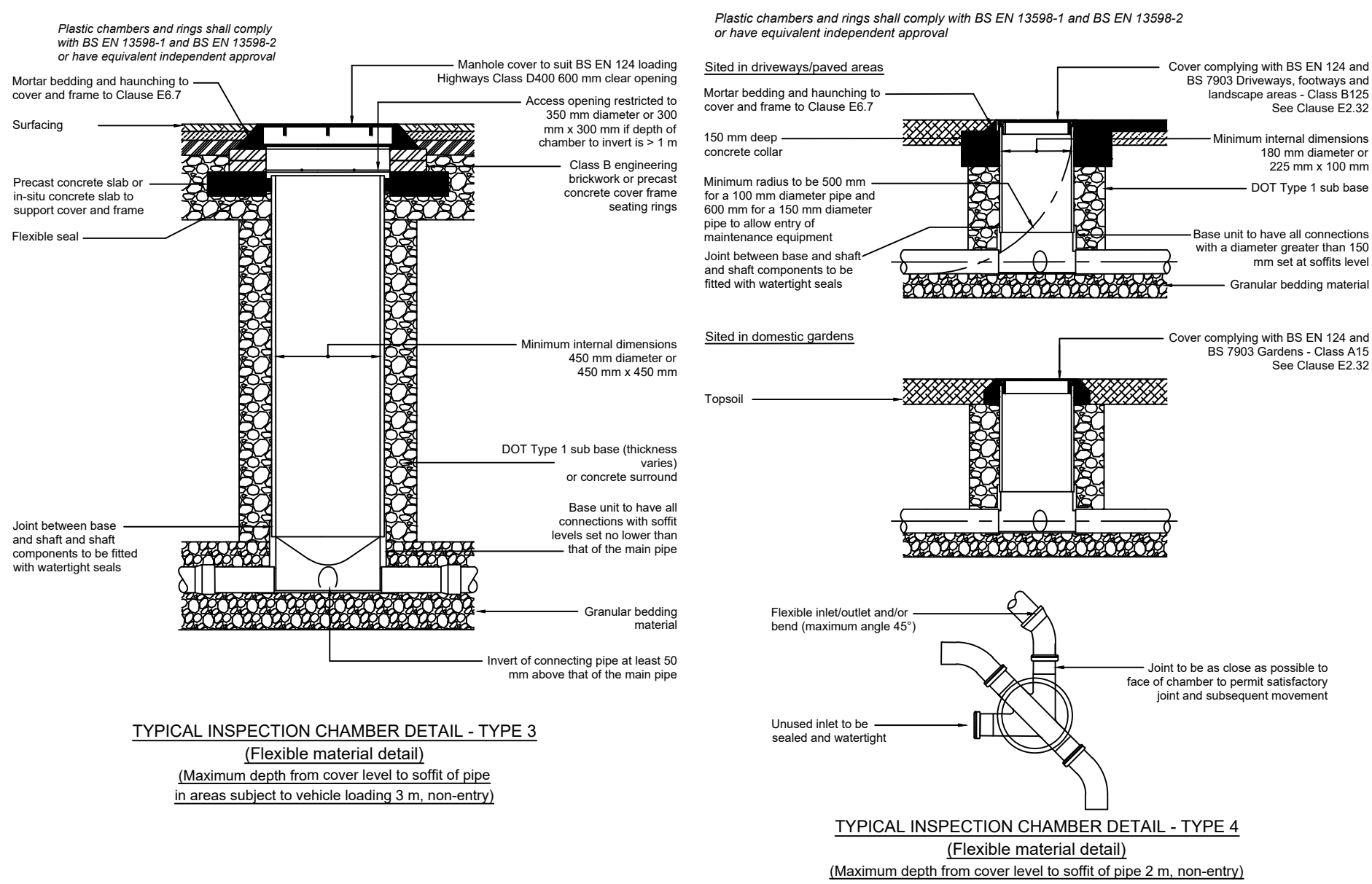
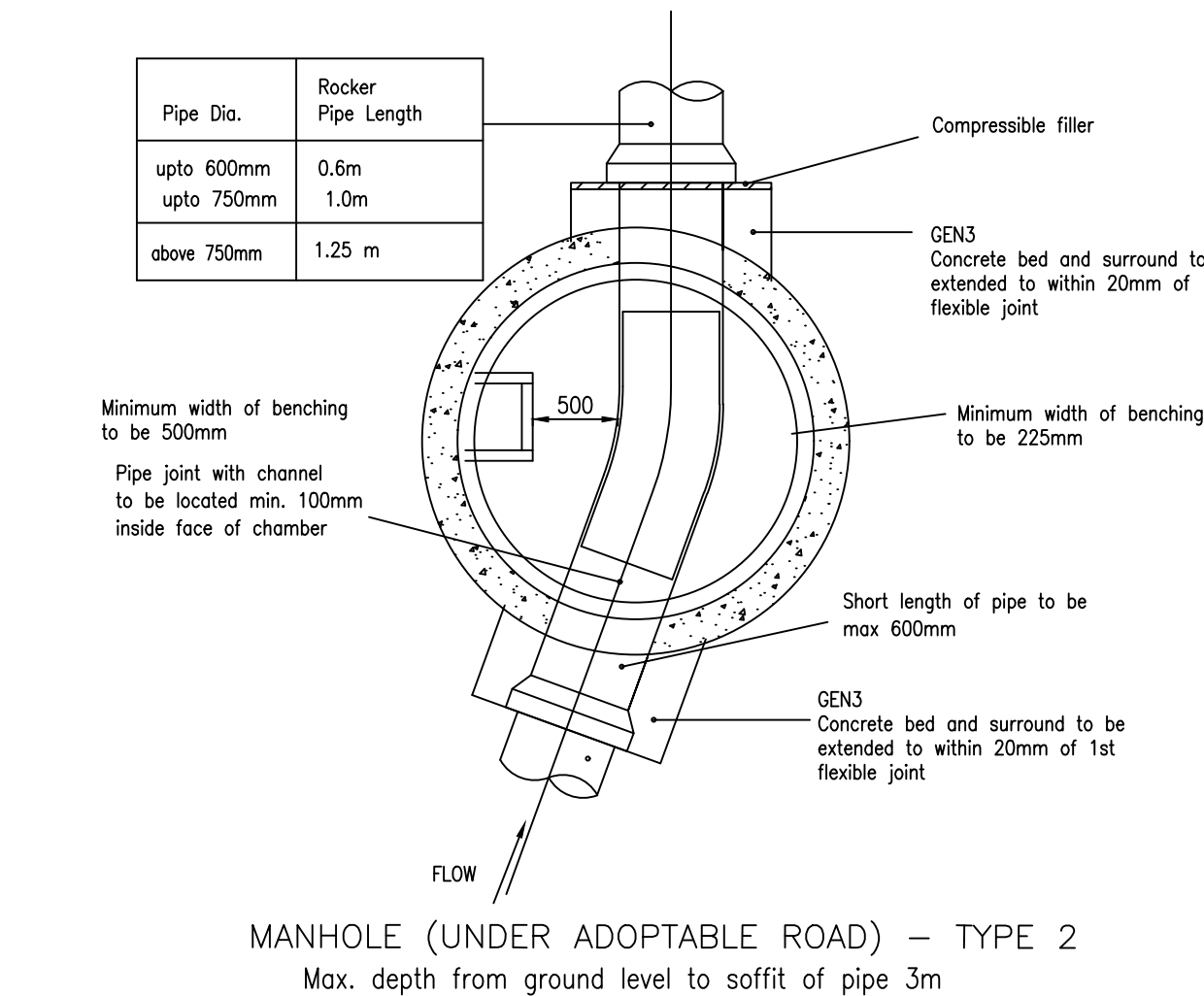
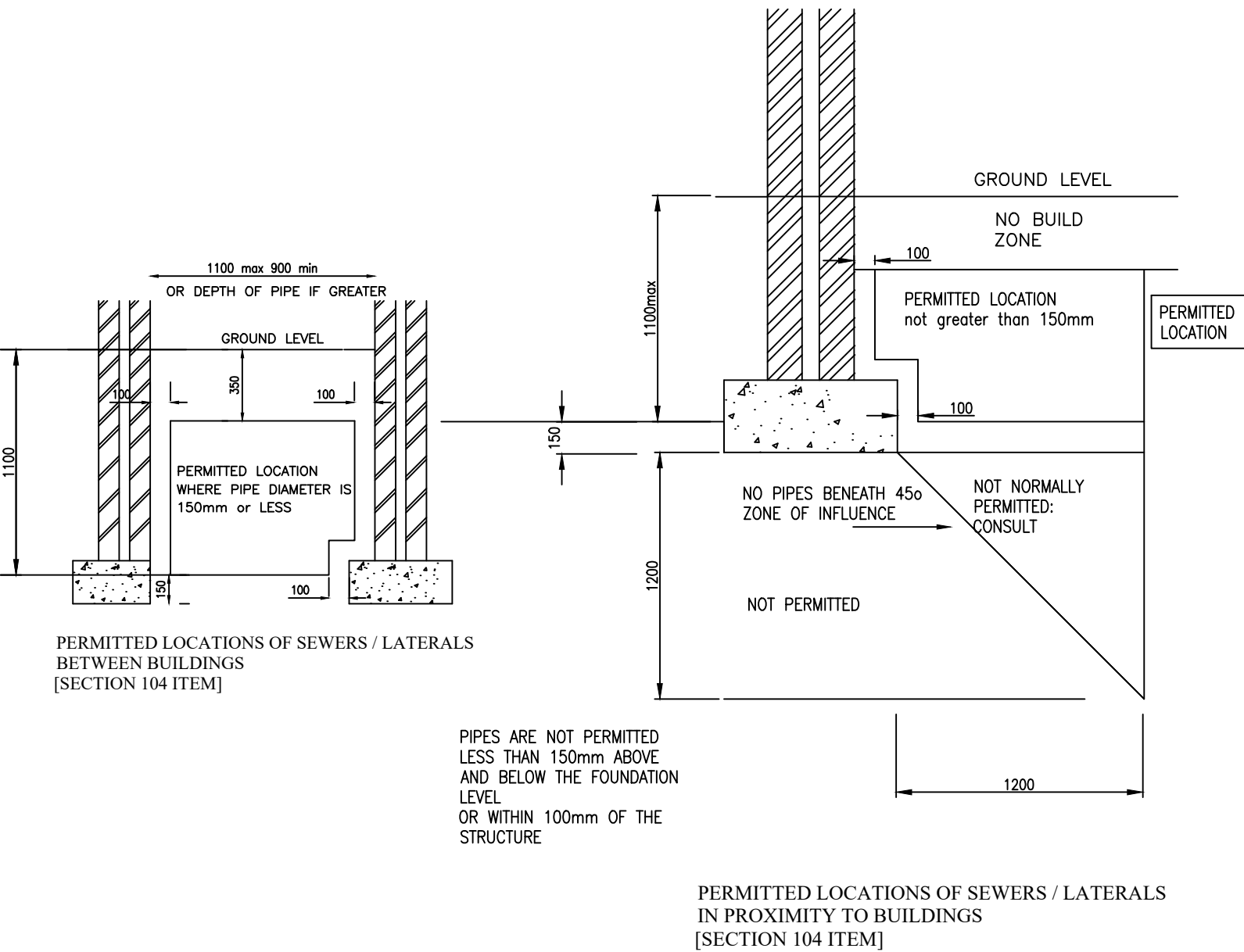




MANHOLE / CHAMBERS:

HIGHWAY AUTHORITY/LOADING CONDITIONS MAY REQUIRE CONCRETE RINGS.

OTHERWISE:

OVER 3m DEEP	TYPE 1 CONCRETE RINGS
NOT OVER 3m, SERVING 10 OR MORE PROPERTIES	TYPE 2 CONCRETE RINGS
OVER 2m/NOT OVER 3m DEEP/ MORE THAN 3 PROPERTIES	TYPE 3 PPIC CHAMBER
2m DEEP OR LESS, SERVING LESS THAN 4 PROPERTIES	TYPE 4 PPIC CHAMBER

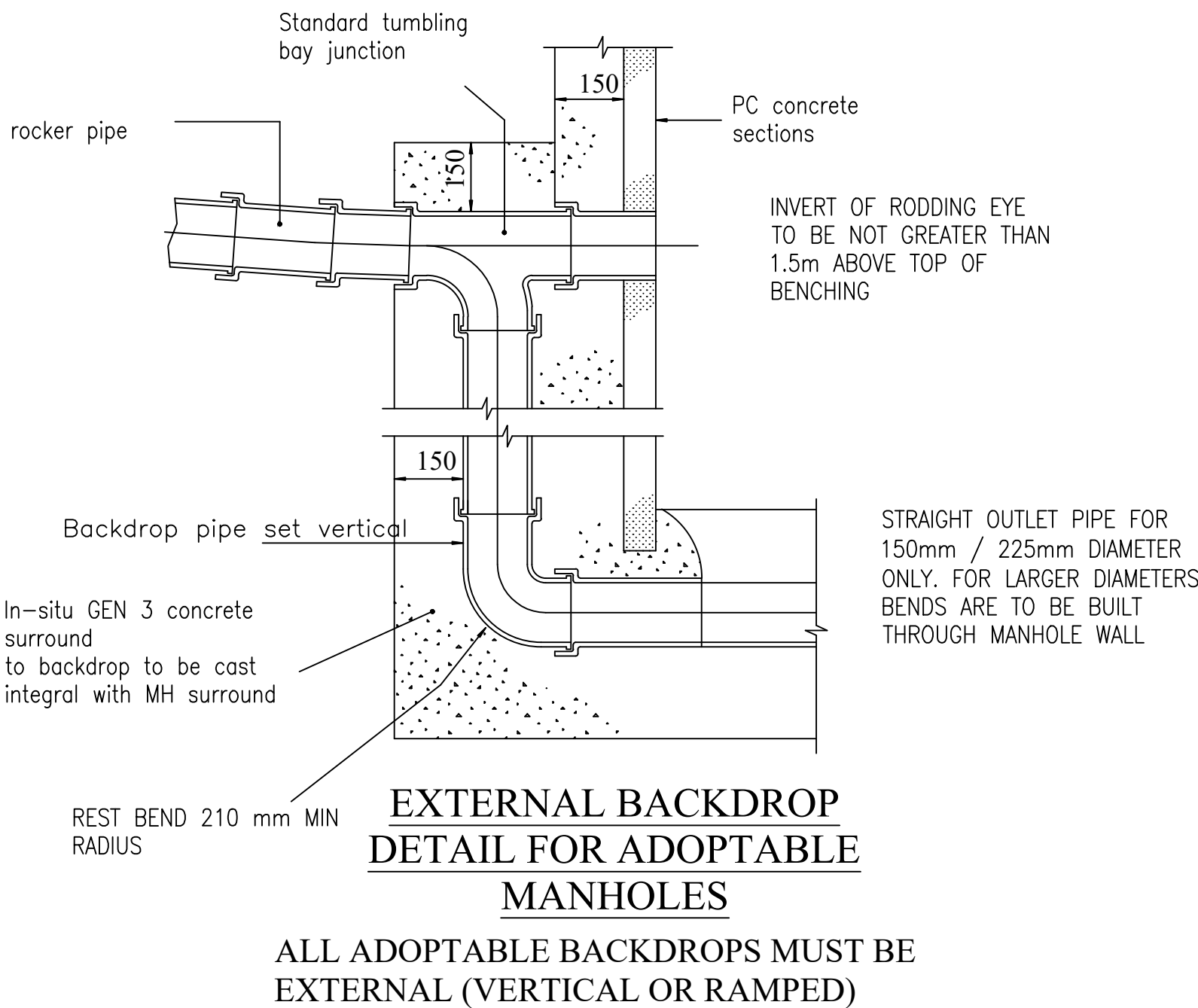
BACKFILL:

TYPE 1, TYPE 2, 150mm CONCRETE SURROUND [WELSH WATER]
TYPE 3: DOT-TYPE 1 SUB-BASE SURROUND
TYPE 4: DOT-TYPE 1 SUB-BASE SURROUND

2 INLETS PER SIDE, (5 IN/ONE OUT) 450mm MIN. DIAMETER

ONE INLET PER SIDE 180 MIN DIAMETER (MINI-ACCESS CHAMBER=MAC)

WHERE SIDE BRANCHES ARE NOT TO BE USED STOPPER TO BE INSERTED TO BLANK OFF CONNECTION



- NOTES ON MANHOLES**
- All dimensions in millimetres unless otherwise stated.
 - Workmanship shall comply with BS 8000 : 1989.
 - All works shall comply with the requirements of W.A.A. Guide – "Sewers for Adoption – 7th Edition"
 - All in situ concrete shall comply with BS 5328 : 1991, to meet Class 1 soil conditions.
 - Insitu structural concrete including surrounds to manholes and pipes shall be Grade C30 to meet Class 1 soil conditions.
 - Precast concrete manhole units shall comply with BS 5911 : 1989 with Sulphate Resisting Cement to meet Class 1 soil conditions.
 - All manhole covers shall be ductile iron to BS EN124 with BS kite mark , with 675mm square clear opening.
 - For manholes 1.35m deep or more, where practicable manhole covers and frames shall be positioned such that they lead to a safe area of benching and not directly over the open channel invert.
 - For manholes less than 1.35m deep, manhole covers and frames shall be positioned over the open channel invert to facilitate rodding.
 - Engineering Bricks – In addition to the requirements of specification, Class B engineering bricks shall not contain frogs or holes and bond should be English.
 - Hooks for safety chains shall be provided on outlet pipes greater then 600mm dia and in accordance with Sewers for Adoption – Design Guide – 7th Edition. Steel grade to be 361L
 - Where manhole covers and frames are to be sited in road categories 1, 2 or 3, (NRSWA), they are to be bedded in a polyester resin bedding mortar.
 - Pipe fittings are for guidance only and may be amended by the site engineer.
 - Manhole co-ordinations refer to centre of manhole, not necessarily centre of pipework. They do not override the sewers for adoption requirement that a manhole must be at least 0.5m from the kerb.
 - All bends to be located within manhole and to be constructed with pre-formed invert bends.
- NOTES:**
- MANHOLE COVERS BE TO SEWERS FOR ADOPTION SECTION B3.2 CLAUSE 18, AND E2.23
- PIPEWORK TO BE TO E.22 FOR UPVC, AND E2.18 IF VITRIFIED CLAY USED

PENDING HIGHWAYS and WELSH WATER APPROVAL

PRELIMINARY

Rev	Description	Date	Drwn	Chkd
A	TYPE 2 MANHOLE REVISED	13:11:18	AK	AK
A	PROXIMITY TO BUILDINGS DETAIL	28:9:18	AK	AK

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Client

M & M DEVELOPMENTS LTD

Project

PROPOSED DEVELOPMENT at FORMER CARAVAN SITE, OLD WREXHAM ROAD, GRESFORD, WREXHAM

Title

MANHOLE DETAILS and DRAINAGE DETAILS

DRAWING NUMBER	SCALE	1:250
1387/04	DATE	22:06:18
	DRAWN	AK
	CHECKED	A.K
	REVISION	B