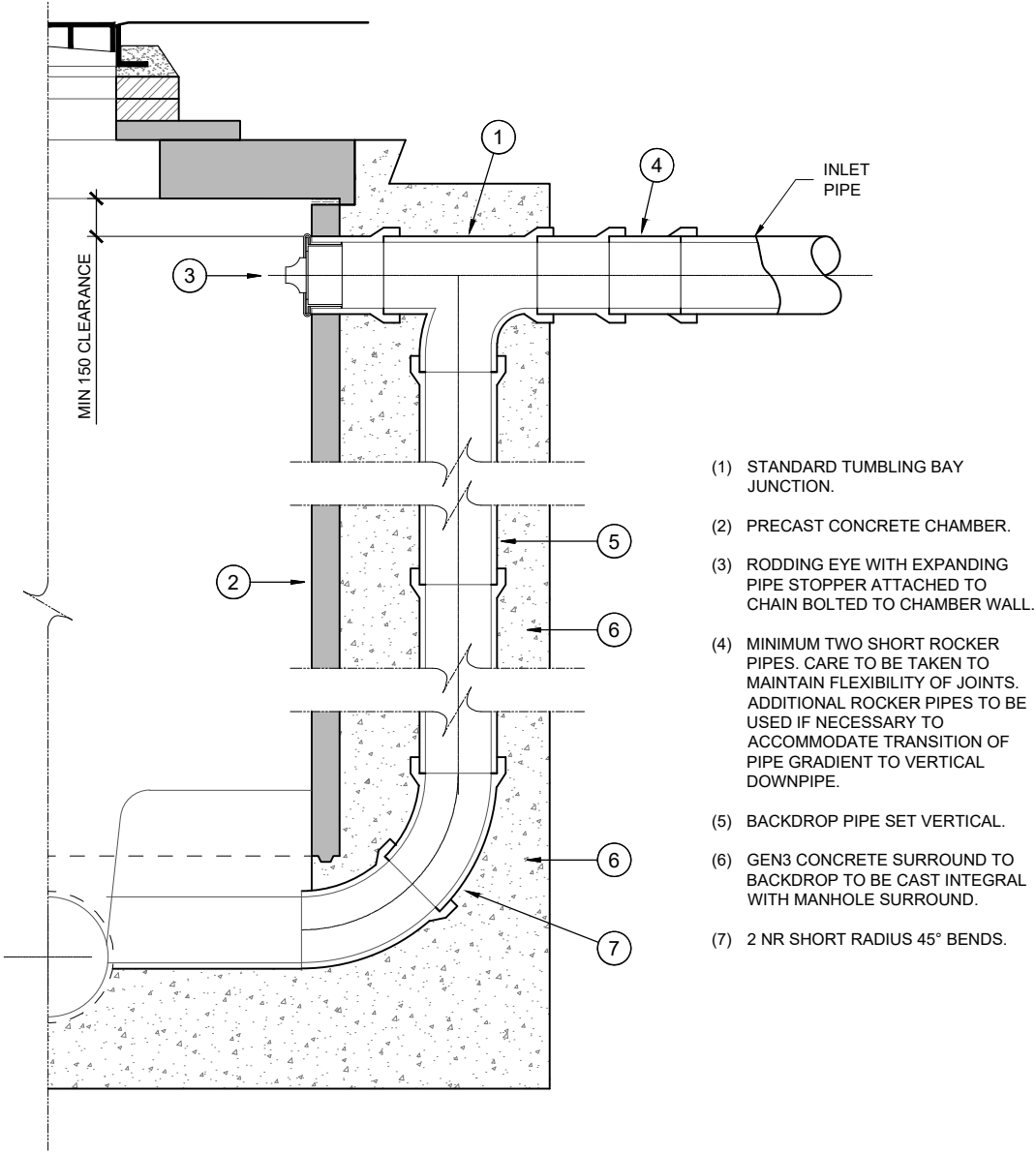
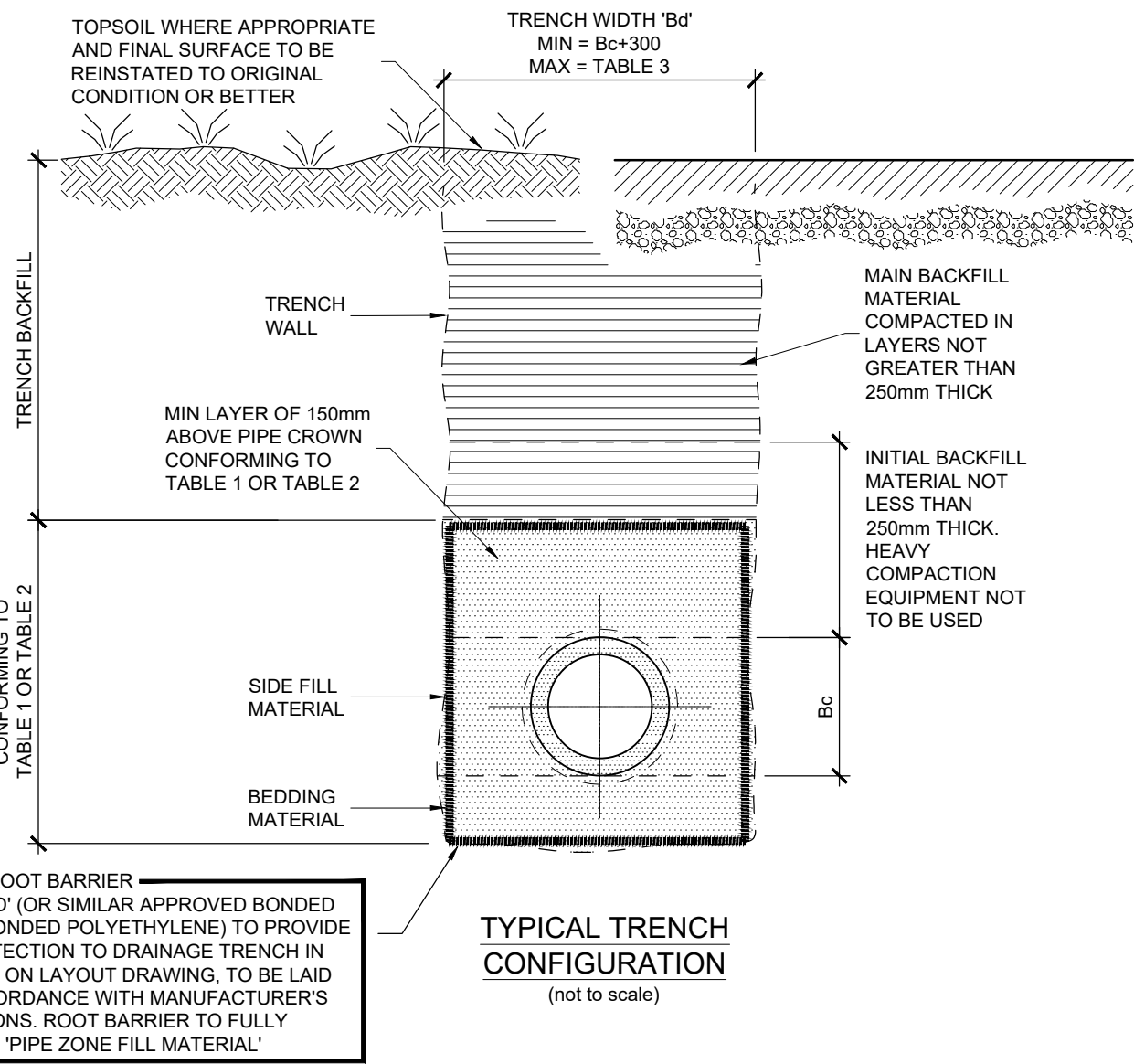
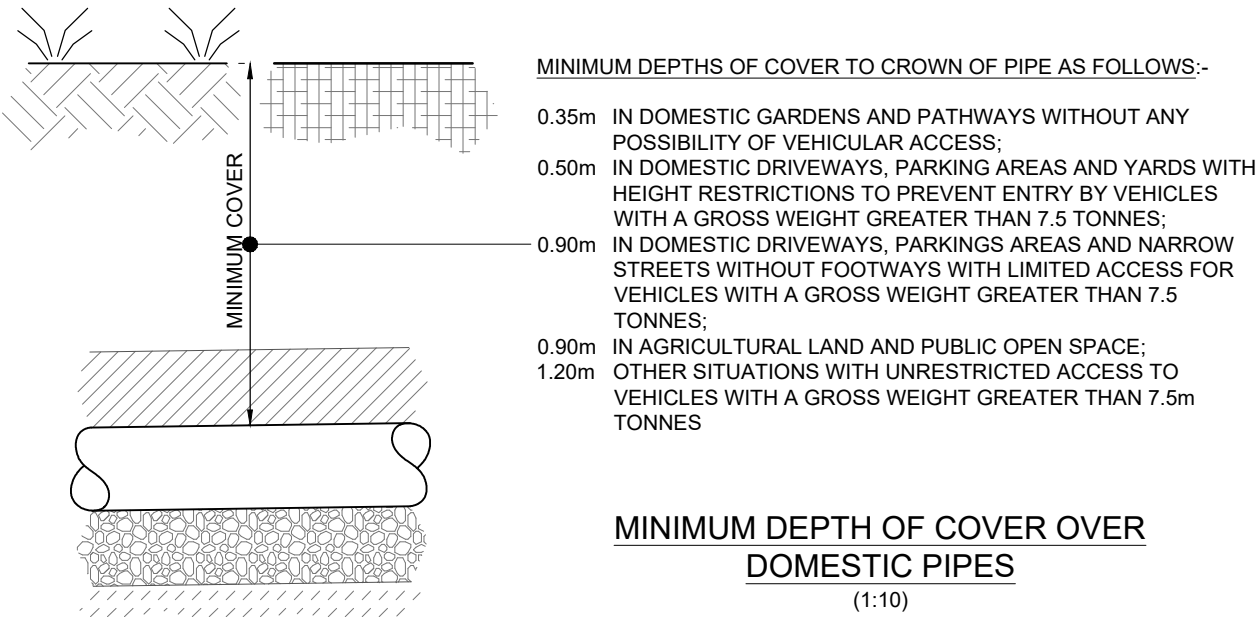




DROP PIPE DIA	
DIAMETER OF HIGH LEVEL PIPE (mm)	DIAMETER OF DROP PIPE (mm)
150	150
225	225
300	300
375	300
450	300
525	375
600	450



LEGEND	
	MAIN BACKFILL MATERIAL
	SELECTED FILL
	GRANULAR MATERIAL AS DEFINED IN TABLES 1 AND 2, AS APPROPRIATE
	GRADE C20 CONCRETE (UNLESS SHOWN OTHERWISE)

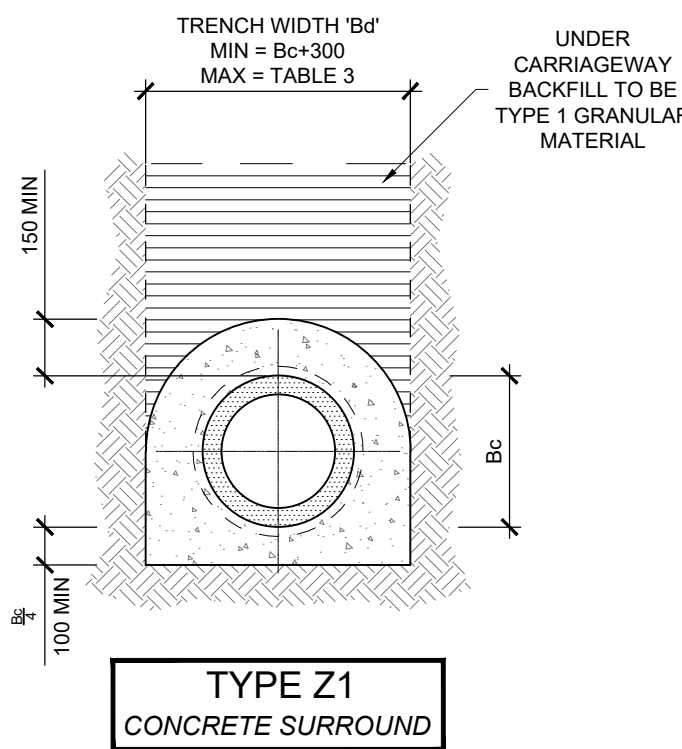
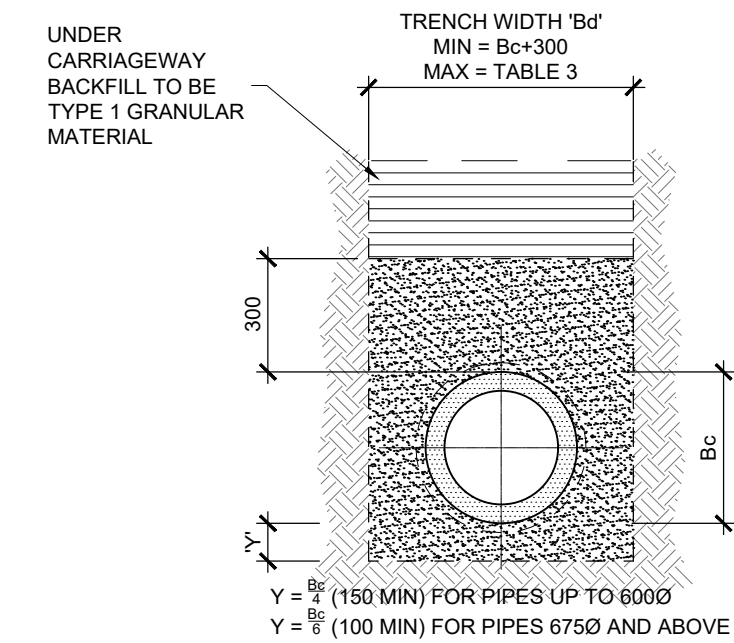


TABLE 3 MAX TRENCH WIDTHS	
PIPE DIA (mm)	MAX TRENCH WIDTH Bd MEASURED 300mm ABOVE PIPE SOFFIT
100	550
150	600
225	700
300	750
375	1050
450	1150
525	1200
600	1350
675	1450
750	1500

TYPICAL DETAIL BACKDROP ENTRY
ALL PIPES TO BE LAID WITH LEVEL SOFFITS UNLESS SPECIFIED OTHERWISE
(not to scale)

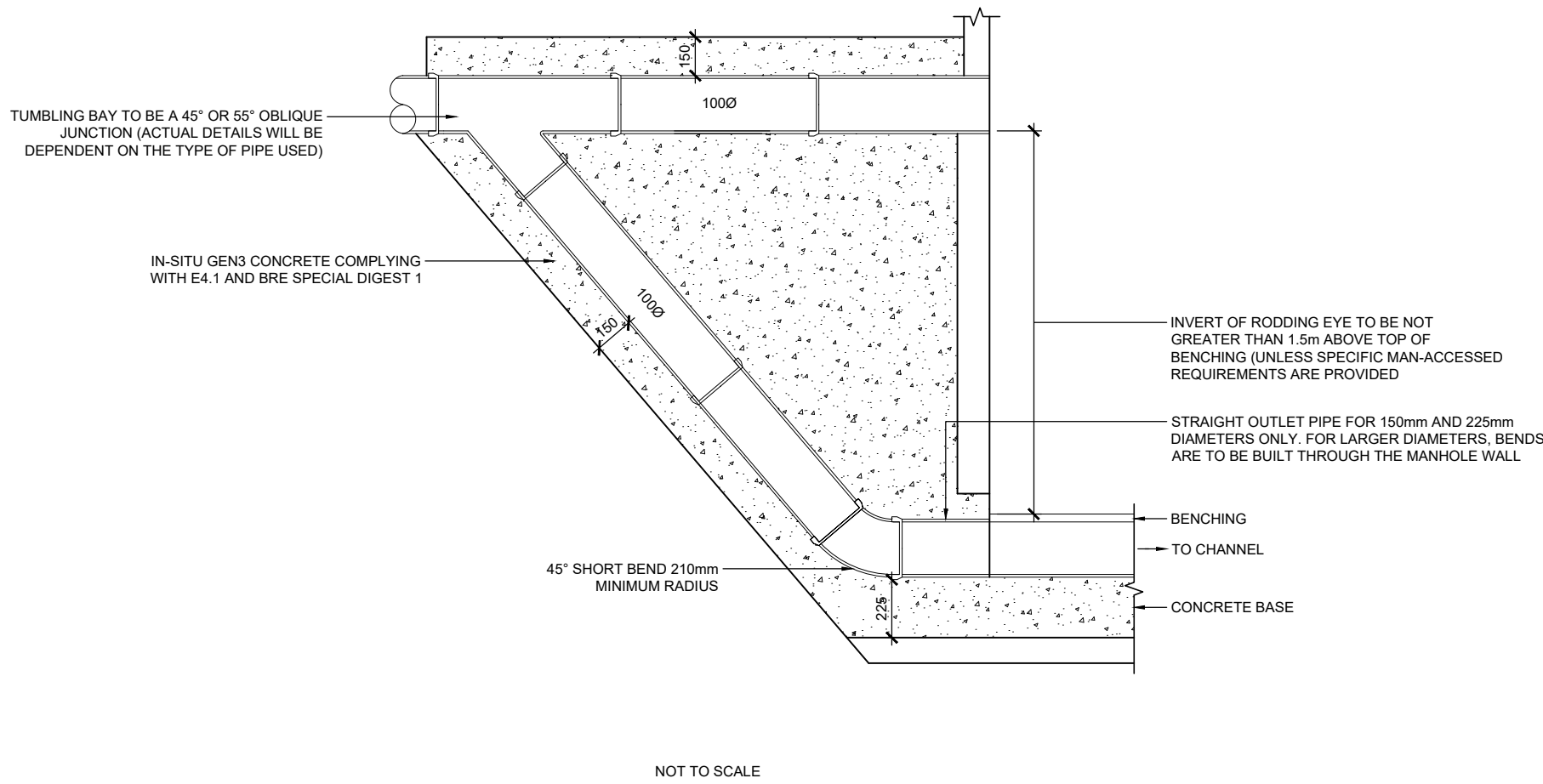
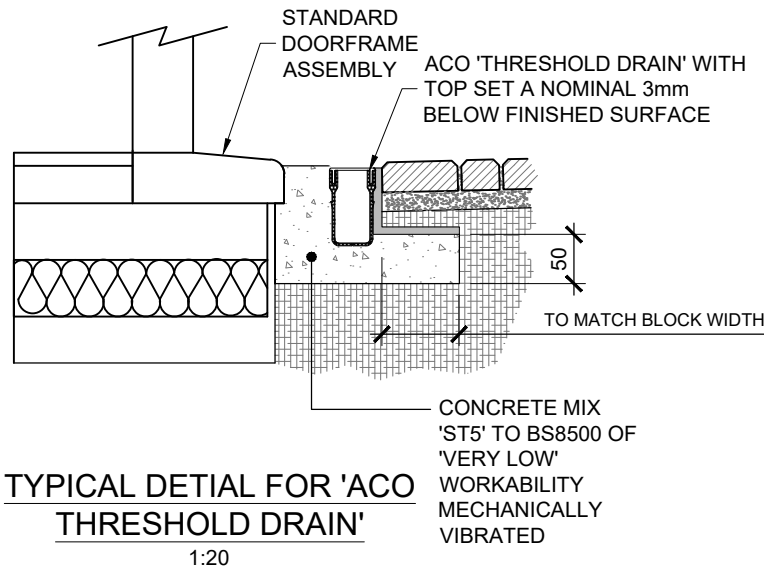
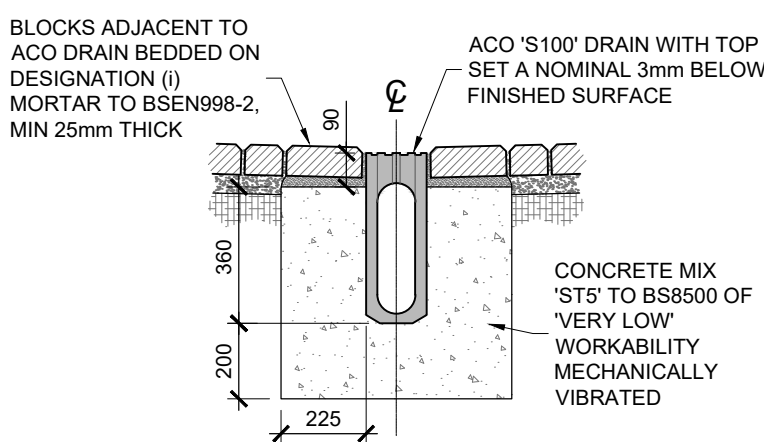


FIGURE B 16 TYPICAL RAMPED BACKDROP DETAIL
FOR USE IN MANHOLE TYPES A TO D



TYPICAL DETAIL FOR 'ACO THRESHOLD DRAIN'
1:20



TYPICAL DETAIL FOR 'ACO S100 DRAIN' INSTALLED IN BLOCK SURFACED PAVEMENT
(1:20)

TABLE 2 GRANULAR BEDDING AND SIDE FILL MATERIALS FOR FLEXIBLE PIPES			
PIPE NOMINAL DIA (mm)	MAXIMUM PARTICLE SIZE (mm)	SUITABLE MATERIALS	
		IMPORTED GRANULAR MATERIALS (Note a)	MAXIMUM CF VALUE FOR 'AS DUG' GRANULAR MATERIALS (Note b)
100Ø	10	10mm NOMINAL SINGLE SIZED	0.15
OVER 100Ø TO 150Ø	15	10 OR 14 NOMINAL SINGLE SIZED, OR 14 TO 5mm GRADED	0.15
OVER 150Ø TO 300Ø	20	10, 14 OR 20 NOMINAL SINGLE SIZED, OR 14 TO 5mm GRADED, OR 20 TO 5mm GRADED	0.15
OVER 300Ø TO 600Ø	20	10, 14, 20 OR 40mm NOMINAL SINGLE SIZED CRUSHED ROCK, OR 14 TO 5mm GRADED, OR 20 TO 5mm GRADED	0.15
OVER 600Ø	40	10, 14, 20 OR 40mm NOMINAL SINGLE SIZED CRUSHED ROCK, OR 14 TO 5mm GRADED, OR 20 TO 5mm GRADED, OR 40 TO 5mm GRADED	0.15

NOTES

- IMPORTED GRANULAR MATERIAL TO INCLUDE NATURAL AGGREGATES, AIR-COOLED BLAST FURNACE SLAG AND SINTERED PULVERISED-FUEL ASH TO BSEN12620 & PD6682-1.
- COMPACTION FRACTION VALUE (SEE APPENDIX A OF WIS 4-08-01).
- MATERIAL EXCAVATED FROM TRENCHES DUG THROUGH LAND CONTAMINATED WITH DOMESTIC, BUILDING OR INDUSTRIAL WASTE SHALL NOT BE USED AS BEDDING OR SIDE FILL MATERIAL.

TABLE 1 GRANULAR BEDDING AND SIDE FILL MATERIALS FOR RIGID PIPES				
PIPE NOMINAL DIA (mm)	MAXIMUM PARTICLE SIZE (mm)	BED TYPE	SUITABLE MATERIALS	
			IMPORTED GRANULAR MATERIALS (Note a)	MAXIMUM CF VALUE FOR 'AS DUG' GRANULAR MATERIALS (Note b)
100Ø	10	S	10mm NOMINAL SINGLE SIZED	0.15
		B		0.30 (Note c)
		F		0.15
		N	COARSE, MEDIUM OR FINE SAND	
OVER 100Ø TO 150Ø	15	S	10 OR 14 NOMINAL SINGLE SIZED, OR 14 TO 5mm GRADED	0.15
		B		0.30 (Note c)
		F		0.15
		N	COARSE, MEDIUM OR FINE SAND	
OVER 150Ø TO 500Ø	20	S	10, 14 OR 20 NOMINAL SINGLE SIZED, OR 14 TO 5mm GRADED, OR 20 TO 5mm GRADED	0.15
		B		0.30 (Note c)
		F		0.15
		N	'ALL-IN AGGREGATE' OR COARSE, MEDIUM OR FINE SAND	
OVER 500Ø (Note d)	40	S	10, 14, 20 OR 40mm NOMINAL SINGLE SIZED CRUSHED ROCK, OR 14 TO 5mm GRADED, OR 20 TO 5mm GRADED, OR 40 TO 5mm GRADED	0.15
		B		0.30 (Note c)
		F		0.15
		N	'ALL-IN AGGREGATE' OR COARSE, MEDIUM OR FINE SAND	

NOTES

- IMPORTED GRANULAR MATERIAL TO INCLUDE AGGREGATES, AIR-COOLED BLAST FURNACE SLAG AND SINTERED PULVERISED-FUEL ASH TO BSEN12620 & PD6682-1.
- COMPACTION FRACTION VALUE (SEE APPENDIX A OF WIS 4-08-01).
- THE HIGHER THE CF VALUE FOR 'AS-DUG' BEDDING AND SIDE FILL MATERIALS THE GREATER THE REQUIRED EFFORT FOR ADEQUATE COMPACTION.
- ANGULAR MATERIALS SHOULD BE CHOSEN TO ENSURE SUFFICIENT SUPPORT IS PROVIDED TO THESE HEAVIER PIPES. CRUSHED ROCK AGGREGATES TO BSEN12620 ARE RECOMMENDED. AIR-COOLED BLAST FURNACE SLAG OR OTHER GRANULAR MATERIALS MAY BE USED IF THEY SHOW A SIMILAR DEGREE OF ANGULARITY.

ADDITIONAL NOTES

IN WET SOIL THE MIGRATION OF FINE SOIL PARTICLES WITH GROUND WATER INTO THE VOIDS OF THE BEDDING AND SIDE FILL MATERIAL MAY BE MINIMISED BY SURROUNDING THE GRANULAR MATERIAL WITH FILTER FABRIC. ALTERNATIVELY, THE GRADING OF THE MATERIAL MAY BE SELECTED SO THAT IT IS SELF FILTERING WITH RESPECT TO THE SURROUNDING SOIL PROVIDED THE OTHER REQUIRED PROPERTIES ARE NOT IMPAIRED.

AIR-COOLED BLAST FURNACE SLAG AND SINTERED PULVERISED FUEL ASH ARE NOT RECOMMENDED FOR USE WITH DUCTILE IRON OR STEEL PIPES DUE TO THE POTENTIAL RISK OF CORROSION.

THE SULPHATE CONTENT OF BEDDING AND SIDE FILL MATERIALS FOR USE WITH CEMENTITIOUS PIPES SHOULD NOT BE GREATER THAN 0.3% AS SULPHUR TRIOXIDE.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
NOTES: THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RISK REGISTER PRODUCED FOR INCLUSION IN THE HEALTH AND SAFETY PLAN. THE HAZARDS NOTED ARE IN ADDITION TO THE NORMAL HAZARDS AND RISKS FACED BY A COMPETENT CONTRACTOR WHEN DEALING WITH THE TYPE OF WORKS DETAILED ON THIS DRAWING.

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- BURIED SERVICES.

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- NO SIGNIFICANT RISKS.

DEMOLITION RISKS:

- EXISTING LIVE SERVICES.
- POSSIBLE ASBESTOS CONTAMINATION.

NOTE:

- DO NOT SCALE, IF IN DOUBT ASK.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL ENGINEER'S DRAWINGS AND DETAILS, THE SPECIFICATION FOR THE WORKS, THE RELEVANT ARCHITECT'S DRAWINGS AND ANY OTHER SPECIALISTS DRAWINGS.
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P01	INITIAL ISSUE	17.10.25	BJL	PC
REV	DESCRIPTION	DATE	BY	AUTH

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CLIENT

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PROJECT

**GRAYS LANE
HITCHIN, HERTFORDSHIRE**
RLC PROJECT NO. 251029

TITLE

**EXTERNAL WORKS
CONSTRUCTION DETAILS
SHEET 3**

DRAWN	AUTHORISED	DATE	SCALE AT A1
BJL	PC	OCT' 25	REFER TO DRAWING

SUITABILITY
S2 - INFORMATION

PROJECT NO.	DRAWING FIELD.	DRAWING NO.	REV
LGH	ROS-GRA-XX-D-C	01402	P01