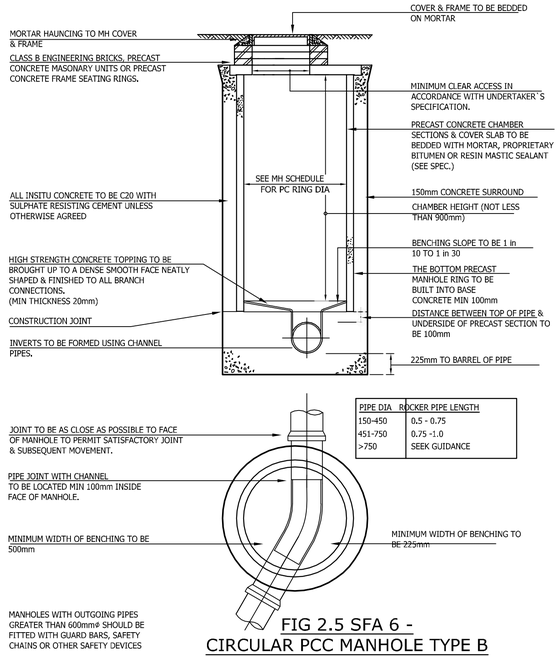
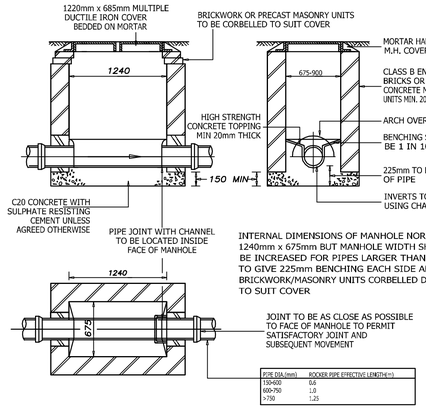


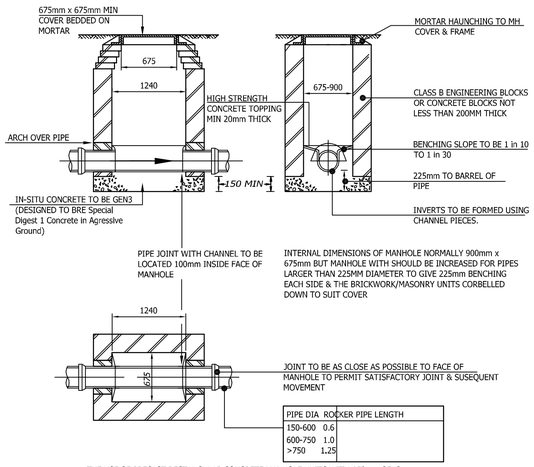

MANHOLES WITH OUTGOING PIPES GREATER THAN 600mm⌀ SHOULD BE FITTED WITH GUARD BARS, SAFETY CHAINS OR OTHER SAFETY DEVICES

## FIG 2.5 SFA 6 - CIRCULAR PCC MANHOLE TYPE B DEPTH 1.45m - 3m



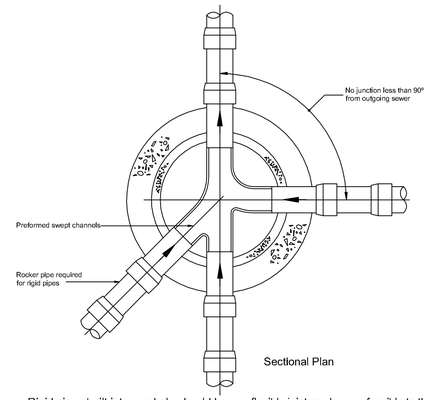

INTERNAL DIMENSIONS OF MANHOLE NORMALLY 1240mm x 675mm BUT MANHOLE WIDTH SHOULD BE INCREASED FOR PIPES LARGER THAN 225mm DIA TO GIVE 225mm BENCHING EACH SIDE AND THE BRICKWORK/MASONRY UNITS CORBELLED DOWN TO SUIT COVER

## FIG 2.6 SFA 6 - MANHOLE TYPE C (NTS)




THE USE OF PRECAST RECTANGULAR CONCRETE MANHOLE UNITS WITH 150mm GEN3 CONCRETE SURROUND (DESIGNED TO BRE SPECIAL DIGEST 1 CONCRETE IN AGGRESIVE GROUND) IS PERMITTED

## FIG 2.7 SFA 6 - MANHOLE TYPE D DEPTH TO SOFFIT <1M (NTS)

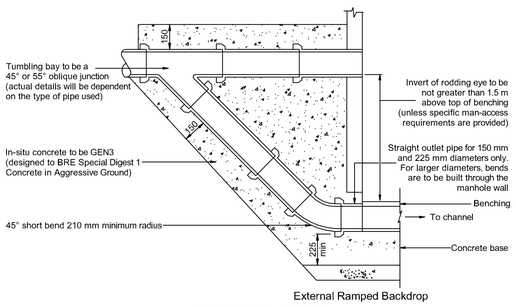



Rigid pipes built into manhole should have a flexible joint as close as feasible to the external face of the structure and the length of the next rocker pipe should be as shown.

| Nominal diameter (mm) | Maximum effective length (m) |
|---|---|
| 150 - 600 | 0.6 |
| 601 - 750 | 1.00 |
| over 750 | 1.25 |

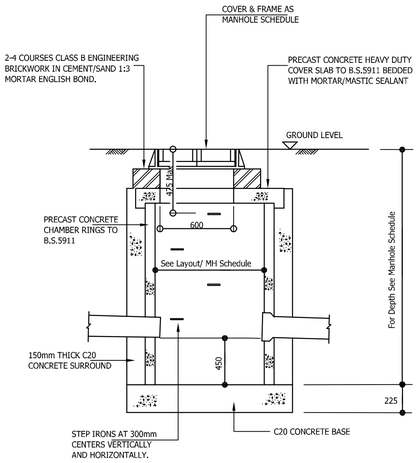
All pipes entering the bottom of the manhole to have soffits level.

## FIG 2.9 SFA 6 - TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES (NTS)




External Ramped Backdrop

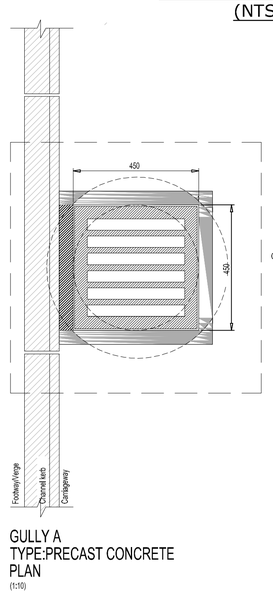
## FIG 2.10 SFA 6 - EXTERNAL RAMPED BACKDROP



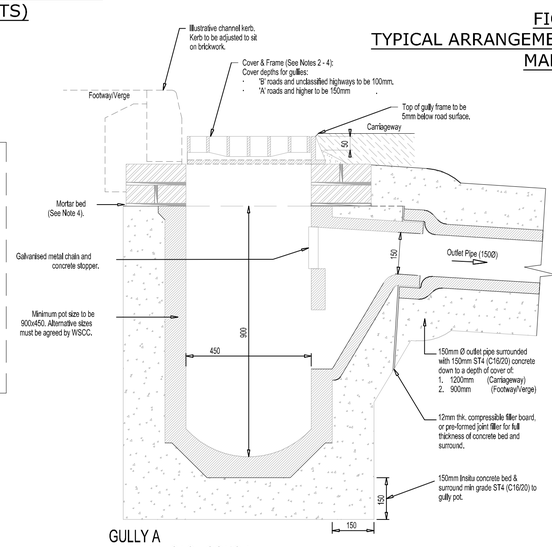

NOTES

1. ROCKER PIPES 600mm LONG FOR 100 TO 450 DIA PIPEWORK (1000mm LONG UP TO 750 DIA) ON OUTLET AND EACH ENTRY STARTING 150mm FROM CONCRETE SURROUND.
2. FOR CHAMBERS DEEPER THAN 3000mm STEP IRONS TO BE REPLACED WITH GALVANISED LADDER TO B.S.4211 AND 729.

## TYPICAL PRECAST CONCRETE CATCHPIT–D210.2




GULLY A
TYPE:PRECAST CONCRETE PLAN
(1:10)




GULLY A
TYPE:PRECAST CONCRETE SECTION
(1:10)

NOTES
1. Do not scale from this drawing.
2. All gully grating and frames to be 'hinged' heavy duty ductile iron minimum grade D400 in accordance with BS EN124:1994 & Section 508 of the Specification of Highway Works.
3. All ironwork shall carry a BSI kite mark.
4. Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to CL2402 of SHW Mortar Designation (i), and either 2 or 3 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
6. Gully pots used for carriageway gullies shall be of precast concrete using Sulphate Resisting Cement (SRC) in accordance with BS 5911, part 230, 2004.
7. All gullies to be trapped. Any variations to this i.e. 'non-trapped', 'gully chute' or 'grip' must be qualified and WSCC shall review each location on an individual basis.
8. Selection of gully grating type shall be to suit the application area i.e carriageway, footway/cycleway and to the satisfaction of the highway inspector.

SURFACE WATER PIPES

Permitted Types as follows:

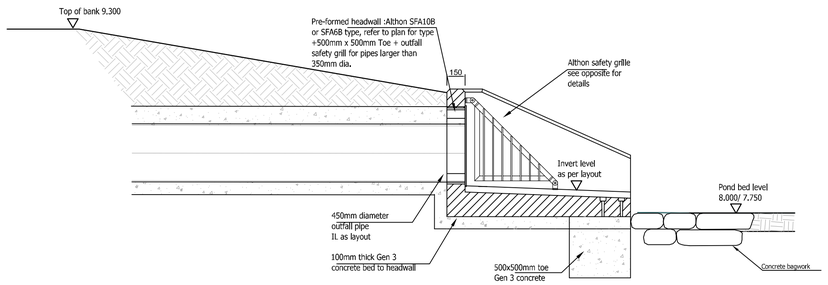
CLAY: (1500mlin-3000max)
All pipe shall be Vitrified Clayware to BS EN 295-1:1991.

UPVC: (1500mlin-9000max) (*)
All pipes shall be to BS EN 1401-1:1998.
All pipes shall be ribbed "twin wall" to provide a suitable network (pipes & couplings).

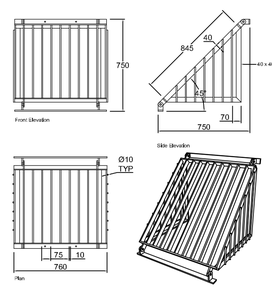
CONCRETE: (3000mlin-9000max) (*)
All pipes shall be made with Sulphate resistant Cement to BS 5911-1:2002.

- ALL jointing and installation shall be undertaken to manufacturers specification.
- ALL materials shall be BBA certified.
- ALL materials shall comply with the Specification for Highway Works.

## ROAD GULLY D208.1



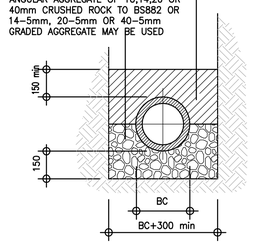

ADOPTED OUTFALL HEADWALL
SCALE 1:25




ALTHON TRASH SCREEN
45° Trash Screen with Sides
40 x 10mm flats at 75mm Centres

SIDE AND BACKFILL:
SELECTED SUITABLE AS–DUG MATERIAL ABOVE PIPES, FREE FROM COHESIVE LUMPS GREATER THAN 75mm AND STONES GREATER THAN 40mm WITH A CF VALUE OF 0.30 MAX AS DETERMINED BY A COMPACTION FRACTION TEST TAKEN ON A REPRESENTITIVE SAMPLE OF THE SELECTED MATERIAL

PIPE BEDDING MATERIAL:
ANGULAR AGGREGATE OF 10,14,20 OR 40mm CRUSHED ROCK TO BS882 OR 14–5mm, 20–5mm OR 40–5mm GRADED AGGREGATE MAY BE USED

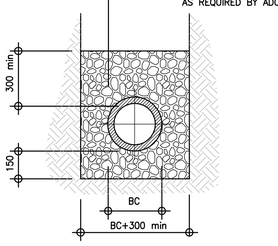



## CLASS B BEDDING

FOR USE WHERE COVER TO CROWN OF PIPE IS GREATER THAN 900mm UNDER VERGES, FOOTWAYS & CYCLEWAYS

PIPE BEDDING MATERIAL:
AGGREGATES FROM NATURAL SOURCES OR SINTERED PULVERISED FUELASH COMPLYING WITH THE RELEVANT PROVISIONS OF BS882 AND BS3797 PART 2 RESPECTIVELY AND TO BE SIZED ACCORDING TO PIPE DIAMETER – CAREFULLY COMPACTED

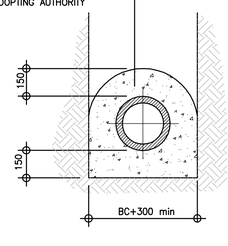
BACKFILL TO REMAINDER OF TRENCHES TO BE SELECTED SUITABLE AS–DUG MATERIAL AS REQUIRED BY ADOPTING AUTHORITY




## CLASS S BEDDING

FOR USE WHERE COVER TO CROWN OF PIPE IS GREATER THAN 1200mm UNDER CARRIAGEWAYS

PIPE BEDDING MATERIAL:
PLAIN CONCRETE MIX ST2.
CONCRETE TO BE SEPARATED AT EACH JOINT WITH AN APPROVED COMPRESSIBLE MATERIAL




## CLASS Z BEDDING

FOR USE WHERE COVER TO CROWN OF PIPE IS LESS THAN 1200mm UNDER CARRIAGEWAYS, OR LESS THAN 900mm UNDER OTHER AREAS

# PIPE BEDDING DETAILS

## GENERAL NOTES:

1. All dimensions to be checked on site. All details and dimensions relating to sub-contractors or suppliers work must be checked and agreed between the sub-contractor or supplier and the main contractor.
2. This drawing is to be read in conjunction with all relevant architects, services and engineers drawings and specifications.
3. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. Any discrepancies shall be notified to gsp prior to works commencing.
4. Tender or billing drawings shall not be used for construction or the ordering of materials.
5. Do not scale. All dimensions and levels to be site confirmed.
6. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gsp.

| REV | DATE | DESCRIPTION | BY | CHK | APP |
|---|---|---|---|---|---|
| P6 | 25.06.20 | Headwall detail revised | SDL | MR | GO |
| P5 | 29.05.20 | Headwall safety grille detail added. Catchpit detail revised | GS | SDL | GO |
| P4 | 21.02.20 | Headwall Detail revised | GS | SDL | GO |
| P3 | 30.01.20 | Ramp Detail added | GS | MR | GO |
| P2 | 23.12.19 | Updated to latest scheme | GS | MR | GO |
| P1 | 06.11.19 | INITIAL ISSUE | GS | MR | GO |

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ARCHITECT: RH PARTNERSHIP

JOB TITLE: ANGEL & HYDE NURSERIES
YAPTON ROAD
BARNHAM

DRAWING TITLE: MAIN DRAINAGE DETAILS

| JOB No. | SCALE @ A1 | DATE |
|---|---|---|
| H19812 | NTS | NOVEMBER 2019 |

| DRAWN | ENGINEER | CHECKED | APP |
|---|---|---|---|
| GS | MR | | |

STATUS: D1 SUITABLE FOR COORDINATION

REVISION: P6 RIBA STATUS: STAGE 4 – TECHNICAL DESIGN

DRAWING No.: 19812–GS–Z1–XX–DR–C–5105

ARUN DISTRICT COUNCIL ENGINEERING