



BENCHING ONLY

SECTIONAL PLAN

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INTERNAL VERTICAL DROP
FOR 100mm DIA HOUSE DRAINS AND 150mm DIA SEWERS

EXTERNAL VERTICAL DROP
FOR SEWERS > 150mm DIA

NOTES

1. All dimensions are in millimetres unless noted otherwise.
2. Unless otherwise approved for particular types of sewer pipe used or particular site conditions short pipes minimum 450mm, maximum 600mm long to be flexibly jointed to all sections of pipe connected to manholes.
3. All benching to be sloped minimum 1 in 5 to channels.
4. Refer Drawing 10410 for manhole construction details.
5. For manholes with more than two internal vertical drops, manhole internal diameter to be increased to 1200mm minimum.
6. Internal vertical drop pipes and fittings to be uPVC unless approved otherwise.
7. Each strap to be minimum 30mm wide x 1mm thick stainless steel grade 316 fastened to wall with two 6mm diameter stainless steel grade 316 masonry anchors.
8. Level invert taper to allow vertical drop one size smaller than incoming sewer.
9. Junction to be sweep or slope riley type. Square junction not acceptable.
10. Centre of manhole may be offset from intersection point of sewers to maximise channel radius of curvature.
11. Bend at bottom of drop may be rotated to maximise radius of curvature of connecting channel.
12. Control sewer is one which controls the invert level of the zero manhole of the pump station serving the catchment.
13. Where incoming sewers are smaller diameter than the outlet sewer, minimum drop to be equal to difference in pipe diameter.

DROPS

Pipe Dia	Drop 'H' (mm)	
	Benching Only	Vertical Drop
100	max 250	min 600
150	max 250	min 600
225	max 300	min 870*
300	max 350	min 1175*

* Based on uPVC fittings data

MINIMUM DROPS

Direction change through Manhole	Min. Drop 'h' (mm)	
	Control Sewer (Refer Note 12)	Other Sewers (Refer Note 13)
0°-45°	25	25
45°-90°	40	50
0°-30°	25	50
30°-60°	50	75
60°-90°	75	

NOTES : Not to Scale
Supersedes TS1A



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SEWER MANHOLE DROPS

STANDARD DRAWING SEWERAGE

10420

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A	1/7/99	ORIGINAL ISSUE	
REVISIONS			

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