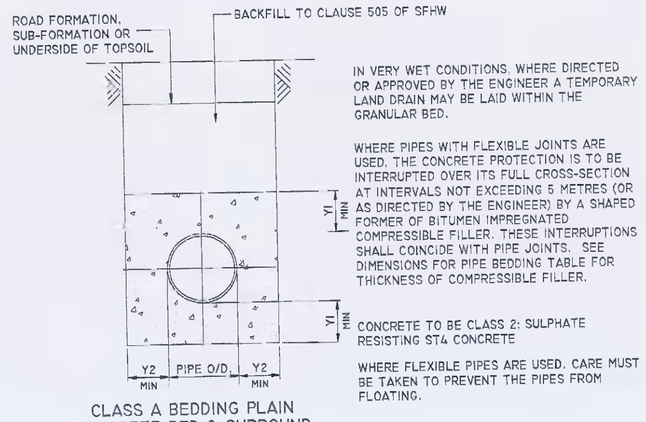
FLEXIBLE JOINTS SHALL BE PROVIDED IN CONCRETE, BY INSERTING COMPRESSIBLE BOARD AT INTERVALS NOT EXCEEDING 5 METERS. PRECUT TO DIAMETER, HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION. REFER TO DIMENSIONS FOR PIPE BEDDING TABLES FOR THICKNESS OF FILLER. FOR VALUES OF Y REFER TO DIMENSIONS FOR PIPE BEDDING TABLES

PIPE DIAMETER	Y MINIMUM		MAXIMUM TRENCH WIDTH	L
	Y1 MIN.	Y2 MIN.		
100	100	200	700	18
150	100	200	750	18
200	100	200	800	18
225	100	200	825	18
250	100	200	850	18
300	100	200	925	18
350	100	200	1000	18
375	100	200	1090	18
400	150	200	1025	18
450	150	200	1175	36

DIMENSIONS FOR CLASS A PIPE BEDDING



IN VERY WET CONDITIONS, WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAID WITHIN THE GRANULAR BED.

WHERE PIPES WITH FLEXIBLE JOINTS ARE USED, THE CONCRETE PROTECTION IS TO BE INTERRUPTED OVER ITS FULL CROSS-SECTION AT INTERVALS NOT EXCEEDING 5 METRES (OR AS DIRECTED BY THE ENGINEER) BY A SHAPED FORMER OF BITUMEN IMPREGNATED COMPRESSIBLE FILLER. THESE INTERRUPTIONS SHALL COINCIDE WITH PIPE JOINTS. SEE DIMENSIONS FOR PIPE BEDDING TABLE FOR THICKNESS OF COMPRESSIBLE FILLER.

CONCRETE TO BE CLASS 2; SULPHATE RESISTING ST4 CONCRETE

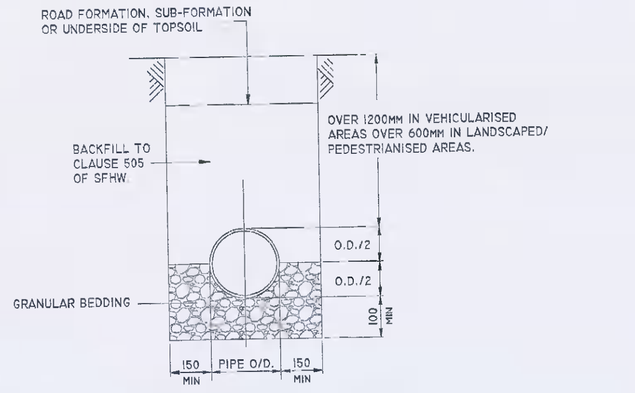
WHERE FLEXIBLE PIPES ARE USED, CARE MUST BE TAKEN TO PREVENT THE PIPES FROM FLOATING.

CLASS A BEDDING PLAIN CONCRETE BED & SURROUND

BEDDING BENEATH AND AT SIDES OF THE PIPE TO BE WELL COMPACTED. WHERE A CONCRETE CRADLE IS PROVIDED, THE FIRST 300MM OF FILL ABOVE THE CROWN OF THE PIPE IS TO BE LIGHTLY COMPACTED BY HAND. MECHANICAL COMPACTION MAY BE USED ONLY ABOVE THIS LEVEL.

CONCRETE CRADLES AND ARCHES MAY BE EXTENDED TO THE SIDES OF THE TRENCH. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS E.G. RUNNING SAND

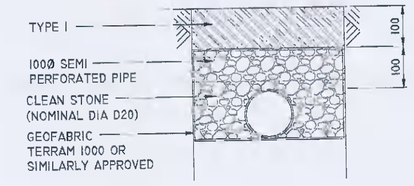
CLASS A CONCRETE BEDDING DETAILS



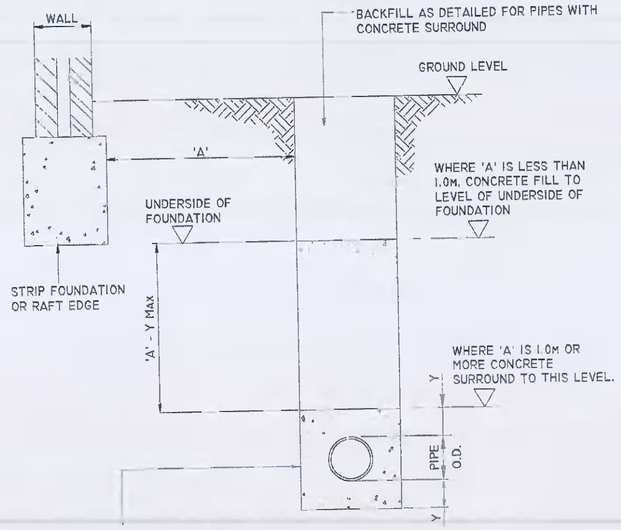
CLASS B BEDDING

BEDDING BENEATH AND AT THE SIDES OF THE PIPE TO BE WELL COMPACTED. THE FIRST 300MM OF FILL ABOVE THE CROWN OF THE PIPE IS TO BE LIGHTLY TAMPED BY HAND. MECHANICAL COMPACTION MAY BE USED ONLY ABOVE THIS LEVEL. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS E.G. RUNNING SAND IN VERY WET CONDITIONS. WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAID WITHIN THE GRANULAR BED.

GRANULAR PIPE BEDDING DETAILS FOR RIGID PIPES



TYPICAL LAND DRAIN DETAIL



SEE CLASS A CONCRETE BEDDING.

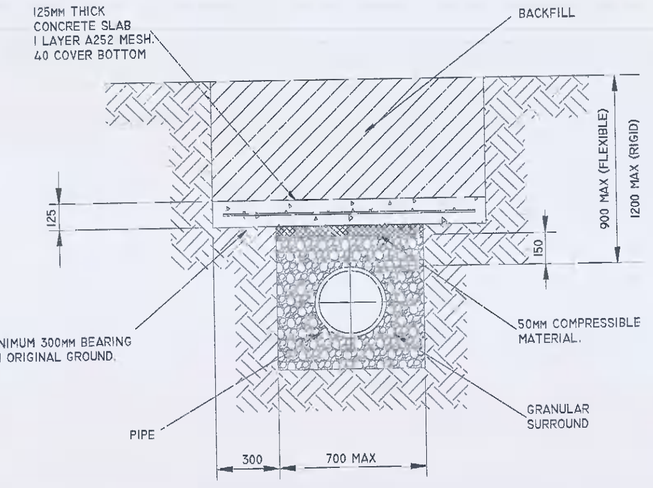
PIPE RUNS NEAR BUILDINGS

IMPORTED GRANULAR MATERAILS TO INCLUDE AGGREGATES TO BS 12620:2002, AIR-COOLED BLAST FURNACE SLAG TO BS 1047 & SINTERED PULVERIZED FUEL ASH TO BS EN 13055-1:2002

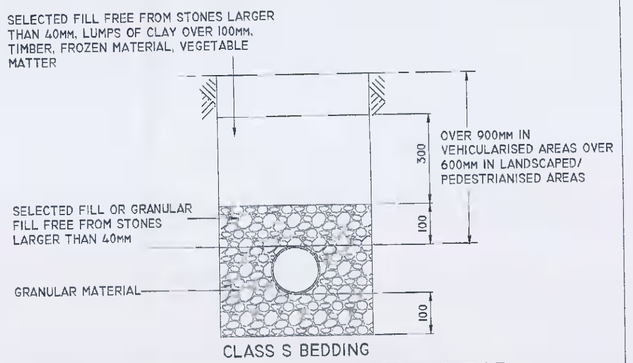
ANGULAR MATERIALS SHOULD BE CHOSEN TO ENSURE SUFFICIENT SUPPORT IS PROVIDED TO HEAVIER PIPES. CLASS S BEDDING SHALL BE USED WITH FLEXIBLE PIPES

PIPE DIAMETER	CLASS OF BEDDING	IMPORTED GRANULAR MATERIAL (NOTE 1)
100	S B	10MM NOMINAL SIZE
OVER 100 TO 150	S B	10 OR 14MM NOM. SINGLE SIZE OR 14 TO 5MM GRADED
OVER 150 TO 300	S B	10,14,20MM NOM. SINGLE SIZE OR 14 TO 5MM GRADED OR 20 TO 5MM GRADED
OVER 300 TO 550	S B	14 OR 20MM NOM. SINGLE SIZE OR 14 TO 5MM GRADED OR 20 TO 5MM GRADED
OVER 550 (NOTE 2)	S B	14, 20, 40MM NOM. SINGLE SIZE CRUSHED ROCK OR 14 TO 5MM GRADED OR 20 TO 5MM GRADED OR 40 TO 5MM GRADED

GRANULAR BEDDING & SIDEFILL MATERIALS FOR RIGID + FLEXIBLE PIPES

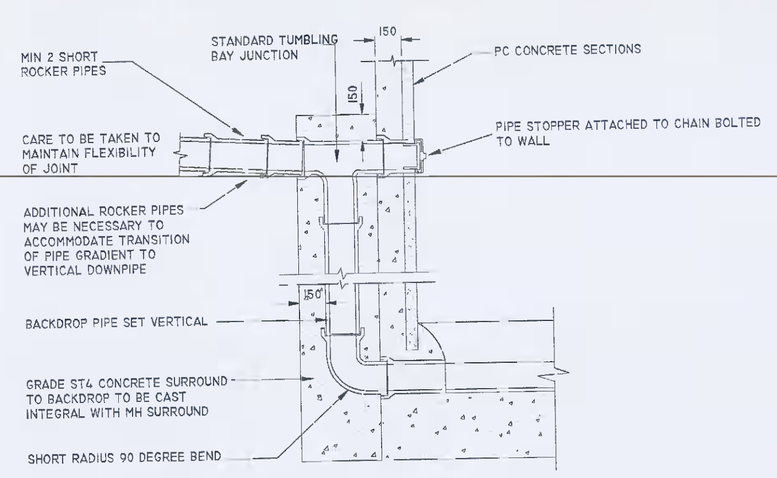


PROTECTION FOR PIPES LAID AT SHALLOW DEPTHS

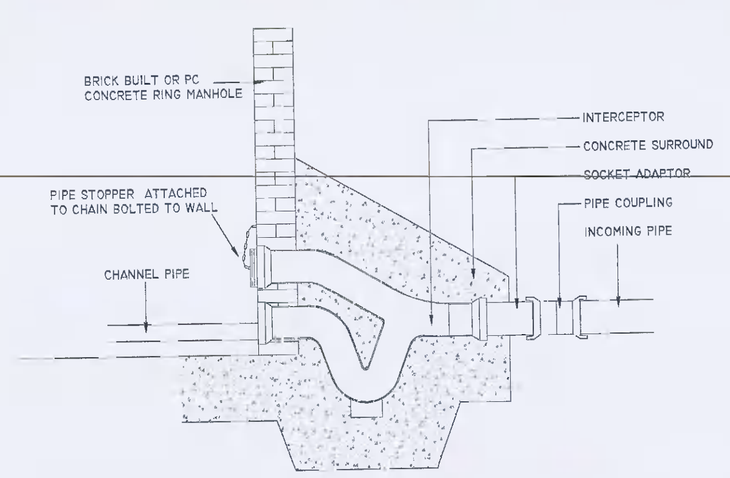


CLASS S BEDDING

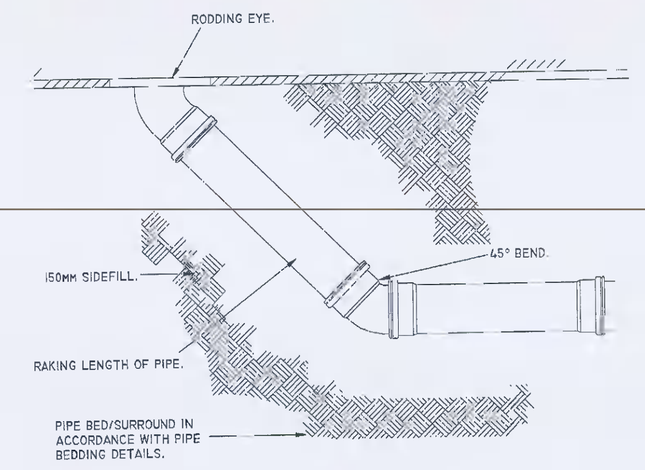
GRANULAR PIPE BEDDING DETAILS FOR FLEXIBLE PIPES



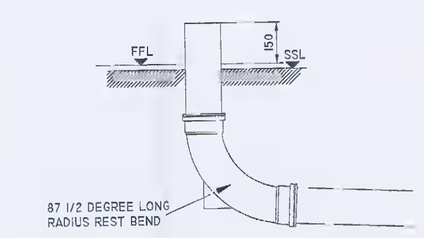
TYPICAL VERTICAL BACKDROP DETAIL



TYPICAL FOUL INTERCEPTOR TO MANHOLE DETAIL



TYPICAL RODDING EYE DETAIL



TYPICAL POP-UP CONNECTION

EQUINIX

HAZARD IDENTIFICATION LEGEND:

HAZARD IDENTIFICATION (If none state 'none relevant')	CONTROL AND MITIGATION MEASURES

NOTE:
Hazards listed above are only those considered significant risks and:

a) not likely to be obvious to a competent contractor or other designers;
b) unusual; or
c) likely to be difficult to manage effectively

REV	DATE	DESCRIPTION	DWN	CHK	APP
P02	16.06.21	ISSUED FOR PLANNING		ABUM	
P01	11.06.21	STAGE 1 ISSUE.		ABUM	

Key:

Project:
Equinix DB081

Drawing Title:
DRAINAGE DETAILS SHEET 1 OF 3

Drawing Number:
DB080-PIN-00-ZZ-DR-C-ZZZZ-5209

Scale:	Paper Size:	Purpose:	Revision:
1:20	A1	S4	P02

PINNACLE
CONSULTING ENGINEERS
SIXTH FLOOR PROSPECT HOUSE 100 NEW OXFORD STREET LONDON WC1A 1HB Tel: 0207 0433410