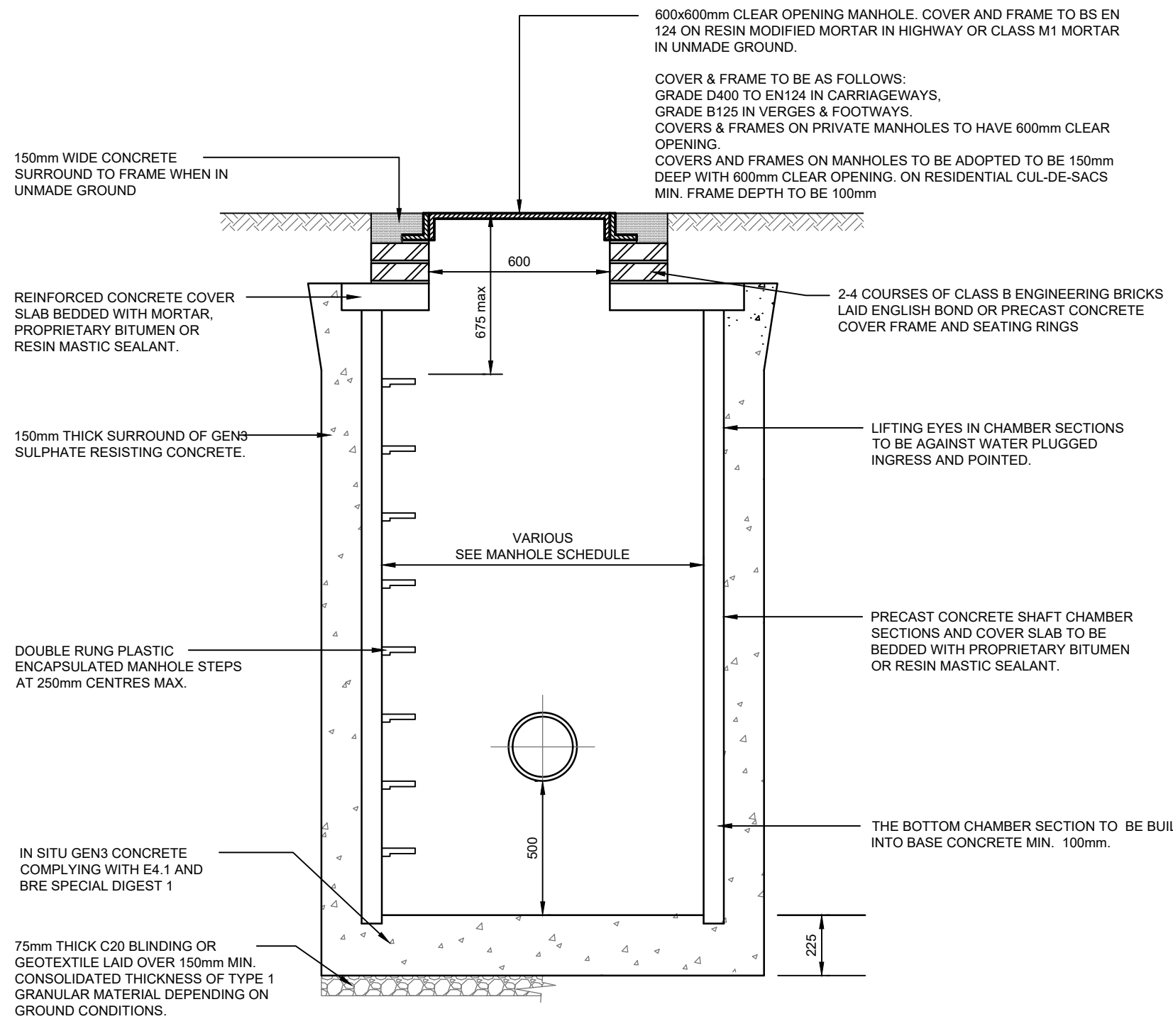
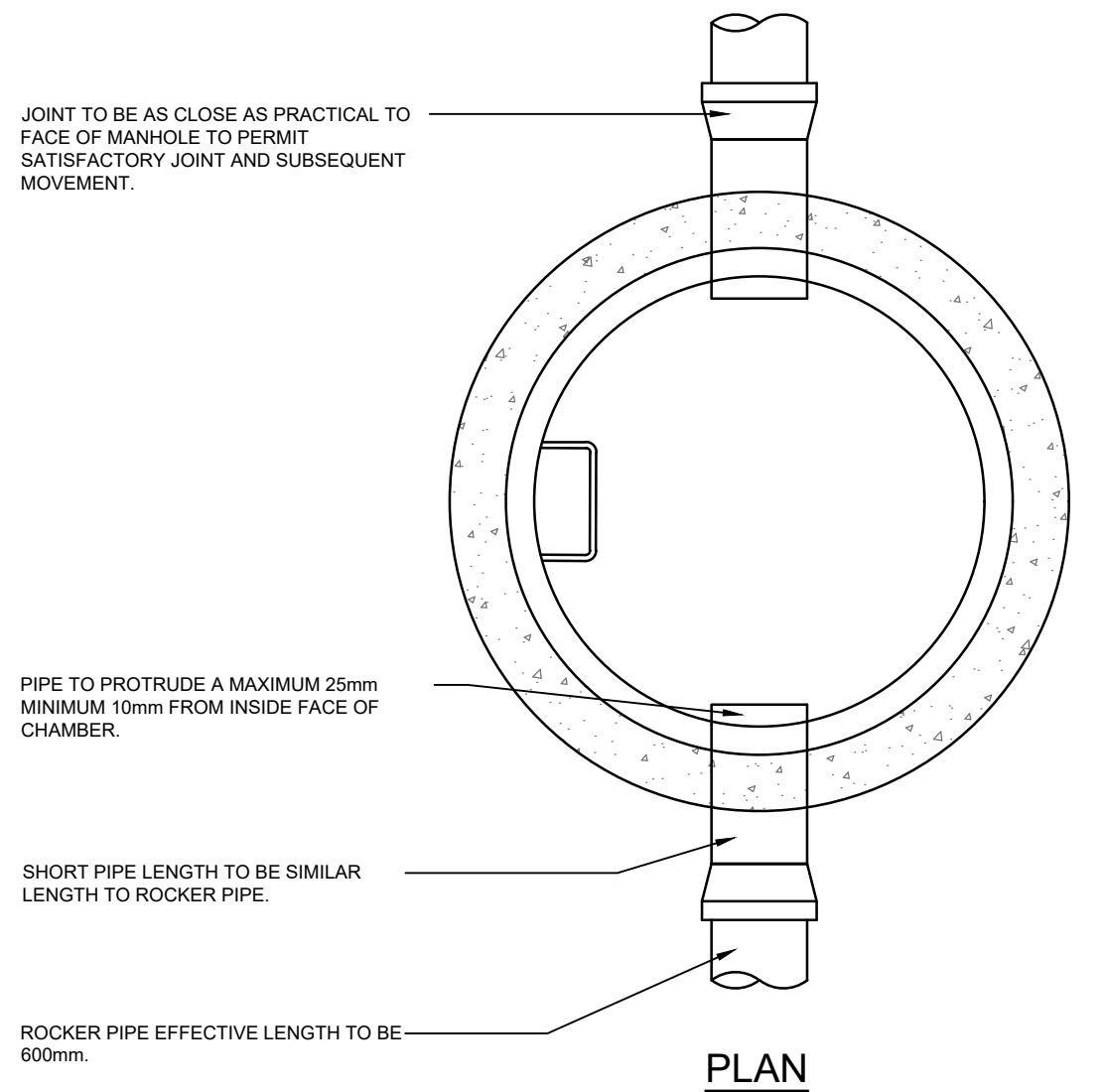


This drawing is copyright.
Contractors must check all dimensions on site.
Only figured dimensions are to be worked from. Discrepancies must be reported immediately to the engineer before proceeding.
Preliminary drawings must not be used for construction purposes.

- NOTES**
- THE PLANNING, DESIGN AND CONSTRUCTION OF SEWERS SHALL BE IN ACCORDANCE WITH DESIGN AND CONSTRUCTION GUIDANCE (DCG APPROVED VERSION 2.2) FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION UNDER THE CODE FOR ADOPTION AGREEMENTS FOR WATER AND SEWERAGE COMPANIES OPERATING WHOLLY OR MAINLY IN ENGLAND (THE CODE) - SEWERAGE SECTOR GUIDANCE APPENDIX C, THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION AND SOUTH WEST WATER AMENDMENTS TO CESWI DATED MAY 1999.
 - THE MINIMUM SIZE OF SEWER WHERE GUIDE BARS, SAFETY CHAINS, OR OTHER SAFETY DEVICES ARE REQUIRED IN MANHOLES SHALL BE 375MM DIAMETER.
 - ALL TYPE A1 & B MANHOLES SHOULD HAVE A CONCRETE SURROUND. CONCRETE RINGS SHALL BE SEALED USING 'TOKSTRIP' AND LIFTING EYES POINTED WITH RESIN MODIFIED MORTAR. PPIC'S SHOULD BE INSTALLED IN ACCORDANCE WITH DCG APPROVED VERSION 2.2.
 - COMPLIANCE WITH HEALTH & SAFETY MATTERS 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 SWW LTD PRIOR TO THE WORKS COMMENCING ON ANY PUBLIC SEWERAGE SYSTEM.
 - WHERE THE PROPOSED SITE DRAINAGE CONNECTIONS TO THE PUBLIC SEWERAGE SYSTEM EITHER BY NEW JUNCTION, NEW MANHOLE OR AT AN EXISTING MANHOLE, IT WILL REQUIRE THE SUBMISSION OF AN APPLICATION FOR SEWER CONNECTION FORM TO SWW LTD PRIOR TO WORKS COMMENCING.
 - MH COVERS AND FRAMES SHALL BE DUCTILE IRON WITH A MINIMUM SQUARE OPENING OF 600x600MM. COVERS SHALL BE DOUBLE TRIANGLE FOR 600MM SQUARE OPENINGS AND BE PROVIDED WITH LOCUSITE CONNECTIONS. FRAME DEPTH SHALL BE 150MM. COVERS TO PPIC'S SHALL BE IN ACCORDANCE WITH DCG APPROVED VERSION 2.2.
 - THE USE OF LADDERS OR STEPS IN MANHOLES, WET WELLS AND VALVE CHAMBERS SHALL COMPLY WITH THE FOLLOWING: STEEL PLASTIC ENCAPSULATED MH SINGLE STEPS SHALL NOT BE USED IN MHS OF A GREATER DEPTH THAN 1.0M. STEEL PLASTIC ENCAPSULATED DOUBLE STEPS MAY BE PROVIDED IN MHS UP TO 3.0M DEEP. LADDERS SHALL BE PROVIDED IN ACCORDANCE WITH BS 4211 IN MHS BETWEEN 3.0M & 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 MANHOLES SHALL PERMIT THE USE OF A WINCH OR LIFTING GEAR MOUNTED AT GROUND LEVEL IN CASE OF EMERGENCIES.
 - ONLY LOW CARBON STEEL OR STAINLESS STEEL LADDERS FOR VERTICAL FIXING TO MANHOLES WILL BE ACCEPTABLE.
 - PROPOSED ADAPTABLE SEWERS ARE ONLY PERMITTED TO HAVE OTHER SEWER/UTILITY 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.
 - ALL IRONWORK TO BE KITE MARKED BY BSI OR CERTIFIED BY EQUAL INSPECTION AUTHORITY.
 - RED COLOURED PLASTIC MARKER TAPE AT LEAST 150MM WIDE SHALL BE LAID AT A MINIMUM OF 200MM ABOVE THE SOFFIT OF THE PIPE. THE TAPE SHALL BE PRINTED WITH THE WORDS 'GRAVITY SEWER' IN BOLD CAPITAL LETTERS THROUGHOUT ITS LENGTH AND AT INTERVALS NOT EXCEEDING 700MM AND SHALL INCORPORATE A CORROSION RESISTANT TRACING SYSTEM FOR NON-METALLIC PIPES.
 - MINIMUM BACKDROP HEIGHT SHALL BE 1M.
 - ON NEW DRAINAGE SCHEMES, THE FIRST MANHOLE UPSTREAM FROM THE CONNECTION TO THE EXISTING FOUL WATER SEWER SHALL BE FITTED WITH A SUITABLE SCREEN, WHICH WILL REMAIN IN PLACE UNTIL THE NEW SEWER BECOMES LIVE. FOR TYPE D MANHOLES, OUTLET TO BE BUNGED WITH SUITABLE STOPPER AND CHAIN WHICH CAN BE REMOVED ON COMPLETION OF WORK.
 - THE FIRST MANHOLE UPSTREAM FROM THE CONNECTION TO THE EXISTING SURFACE WATER SEWER SHALL BE CONSTRUCTED AS A CATCHPIT UNTIL JUST PRIOR TO THE COMMENCEMENT OF THE TWELVE MONTH MAINTENANCE PERIOD. AT THIS TIME THE CHANNELS WILL BE INSTALLED AND THE BENCHING CONSTRUCTED.



SECTION



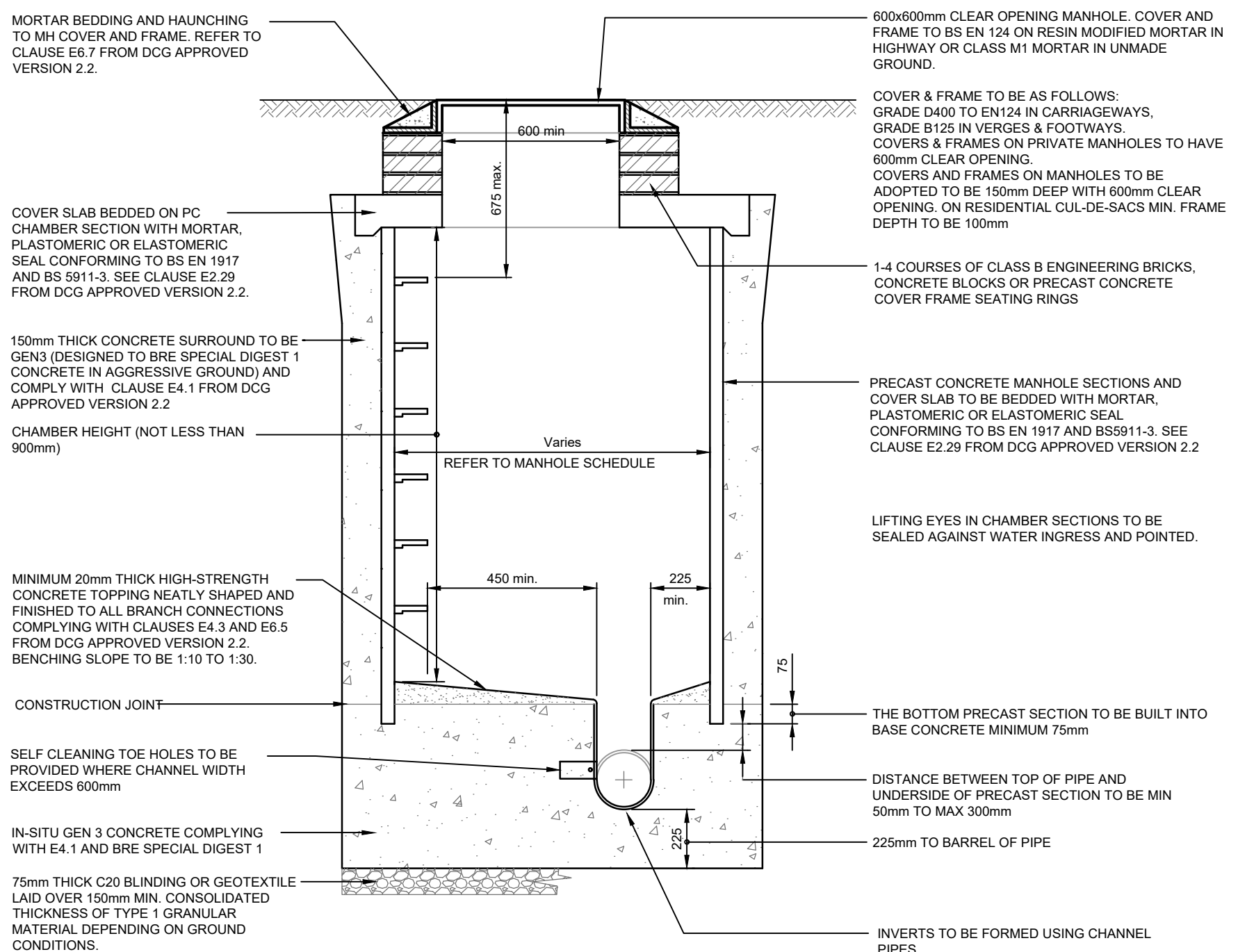
PLAN

TYPICAL SILT TRAP DETAILS

NOMINAL PIPE DIAMETER, mm	MAXIMUM EFFECTIVE LENGTH (m)
150-600	0.6
601-750	1.0
OVER 750	1.25

ROCKER PIPE DETAILS TO DCG APPROVED VERSION 2.2

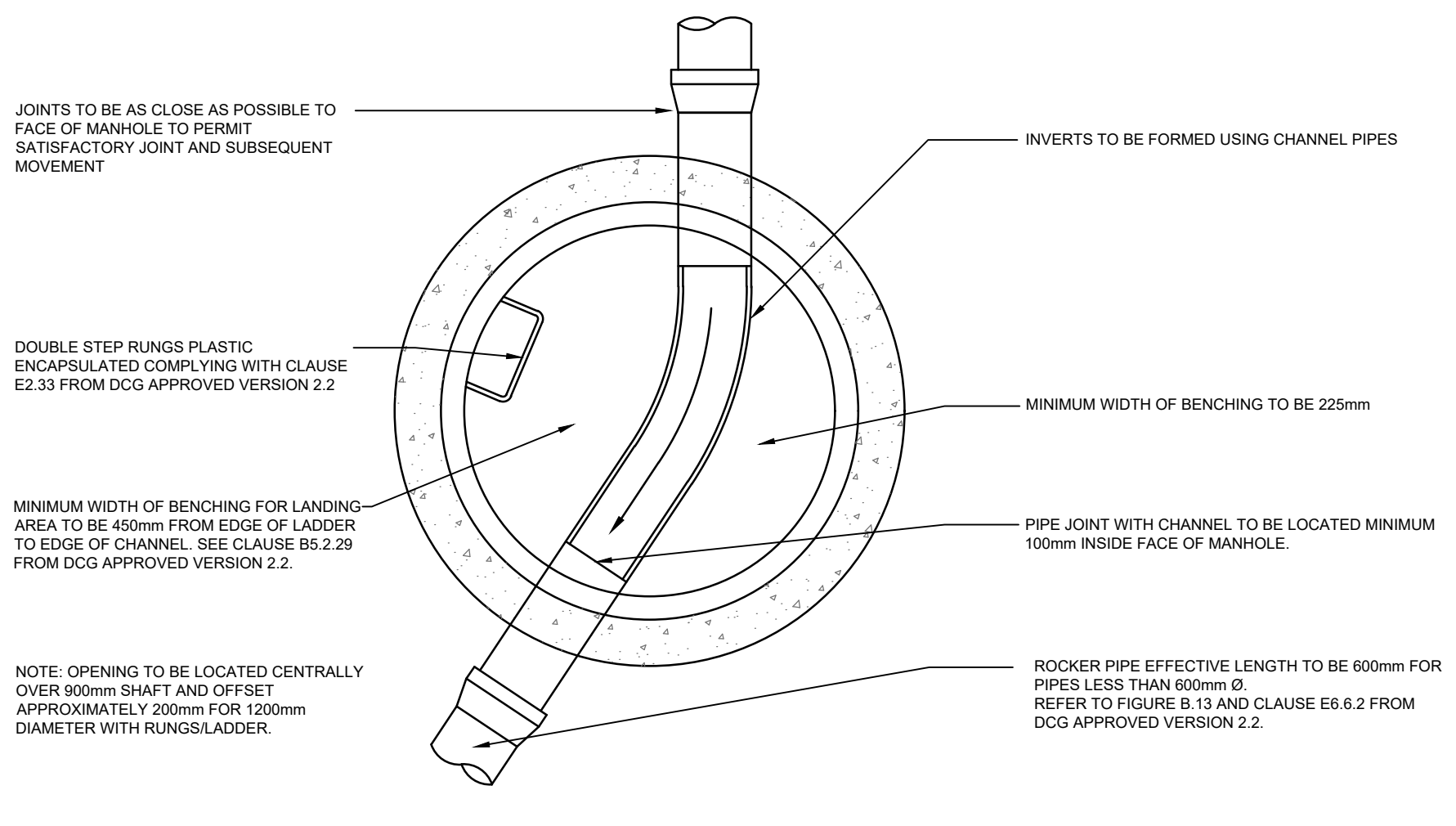
RIGID PIPES BUILT INTO MH TO HAVE FLEXIBLE JOINTS A S CLOSE AS POSSIBLE TO THE EXTERNAL FACE OF THE STRUCTURE AND THE LENGTH OF THE NEXT ROCKER PIPE SHOULD BE AS SHOWN IN THE TABLE ABOVE.



SECTION

TYPICAL MANHOLE DETAIL - TYPE B

DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.5M TO 3M

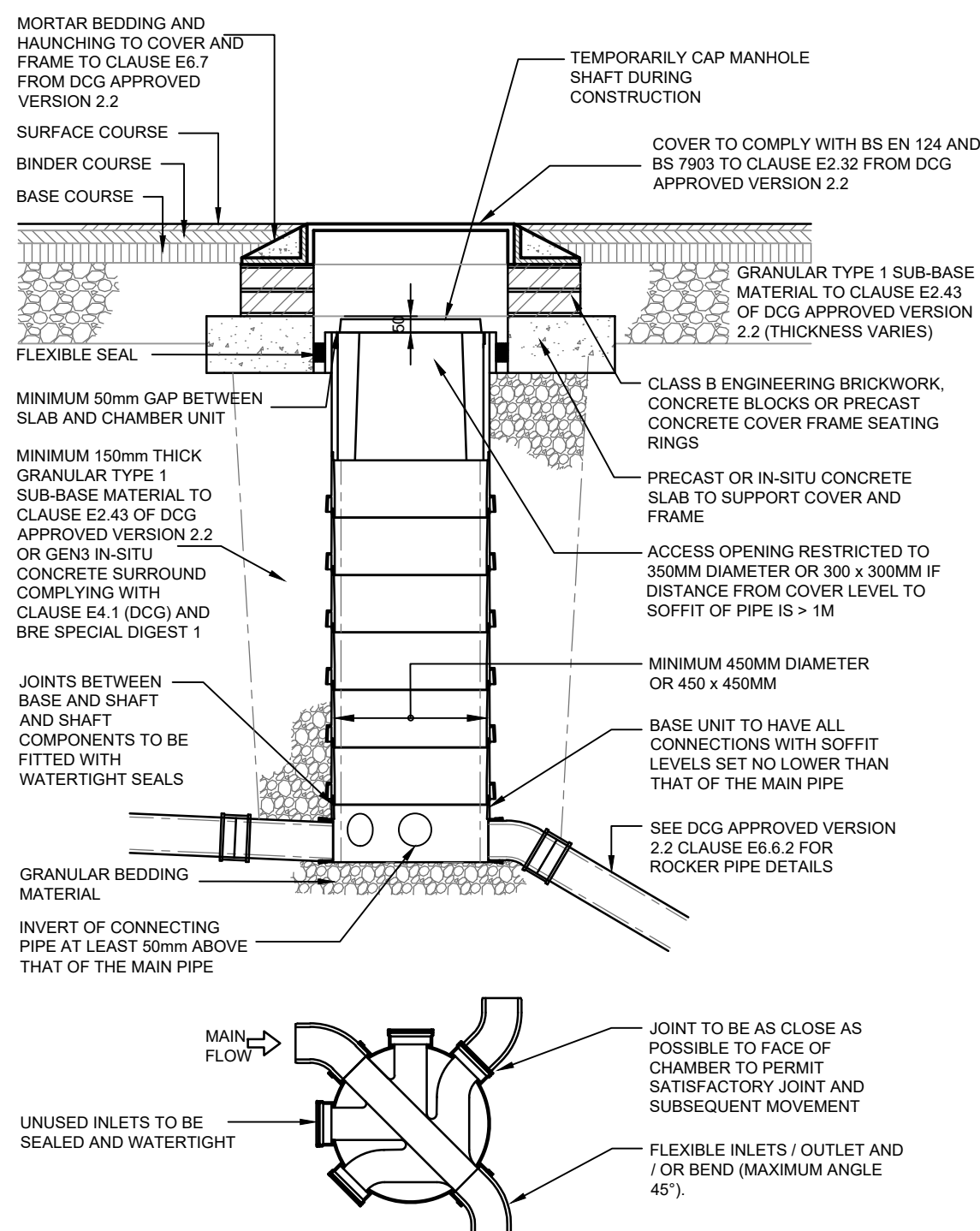


PLAN

TYPICAL MANHOLE DETAIL - TYPE B

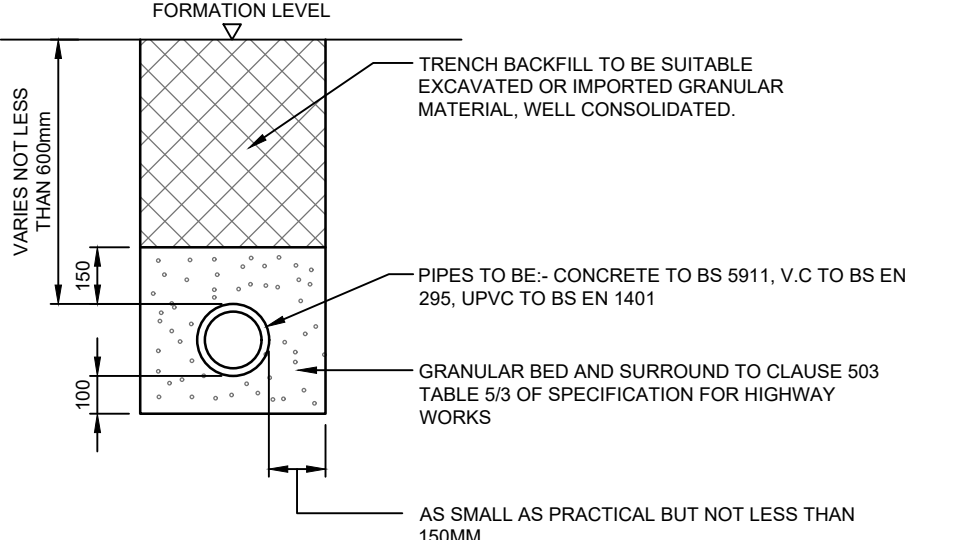
NOMINAL PIPE DIAMETER, mm	AGGREGATE SIZE, mm	
	GRADED	SINGLE-SIZED
NOT EXCEEDING 140	-	4/10
EXCEEDING 140 BUT NOT EXCEEDING 400	2/14 or 4/20	4/10, 6/10 or 10/20
EXCEEDING 400	2/14, 4/20 or 4/40	4/10, 6/14 or 10/20 or 20/40

TABLE 5/3:(05/04) BS EN 13242, COARSE AGGREGATE FOR PIPE BEDDING, HAUNCHING AND SURROUND MATERIAL

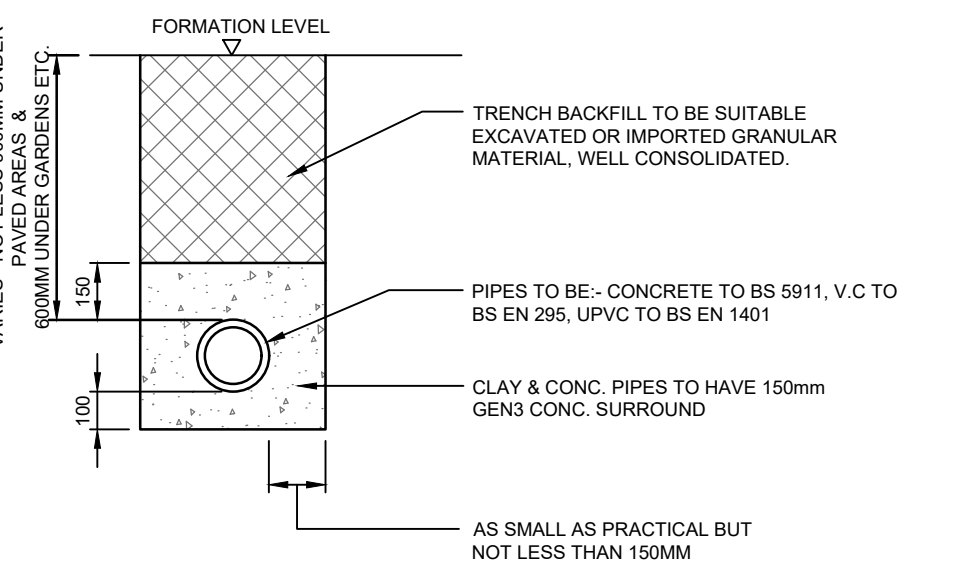


TYPICAL ACCESS CHAMBER DETAIL - TYPE D FLEXIBLE MATERIAL DETAIL

DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING UP TO 2M (NON ENTRY)



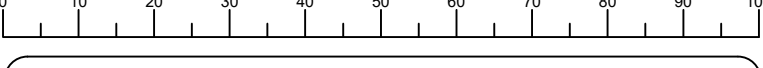
CLASS S BEDDING



CLASS Z BEDDING CONCRETE SURROUND

PIPES LAID WITHIN HIGHWAY LIMITS & TRAFFICKED AREAS CONCRETE BED AND SURROUND TO BE USED WHERE COVER TO PIPE CROWN IS LESS THAN 1200MM. CONCRETE SURROUND TO PIPES TO HAVE EXPANSION JOINT AT EVERY PIPE JOINT.

REV.	DATE	NOTE	JCF	CN
P1	08.12.23	PRELIMINARY ISSUE	JCF	CN



AIREY COLES consulting engineers

1st FLOOR, ASHLEIGH COURT
ASHLEIGH WAY
LANGAGE BUSINESS PARK
PLYMPTON
PL7 5JX

Tel: 01752 229119
Fax: 01752 222115
admin@aireyandcoles.co.uk

PROJECT
COMMUNITY DIAGNOSTICS CENTRE, PLYMOUTH

DRAWING TITLE
TYPICAL DRAINAGE DETAILS

SCALE: 1:20
DATE: DEC 23
DRAWN BY: JCF
CHECKED: CN

INTERNAL REFERENCE: 11409 - C120
REVISION: P1

PROJ-VOLUME-LEVEL-ROLE-ORIG-FILETYPE-CLASSIFICATION-NUMBER

PRELIMINARY NOT FOR CONSTRUCTION