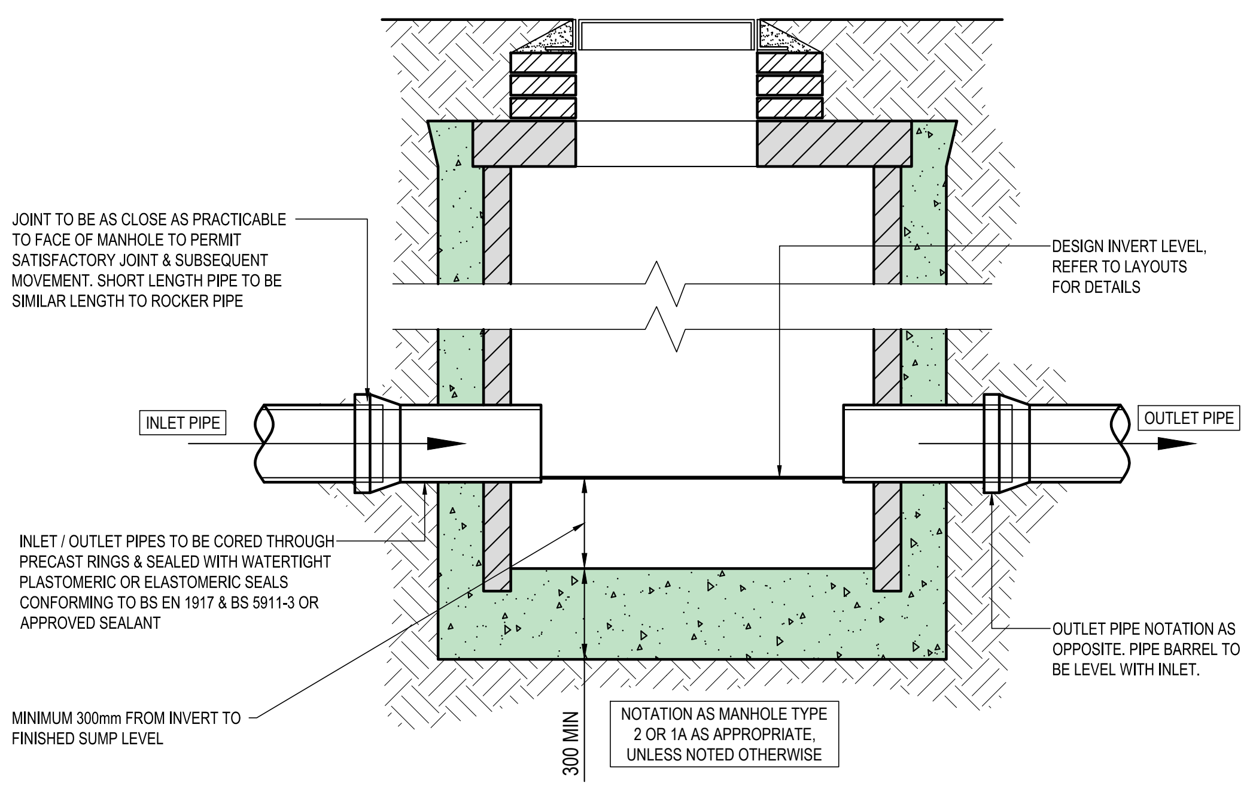
FWAC / SWAC (TYPE 4)

SECTION SHOWING REQUIREMENTS FOR NON-ENTRY ACCESS CHAMBER
0.30 m - 2.00 m COVER LEVEL TO INVERT
(1:20 AT A1)


MORTAR BEDDING & HAUNCHING TO COVER & FRAME TO BS EN 124, BS 7903
600mm x 600mm CLEAR OPENING COVER, CLASS D400
GL
2 TO 4 COURSES OF CLASS B ENGINEERING BRICKS WITH 3:1 SAND / CEMENT MORTAR
675mm MAXIMUM
675mm MAXIMUM TO FIRST LADDER RUNG FROM COVER LEVEL
PCC MANHOLE SECTIONS & COVER SLAB TO BE BEDDED WITH MORTAR, PLASTOMERIC OR ELASTOMERIC SEAL
900mm MINIMUM
REFER TO TABLE B.1 BELOW FOR PCC RING DIAMETER
LIFTING EYES IN CONCRETE RINGS TO BE POINTED
150mm C16/20 CONCRETE SURROUND
BENCHING SLOPE TO BE 1:10 TO 1:30
GRANOLITHIC HIGH STRENGTH CONCRETE TOPPING TO BE BROUGHT UP TO A DENSE SMOOTH FACE (MINIMUM THICKNESS 20mm)
THE BOTTOM PRECAST SECTION TO BE BUILT INTO BASE CONCRETE MINIMUM 75mm
CONSTRUCTION JOINT
DISTANCE BETWEEN TOP OF PIPE & UNDERSIDE OF PRECAST SECTION TO BE MINIMUM 50mm TO MAXIMUM 300mm
INVERTS TO BE FORMED USING CHANNEL PIECES
225mm C16/20 CONCRETE BED
JOINT TO BE AS CLOSE AS POSSIBLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT & SUBSEQUENT MOVEMENT
PIPE JOINT WITH CHANNEL TO BE LOCATED MINIMUM 100mm INSIDE FACE OF MANHOLE
MINIMUM WIDTH OF BENCHING TO BE 225mm
DOUBLE STEP RUNGS
TOE HOLES TO BE PROVIDED IN BENCHING OF SEWER GREATER THAN 450mm Ø FOR ACCESS TO INVERT
500mm MINIMUM FROM EDGE OF STEPPING TO EDGE OF CHANNEL

TYPICAL PCC MANHOLE DETAIL (TYPE 2)

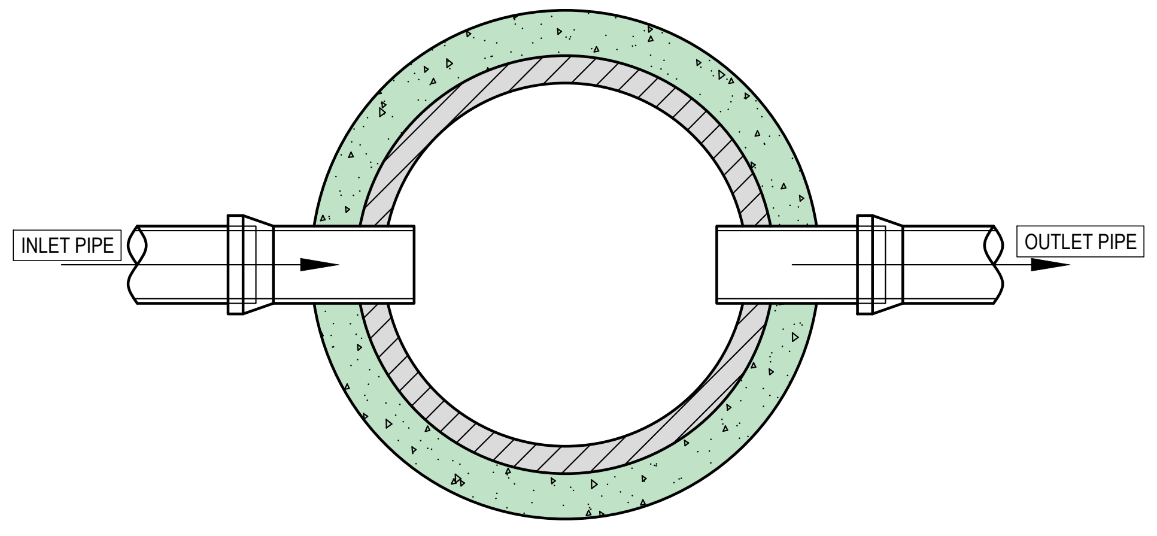
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 2m TO 3m
SCALE 1:25


JOINT TO BE AS CLOSE AS PRACTICABLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT & SUBSEQUENT MOVEMENT. SHORT LENGTH PIPE TO BE SIMILAR LENGTH TO ROCKER PIPE
DESIGN INVERT LEVEL, REFER TO LAYOUTS FOR DETAILS
INLET PIPE
OUTLET PIPE
INLET / OUTLET PIPES TO BE CORED THROUGH PRECAST RINGS & SEALED WITH WATERTIGHT PLASTOMERIC OR ELASTOMERIC SEALS CONFORMING TO BS EN 1917 & BS 5911-3 OR APPROVED SEALANT
OUTLET PIPE NOTATION AS OPPOSITE. PIPE BARREL TO BE LEVEL WITH INLET.
MINIMUM 300mm FROM INVERT TO FINISHED SUMP LEVEL
300 MIN

NOTATION AS MANHOLE TYPE 2 OR 1A AS APPROPRIATE, UNLESS NOTED OTHERWISE

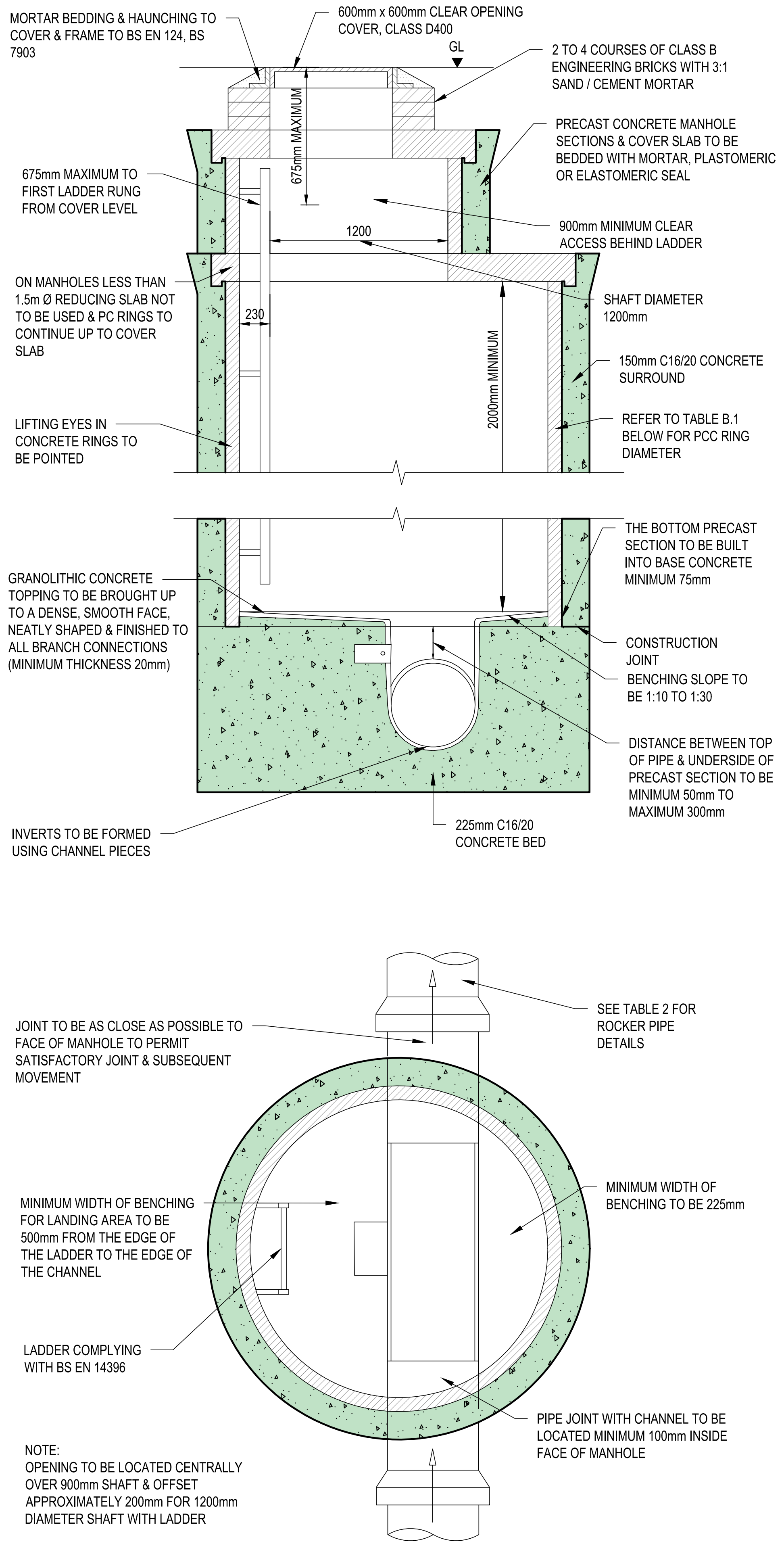
TYPE 2 CATCHPIT MANHOLE

SECTION SIMILAR TO TYPE 2 / TYPE 1A MANHOLE
ADDITIONAL REQUIREMENTS FOR CATCHPIT MANHOLE SHOWN
(1:20 AT A1)



TYPE 2 CATCHPIT MANHOLE

PLAN SIMILAR TO TYPE 2 / TYPE 1A MANHOLE
ADDITIONAL REQUIREMENTS FOR CATCHPIT MANHOLE SHOWN
(1:20 AT A1)


MORTAR BEDDING & HAUNCHING TO COVER & FRAME TO BS EN 124, BS 7903
600mm x 600mm CLEAR OPENING COVER, CLASS D400
GL
2 TO 4 COURSES OF CLASS B ENGINEERING BRICKS WITH 3:1 SAND / CEMENT MORTAR
PRECAST CONCRETE MANHOLE SECTIONS & COVER SLAB TO BE BEDDED WITH MORTAR, PLASTOMERIC OR ELASTOMERIC SEAL
675mm MAXIMUM
675mm MAXIMUM TO FIRST LADDER RUNG FROM COVER LEVEL
900mm MINIMUM CLEAR ACCESS BEHIND LADDER
1200
ON MANHOLES LESS THAN 1.5m Ø REDUCING SLAB NOT TO BE USED & PC RINGS TO CONTINUE UP TO COVER SLAB
SHAFT DIAMETER 1200mm
230
2000mm MINIMUM
150mm C16/20 CONCRETE SURROUND
LIFTING EYES IN CONCRETE RINGS TO BE POINTED
REFER TO TABLE B.1 BELOW FOR PCC RING DIAMETER
THE BOTTOM PRECAST SECTION TO BE BUILT INTO BASE CONCRETE MINIMUM 75mm
GRANOLITHIC CONCRETE TOPPING TO BE BROUGHT UP TO A DENSE, SMOOTH FACE, NEATLY SHAPED & FINISHED TO ALL BRANCH CONNECTIONS (MINIMUM THICKNESS 20mm)
CONSTRUCTION JOINT
BENCHING SLOPE TO BE 1:10 TO 1:30
DISTANCE BETWEEN TOP OF PIPE & UNDERSIDE OF PRECAST SECTION TO BE MINIMUM 50mm TO MAXIMUM 300mm
INVERTS TO BE FORMED USING CHANNEL PIECES
225mm C16/20 CONCRETE BED
SEE TABLE 2 FOR ROCKER PIPE DETAILS
JOINT TO BE AS CLOSE AS POSSIBLE TO FACE OF MANHOLE TO PERMIT SATISFACTORY JOINT & SUBSEQUENT MOVEMENT
MINIMUM WIDTH OF BENCHING FOR LANDING AREA TO BE 500mm FROM THE EDGE OF THE LADDER TO THE EDGE OF THE CHANNEL
MINIMUM WIDTH OF BENCHING TO BE 225mm
LADDER COMPLYING WITH BS EN 14396
PIPE JOINT WITH CHANNEL TO BE LOCATED MINIMUM 100mm INSIDE FACE OF MANHOLE

NOTE:
OPENING TO BE LOCATED CENTRALLY OVER 900mm SHAFT & OFFSET APPROXIMATELY 200mm FOR 1200mm DIAMETER SHAFT WITH LADDER

TYPICAL MANHOLE DETAIL (TYPE 1A)

DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m to 6.0m
SCALE: 1:25

MAXIMUM PIPE DIA.	ROCKER PIPE LENGTH
≤600mm	0.6m
675-750mm	1.0m
>825mm	1.25m

TABLE 2

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
150 - 375mm	1200
450	1350
455 - 525	1500
555 - 675	1500
690 - 900	1800

TABLE B.1 MANHOLE DIAMETER

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IN ASSOCIATION WITH:

PROJECT:
PROPOSED RESIDENTIAL DEVELOPMENT
ONE HORTON HEATH
FIRST RESIDENTIAL PARCEL

TITLE:
PROPOSED DRAINAGE DETAILS
SHEET 01

TECH:	CSE:	ICSE:	SCALE: 1:20 @ A1
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