DO NOT SCALE

VARIABLE FEATURES (v.f.)

A	Manhole Cover	Depth to soffit from cover level <1.5m Minimum Clear Opening Sizes 750 x 750 on 1050 chamber / shaft 1200 x 675 on 1200 and above chambers / shafts Beneath all man-access covers greater than 600x600 a rectractable safety handhold shall be provided. It shall extend 1200 above Ground Level	Depth to soffit from cover level >1.5m Minimum Clear Opening Sizes 600 x 600 for Double Step Access 600 x 600 for Ladder Access 750 x 600 for Feature Ladder Access

B	Cover Slab		Reducing Slab	
		Hole size in cover slab	Chamber Dia	Hole Diameter in Reducing Slab
	Chamber Dia			
	1050	750 x 750 c.o.	1200	reducing slab not used
	1200	1200 x 675 c.o.	1350	reducing slab not used
	1350	1200 x 675 c.o.	1500	reducing slab not used
	1500	1200 x 675 c.o.	1800	1050 for Double step access or 1200 for Ladder access
	1800	1200 x 675 e.o.	2100	1050 for Double step access or 1200 for Ladder access
	2100	1200 x 675 e.o.	2400	1050 for Double step access or 1200 for Ladder access
	2400	1200 x 675 e.o.	2700	1050 for Double step access or 1200 for Ladder access
	2700	1200 x 675 e.o.	3000	1050 for Double step access or 1200 for Ladder access
	3000	1200 x 675 e.o.		

	Feature related to pipe Diameter	Diameter of larger pipes											
		150	225	300	375	450	525	600	675	750	825	900	
C	Rocker pipes	Rocker effective length : 600							Rocker effective length : 1000			See Note	
D	Benching Width	Min 600				Min 750			Min 1100				
E	Benching Railings	Not Required							Required				
F	Sewer Safety Chains	Not Required							Required				
G	Invert Access Step	Not Required				Required with double steps							

Chm-Dia	"X" Min
900	700
1050	800
1200	950
1350	1000
1500	1050
1800	1150
2100	1300
2400	1450
2700	1550
3000	1700

Refer to v.f."C"
Rocker pipe effective length shall be 1250, Rocker pipes to be used until the pipe outside Diameter exceeds the effective length of the rocker pipe

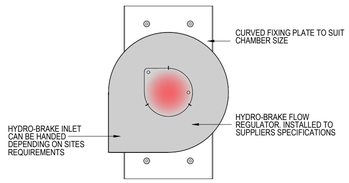
BS EN 13242, COARSE AGGREGATE (CLAUSE 4.3.2)		
CATEGORY FOR GENERAL GRADING REQUIREMENTS	Gc80-20	
CATEGORY FOR TOLERANCES AT MID-SIZE SIEVES	GTnr (NO REQUIREMENTS)	
CATEGORY PF MAXIMUM VALUES OF FINES CONTENTS	GRAVEL - F1.5 CRUSHED ROCK, RECYCLED AGGREGATE - F4	
NOMINAL PIPE DIAMETER (mm)	AGGREGATE SIZE, mm	
	GRADED	SINGLE SIZED
NOT EXCEEDING 140	-	4/10
EXCEEDING 140 BUT NOT EXCEEDING 400	2/14 or 4/20	4/10, 6/14 or 10/20
EXCEEDING 400	2/14, 4/20 or 4/40	4/10, 6/14, 10/20 or 20/40

FLEXIBLE PIPE BEDDING, HAUNCHING AND SURROUND MATERIAL

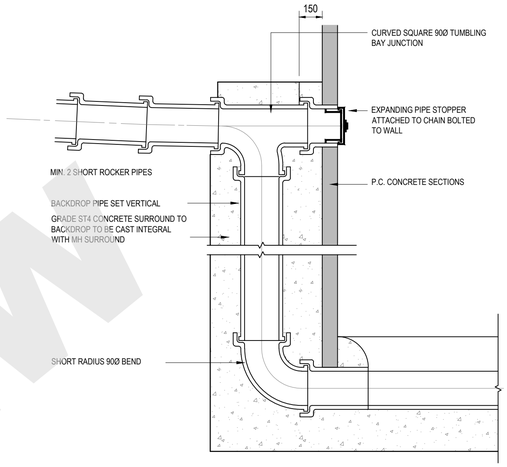
BS EN 1610:1998 ANNEX B TABLE B.15 COARSE AGGREGATE - PIPE BEDDING							
SIEVE SIZE (mm)	PERCENTAGE BY MASS PASSING BS SIEVES FOR NOMINAL SIZES						
	GRADED AGGREGATE (mm)			SINGLE-SIZED AGGREGATE (mm)			
	40 to 5	20 to 5	14 to 5	40	20	14	10
50.0	100	-----	-----	100	-----	-----	-----
37.5	90 - 100	100	-----	85 - 100	100	-----	-----
20.0	35 - 70	90 - 100	100	0 - 25	85 - 100	100	-----
14.0	-----	-----	90 - 100	-----	-----	85 - 100	100
10.0	10 - 40	30 - 60	50 - 85	0 - 5	0 - 25	0 - 50	85 - 100
5.0	0 - 5	0 - 10	0 - 10	-----	0 - 5	0 - 10	0 - 25
2.36	-----	-----	-----	-----	-----	-----	0 - 5

RIGID PIPES BEDDING GRADING

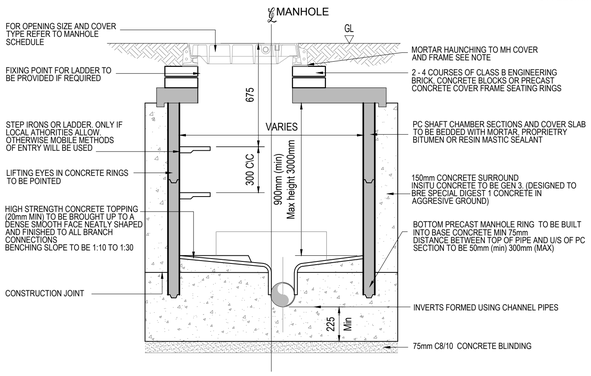
FOR RIGID PIPES THE BEDDING SHOULD BE SINGLE SIZE MATERIAL OR GRADED MATERIAL FROM 5mm UP TO A MAX SIZE OF 10mm FOR 100mm PIPES; 14mm FOR 150mm PIPES; 20mm FOR 225mm TO 600mm PIPES; 40mm FOR OVER 600mm PIPES



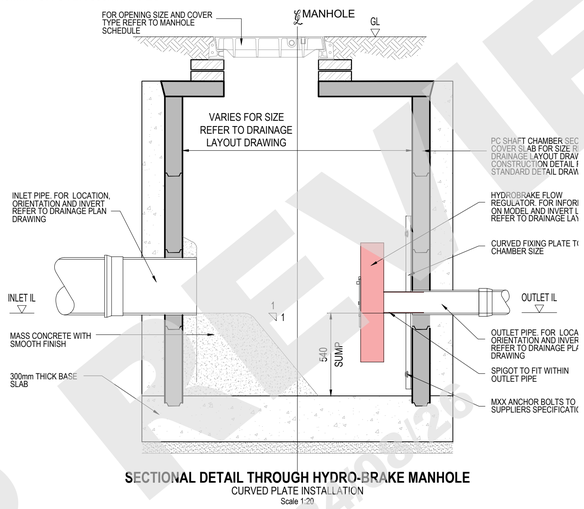
ELEVATION ON HYDRO-BRAKE CURVED PLATE FITTING DETAIL
RESTRICTION HYDRO-BRAKE DIRECT CONNECTION
Scale 1:20



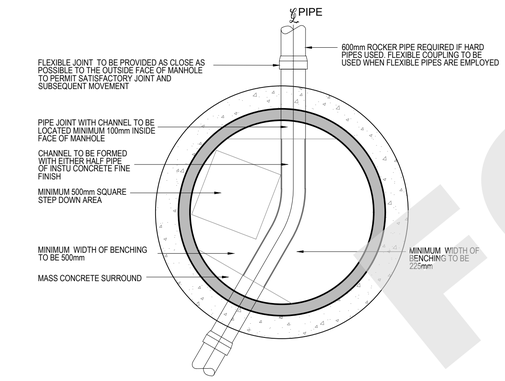
TYPICAL VERTICAL BACKDROP
Scale 1:20

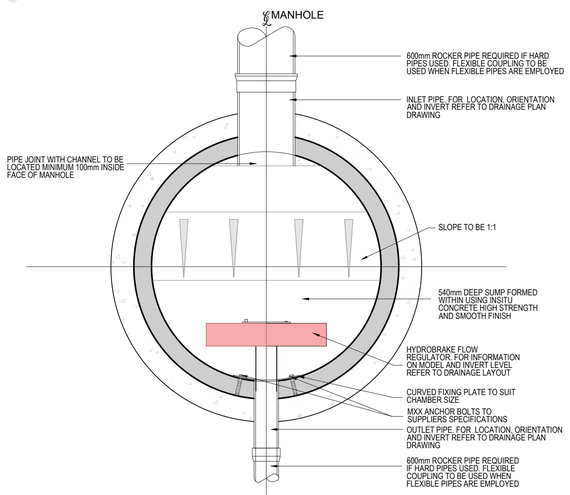


PC CONCRETE MANHOLE DETAIL
MAX DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m
Scale 1:20

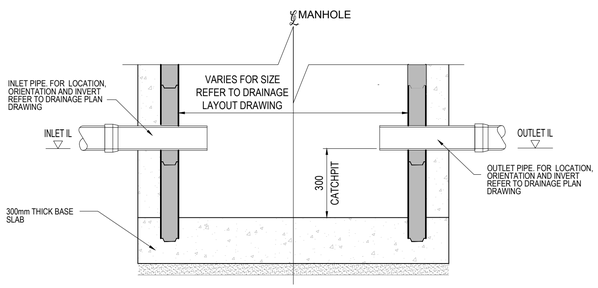


SECTIONAL DETAIL THROUGH HYDRO-BRAKE MANHOLE
CURVED PLATE INSTALLATION
Scale 1:20

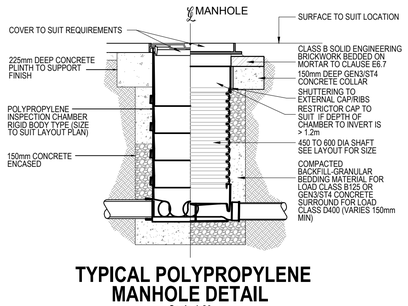




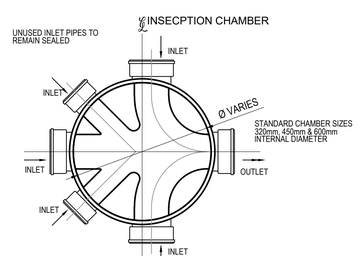
PLAN DETAIL THROUGH HYDRO-BRAKE MANHOLE
CURVED PLATE INSTALLATION
Scale 1:20



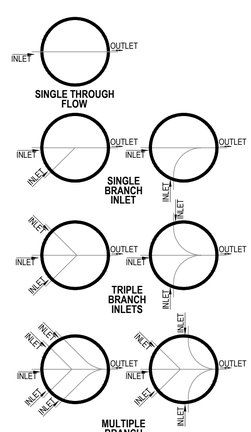
SECTIONAL DETAIL THROUGH MANHOLE WITH CATCHPIT
Scale 1:20



TYPICAL POLYPROPYLENE MANHOLE DETAIL
Scale 1:20



PLAN ON TYPICAL POLYPROPYLENE PREFORMED MANHOLE DETAIL
Scale 1:20



NOTES

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONNECTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE FROM THIS DRAWING. ALL SETTING OUT DIMENSIONS ARE TO BE CHECKED AND VERIFIED ON SITE PRIOR TO COMMENCEMENT OF ANY BUILDING WORKS & FABRICATION OF MATERIALS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER.
3. ALL WORKMANSHIP AND MATERIALS ARE TO COMPLY WITH THE CURRENT BUILDING REGULATIONS, BRITISH STANDARDS AND CODES OF PRACTICE. ALL MATERIALS SHALL BE FIXED OR APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR IS TO TAKE INTO ACCOUNT EVERYTHING DEEMED NECESSARY FOR THE PROPER EXECUTION OF THE WORKS WHETHER INDICATED ON THE DRAWINGS OR NOT TO THE COMPLETE SATISFACTION OF THE LOCAL AUTHORITY.
4. FOR FINAL SETTING OUT INFORMATION RELATING TO WALL POSITIONS REFER TO ARCHITECTS DRAWINGS.

CHAMBER NOTES

1. ALL INVERT LEVELS OF EXISTING FOUL AND SURFACE WATER SYSTEMS ARE TO BE CONFIRMED BY THE CONTRACTOR.
2. FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE. ROCKER PIPES TO BE INSTALLED FOR LENGTHS SEE TABLE.
3. ALL CHAMBER MATERIALS ARE TO HAVE KITE-MARKS (OR SIMILAR APPROVED WHERE PRACTICABLE.
4. CHAMBERS FOR ADOPTION MUST FOLLOW RELEVANT WATER AUTHORITIES STANDARDS.
5. ACCESS COVER GRADE TO SUIT UNIT LOCATION
6. ALL ACCESS COVERS MUST BE SINGLE PERSON LIFT.
7. ACCESS COVERS MUST CARRY THE BSI KITEMARK AND SHALL COMPLY WITH BS 5911 PART 3
8. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY. A REPORT PROVIDED TO PROVE THAT SUCH PRECAUTIONS ARE NOT REQUIRED.
9. ALL SEWER TRENCHES AND BRANCH CONNECTIONS TO BE BACKFILLED WITH SUITABLE MATERIAL IN LAYERS NOT EXCEEDING 225MM UNCONSOLIDATED THICKNESS THEN FULLY COMPACTED.
10. THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING:-
    (i) ALL OPERATIONS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE GENERAL HEALTH AND SAFETY POLICY OF THE DEVELOPER AS REQUIRED BY SECTIONS 2 OF THE HEALTH AND SAFETY AT WORK ACT 1974 AND IN PARTICULAR THE CONSTRUCTION (GENERAL PROVISIONS) REGULATIONS.
    (iii) THE LOCAL AUTHORITY AND UTILITIES COMPANIES ARE TO BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK ON SITE.
11. ALL OPERATIONS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE GENERAL HEALTH AND SAFETY POLICY OF THE DEVELOPER AS REQUIRED BY SECTIONS 2 OF THE HEALTH AND SAFETY AT WORK ACT 1974 AND IN PARTICULAR THE CONSTRUCTION (GENERAL PROVISIONS) REGULATIONS.
12. THE CONTRACTOR SHALL ALLOW FOR KEEPING TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SUMPS AND DE-WATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY & LLFA AND ENVIRONMENT AGENCY.

500mm 0mm 500mm 1000mm
Scale 1:20

REV	DATE	REVISION DETAILS	DRN	CHK	APP
P1	26.08.24	FIRST ISSUE	GDR	STJ	SWH

CLIENT
SUPREME DEVELOPMENTS MANCHESTER

PROJECT:
BRADSTONE ROAD

DRAWING TITLE:
DRAINAGE STANDARD DETAILS SHEET 1 OF 2

DRAWING STATUS:
PRELIMINARY
A1

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SCALE	PROJECT - ORIGINATOR - ZONE - LEVEL - TYPE - ROLE - NUMBER	REV
1:200	7194-ADS-XX-00-DR-C-501	P1

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