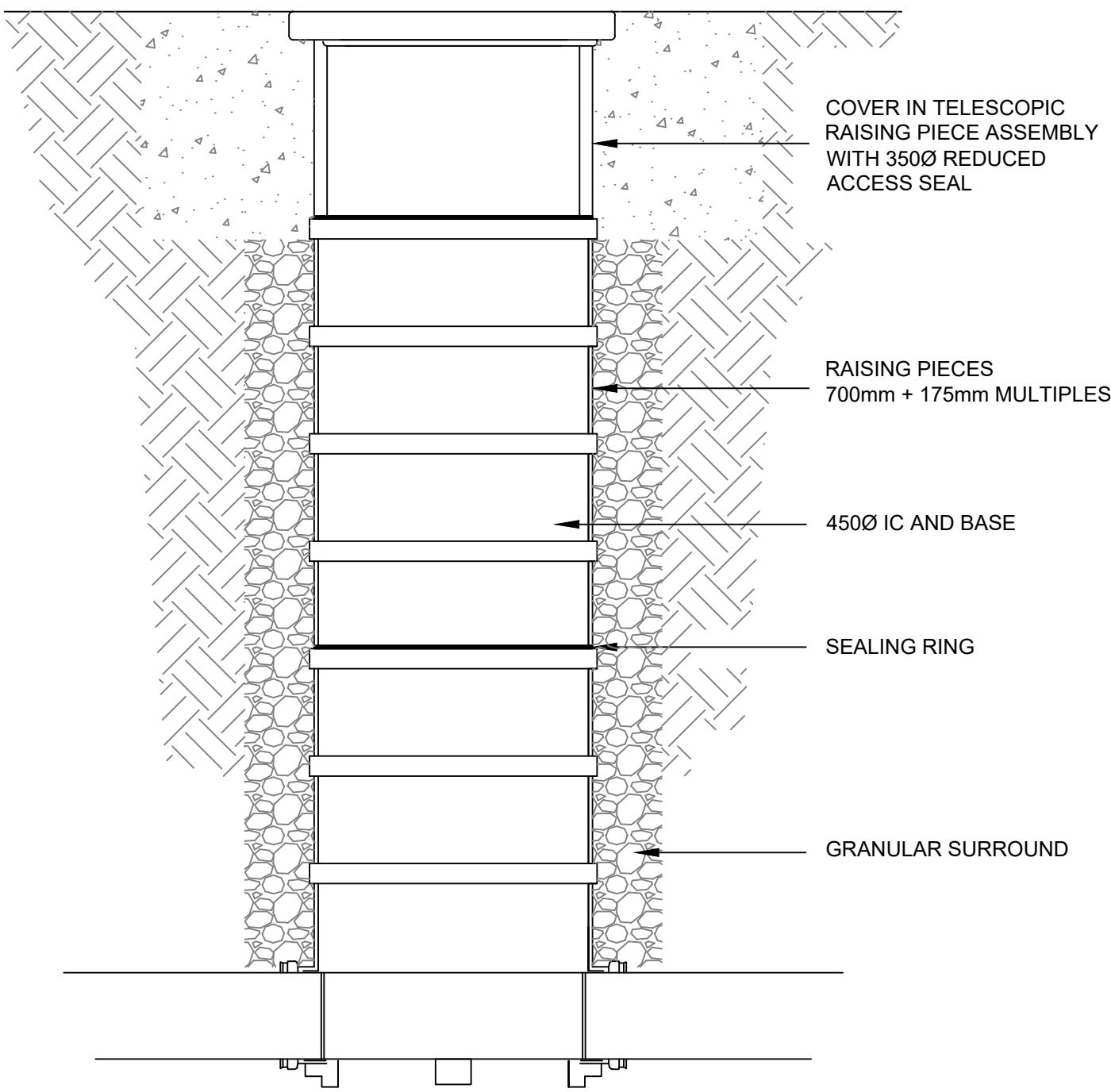
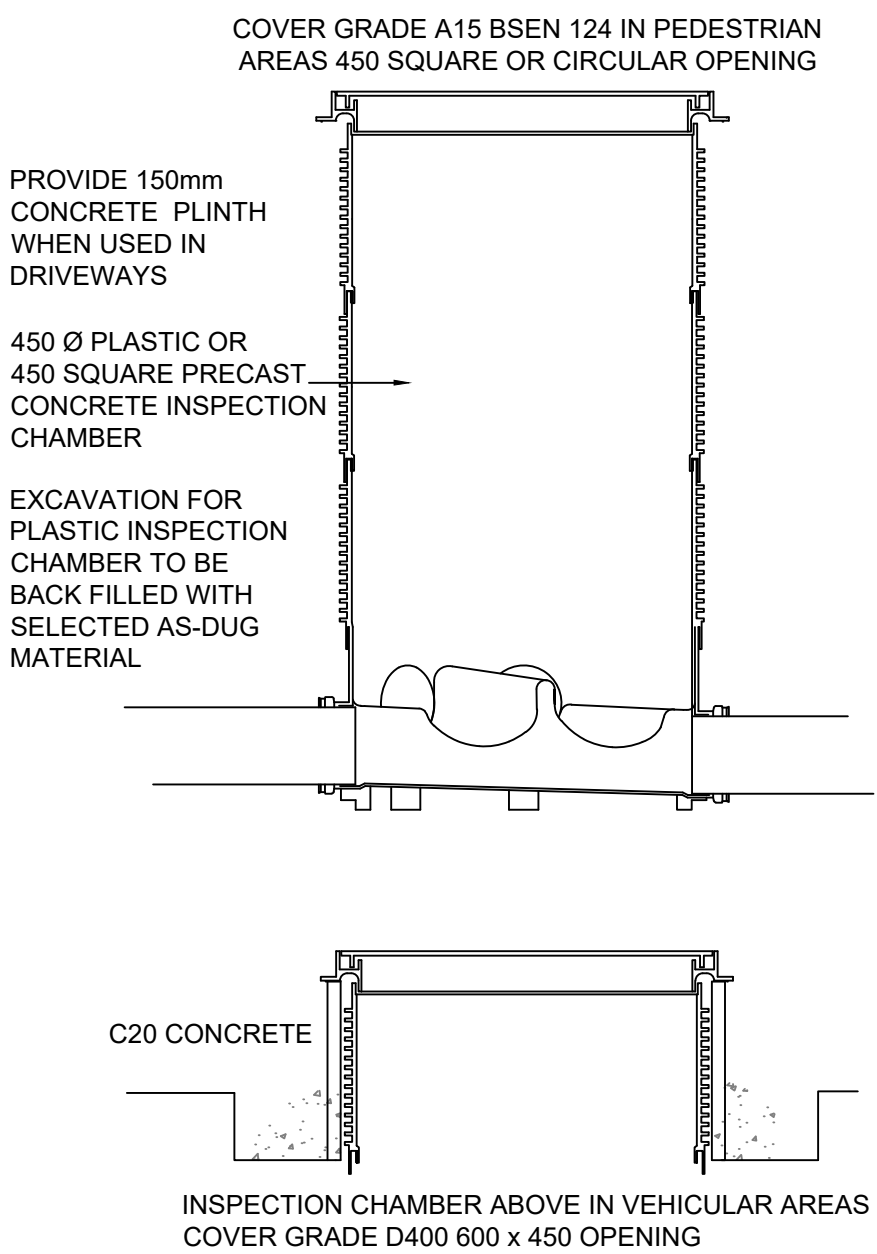




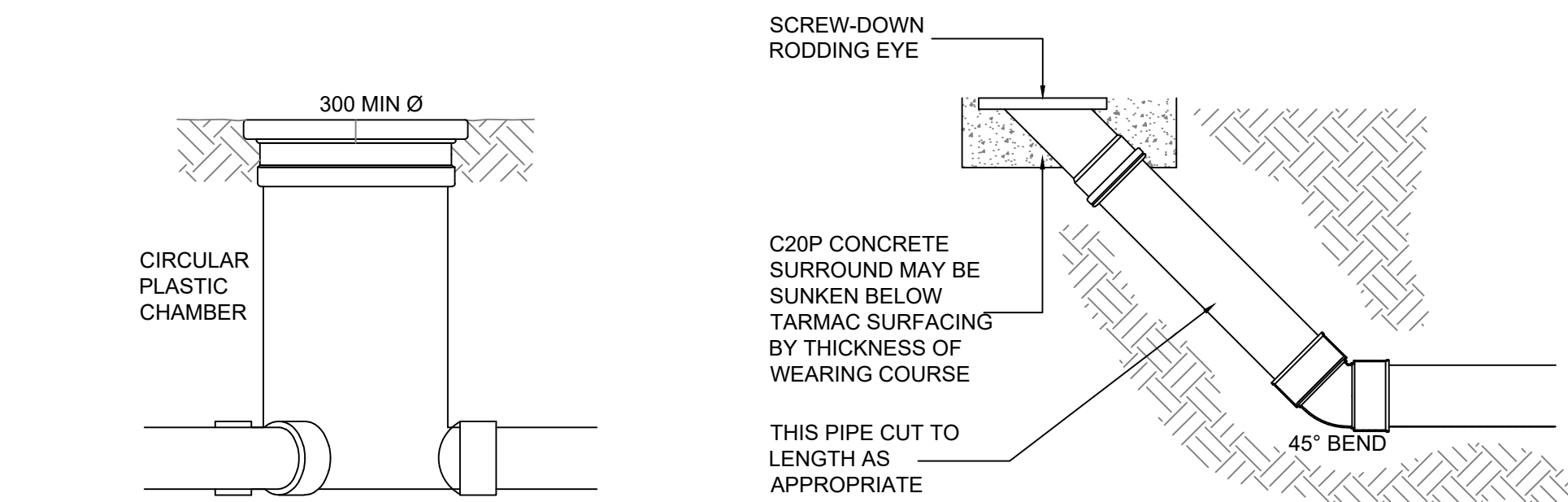
REDUCED ACCESS TELESCOPIC INSPECTION CHAMBER

SCALE 1:10
(1.2m - 3m DEEP)



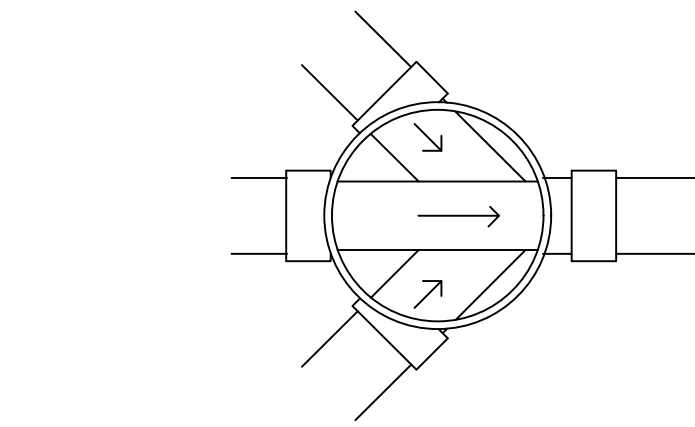
INSPECTION CHAMBER TYPE

SCALE 1:10
NOT EXCEEDING 1200 DEEP 100 & 150Ø PIPES ONLY



SHALLOW INSPECTION CHAMBER

SCALE 1:10
N.E. 600 DEEP 100Ø PIPES ONLY

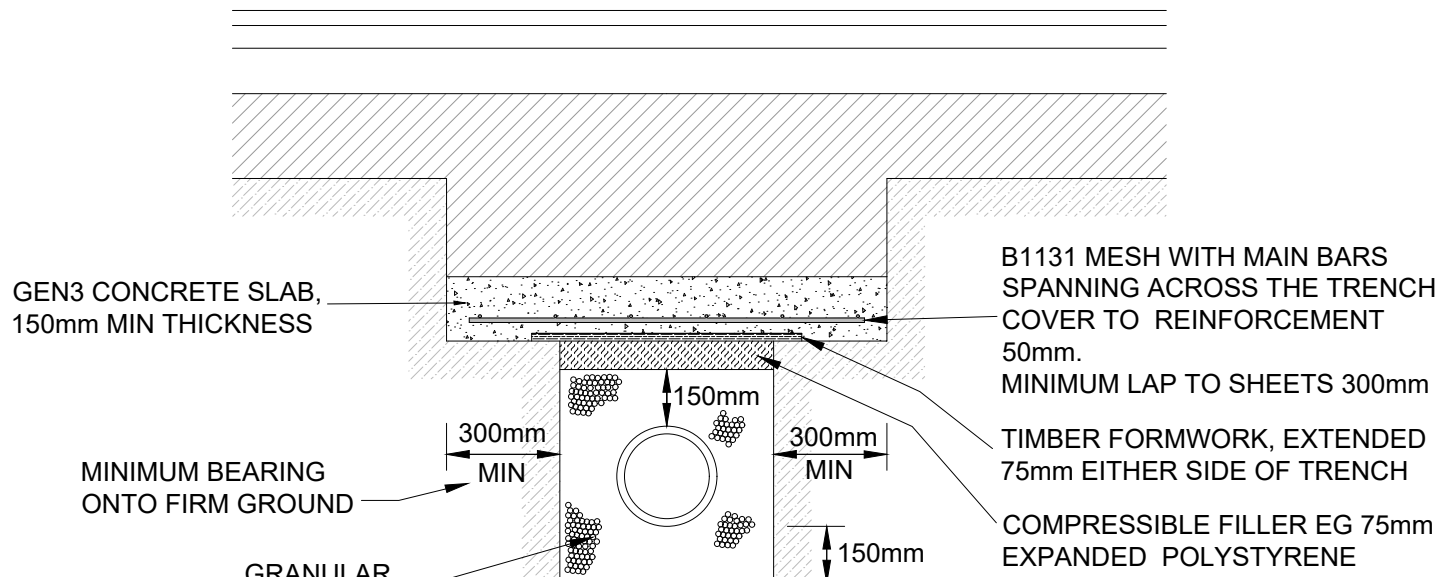


SHALLOW INSPECTION CHAMBER BASE

SCALE 1:10

MINIMUM DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS					
TYPE	DEPTH TO INVERT FROM COVER LEVEL (m)	INTERNAL SIZES LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)	COVER SIZES LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)
Rodding Eye		As drain but min 100			Same size as pipework (1)
Access Fitting Small 150Ø 150 x 100 Large 225 x 100	0.6 or less except where situated in a chamber	150 x 100 225 x 100	150 220	150 x 100 (1) 225 x 100 (1)	same size as access fitting
Inspection Chamber Shallow Deep	0.6 or less 1.2 or less > 1.2	225 x 100 450 x 450 450 x 450	190 (2) 450 450	min 430 x 430 max 300 x 300 (3)	190 (1) 430 Access restricted to max 350 (3)

Notes:
1 The clear opening maybe reduced by 20mm in order to provide proper support for the cover and frame
2 Drains up to 150mm
3 A larger clear opening cover may be used in conjunction with a restricted access. The size is restricted for health and safety reasons to deter entry

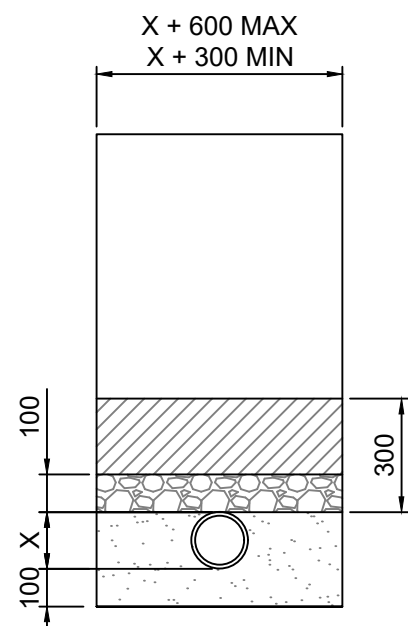


CONCRETE PROTECTION TO SHALLOW PVCu PIPES UNDER ROADS AND VEHICULAR AREAS

NOT TO SCALE

APPLIES TO PIPELINES BENEATH CARRIAGEWAYS WITH LESS THAN 1.20m COVER FROM FINISHED SURFACE LEVELS AND 900mm COVER BELOW PAVED AREAS / DRIVES

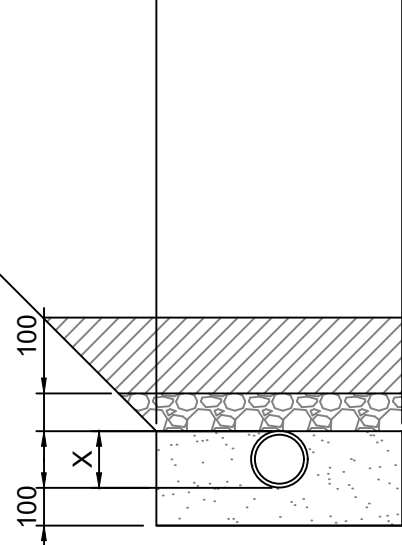
FLEXIBLE PIPES



Pipe Diameter (mm)	Nominal particle size (mm)	Material detail (mm)
100	10	10 single size. No sharp edges
Over 100 to 150	15	10 or 14 single size or 14 to 5 graded
Over 150 to 300	20	10, 14 or 20 single size or 14 to 5 graded or 20 to 5 graded

PVC PIPE BEDDING SPECIFICATIONS

VEE TRENCH



SHALLOW DRAINS WHERE THERE IS RISK OF DAMAGE, PIPES LAID AT LESS THAN 600mm DEPTH (NOT UNDER A ROAD) SHOULD BE PROTECTED BY USE OF A PAVING SLAB OR SIMILAR. A MINIMUM 75mm CUSHIONING LAYER OF GRANULAR MATERIAL MUST BE LAID BETWEEN ANY SLAB AND THE CROWN OF THE PIPE

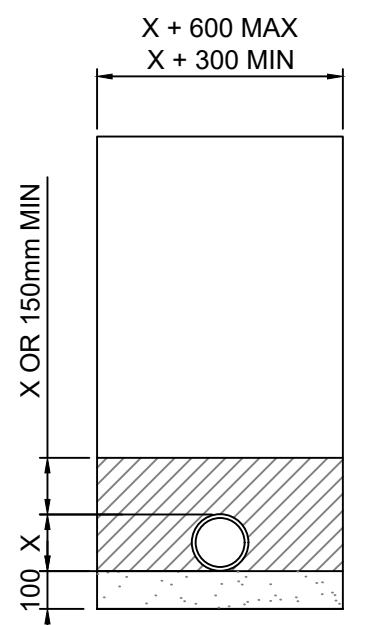
PIPES LAID UNDER ROADS AND HARDSTANDINGS THE MINIMUM COVER UNDER ROADS SHOULD BE 1.2m FROM THE TOP OF THE PIPE. WHERE THIS IS LESS THAN 1.2m ADDITIONAL PROTECTION IS REQUIRED I.E. REINFORCED BRIDGING SLABS

COVER REQUIREMENTS TO PVC PIPES

RIGID PIPES

TYPE N

BEDDING FACTOR = 1.1

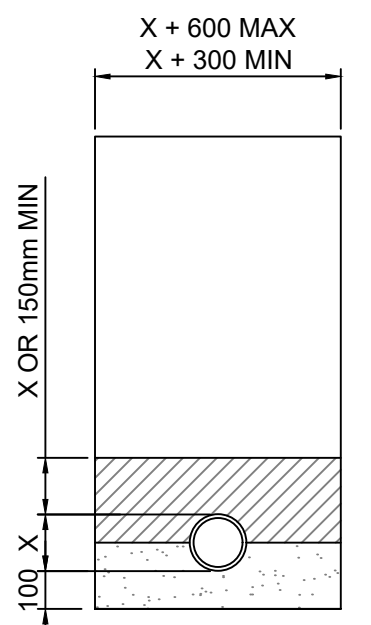


MACHINE-CUT TRENCH BOTTOM

GENERALLY SUITABLE FOR ALL SOILS

TYPE B

BEDDING FACTOR = 1.9

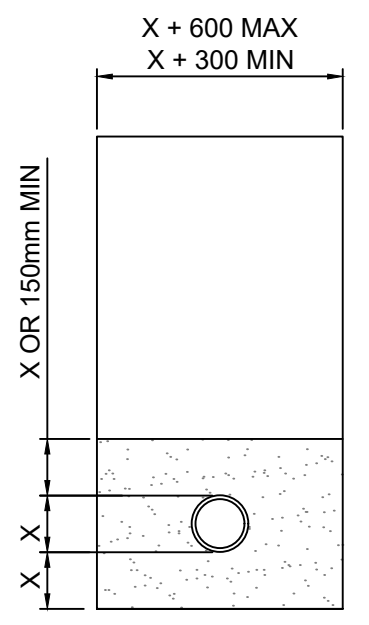


MACHINE-CUT TRENCH BOTTOM

GENERALLY SUITABLE FOR ALL SOILS

TYPE S

BEDDING FACTOR = 2.2

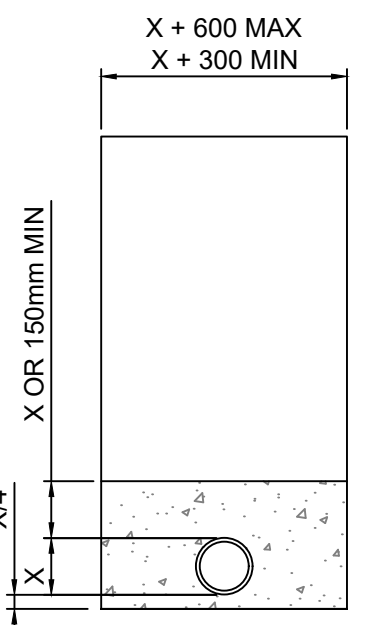


GRANULAR BED AND SURROUND

GENERALLY SUITABLE FOR ALL SOILS

TYPE A2

BEDDING FACTOR = 2.6



PLAIN CONCRETE SURROUND

SUITABLE FOR ALL CONDITIONS EXCEPT FOR ROCK IN MINING AREAS WHERE USE GRANULAR BASE COURSE. MOVEMENT JOINTS TO BE PROVIDED AT 2.0m CENTRES

NOTE
MATERIAL EXCAVATED OR IMPORTED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE FREE FROM VEGETATION, COMBUSTIBLE MATERIAL AND BUILDING RUBBISH

PIPE BEDDING TYPES

SCALE 1:20

PIPE BEDDING SPECIFICATIONS

KEY



GRANULAR MATERIAL TO S.H.W. CLAUSE 503.3 (1)



CONCRETE TO S.H.W. CLAUSE 503.3 (3)



MATERIAL TO S.H.W. CLAUSE 503.3 (2), E.G. SAND



CLASS B MATERIAL TO S.H.W. CLAUSE 503.3 (4)

SPECIFICATION FOR HIGHWAY WORKS

1. TYPES B AND S THE GRANULAR MATERIAL CONSISTING OF NATURAL AND/ OR RECYCLED COARSE OF AGGREGATE OR RECYCLED CONCRETE AGGREGATE SHALL HAVE A GRADING IN ACCORDANCE WITH TABLE BELOW
2. TYPE N THE GRANULAR MATERIAL CONSISTING OF NATURAL AND/ OR RECYCLED COARSE AGGREGATE OR RECYCLED CONCRETE AGGREGATE SHALL COMPLY WITH TABLE BELOW

Nominal Pipe Diameter (mm)	BS 882 Coarse Aggregate (Table 3)		Nominal Pipe Diameter (mm)	BS 882 : 1992 Sand (Table 4)	BS 882 : 1992 All-in Aggregate (Table 5)
	Graded Aggregate Ranges (mm)	Single Sized Aggregate Sizes (mm)		Limits	Nominal Sizes (mm)
Not exceeding 140	-	10	Not exceeding 140	Overall Limits	10
Exceeding 140 but not exceeding 400	20 to 5 or 14 to 5	10, 14 or 20	Exceeding 140 but not exceeding 400	Overall Limits	10 or 20
Exceeding 400	14 to 5, 20 to 5 or 40 to 5	10, 14, 20 or 40	Exceeding 400	Overall Limits	10, 20 or 40

A = FOR SLEEVE JOINTED PIPES A MINIMUM OF 50mm OR 1/6 x WHICHEVER IS THE GREATER. FOR THE SOCKETED PIPES A MINIMUM OF 100mm OR 1/6 x WHICHEVER IS THE GREATER UNDER BARRELS BUT NOT LESS THAN 50mm UNDER SOCKETS

IN ROCK OR MIXED SOILS CONTAINING ROCK BANDS, BOULDERS, LARGE FLINTS OR STONES OR OTHER IRREGULAR HARD SPOTS

A = FOR SLEEVE JOINTED PIPES A MINIMUM OF 150mm OR 1/4 x WHICHEVER IS THE GREATER. FOR THE SOCKETED PIPES, A MINIMUM OF 200mm OR 1/4 x WHICHEVER IS THE GREATER UNDER BARRELS NOT AND 150mm MINIMUM UNDER SOCKETS

3. TYPES A AND Z CONCRETE SHALL BE MIX ST2 RESPECTIVELY. BACKFILLING SHALL NOT BE CARRIED OUT UNTIL AFTER THE CONCRETE HAS CURED

4. CLASS B LOWER TRENCH FILL MATERIAL AS DESCRIBED IN TABLE 6/1. GENERAL MATERIAL CLASS 1, 2 OR 3 EXCEPT THERE SHALL BE NO STONES OR LUMPS OF CLAY > 40mm NOMINAL DIAMETER- RECYCLED AGGREGATE

NOTES

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1. BUILDING DRAINAGE SHALL COMPLY WITH BS 8301 1985 BSEN 752
2. ALL DRAINAGE TO BE 100mmØ UNLESS OTHERWISE SHOWN
3. PIPES RUNNING UNDER BUILDINGS WITHOUT SUSPENDED FLOORS SHALL HAVE 100mm GRANULAR SURROUND
4. ALL EXISTING DRAINAGE LEVELS TO BE CHECKED PRIOR TO COMMENCEMENT OF WORKS & ANY DISCREPANCY TO BE REPORTED TO THE ENGINEER

THE MINIMUM DEPTH OF COVER TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION

MINIMUM DEPTH	LOCATION OF PIPES
0.35m	DOMESTIC GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS
0.50m	DOMESTIC DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES
0.90m	DOMESTIC DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G., MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES
0.90m	AGRICULTURAL LAND AND PUBLIC OPEN SPACE
1.20m	OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES

MANHOLE COVER GRADES	
COVER GRADE	LOCATION OF MANHOLES
B125	GARDENS, PATHWAYS, DRIVEWAYS AND FOOTPATHS
C250	LIGHTLY TRAFFICKED ROADS AND SMALL PRIVATE CAR PARKS
D400	ROADS AND PARKING AREAS FOR ALL TYPES OF VEHICLES

NOTE: ALL MANHOLE AND DRAINAGE COVERS SHALL COMPLY WITH BS EN124. MANHOLE COVERS WITHIN BLOCK PAVED AREAS SHALL BE RECESSED.

REV	DATE	AMENDMENT	BY
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STATUS

PRELIMINARY

31 Greenlands Business Centre
Studley Road
Redditch, B98 7HD
Tel: (01527) 903938
Email: mail@csge.co.uk

CSG
Consulting Engineers

CLIENT

MOUNT PLEASANT HOUSING LTD

PROJECT

TURNERS PASTURE
CHEADLE

TITLE

DRAINAGE CONSTRUCTION
DETAILS 2

DATE NOVEMBER 2024	DRAWN SSD
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SCALE 1:20	SIZE A1	CHECKED KW	APPROVED KW
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DRAWING NUMBER 1983-003	REVISION -
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