

Rev.	Amendments	Date	Made By	Chk'd By

Diameter of largest pipe in manhole (mm)	Internal diameter of manhole (mm)
Less than 375	1200
375–450	1350
500–700	1500
750–900	1800

NOTES

Highway drainage design and construction shall comply with "Sewers For Adoption" in design and construction guide for develops, 7th Edition or the latest revisions of this publication.

Type A manhole (benching to slab soffit) should be in excess of 2000mm, if this is impracticable then Type B manhole are preferred to an absolute minimum height (benching to slab soffit) of 700mm.

The sizes quoted above are the minimum. If two or more pipes enter the manhole, the size should be sufficient to accommodate adequate benching.

Depths of sewer

Sewers laid within the highway should have a minimum cover of 1.2m measured from the top of the pipe barrel to the finished road surface, in order to avoid interference with underground utility pipes and cables. Where this is not practicable, the sewers shall incorporate 150mm thick ST4 concrete bed and surround with flexible joints not exceeding 6.0m in length. The design of the pipeline should take account of loading from the passage of the Developer's construction plant as well as normal design loading.

Sewers not laid in the highway should be laid at a sufficient depth to avoid interference with land drains or cultivation. Cover over the shallowest part of the pipeline structure of 0.9m will normally satisfy this requirement. Where this is not practicable, the sewers shall incorporate 150mm thick ST4 concrete bed and surround with flexible joint not exceeding 6.0m in length.

MANHOLE COVERS AND FRAMES

1. Manhole covers and frames shall be double triangular 150mm depth and comply with the relevant BS EN 124, D400 Kitemarked and they shall be of a non-rocking design which does not rely on the use of cushion inserts.
2. The clear opening shall be as per the standard detail with the appropriate flange thicknesses or equivalent alternative to be agreed prior to use.
3. All manholes covers shall be the non-ventilating type and shall have closed keyways.
4. Minimum 2 and maximum of 4 courses brickwork to be provided under manhole cover, 3 courses brickwork is recommended.

STEPS

1. Steps shall be provided in manholes and other chambers in accordance with the requirements set out in the publication 'Sewers For Adoption' 7th Edition.

CHAMBER SIZE AND DRAINAGE NOTES

COMMON STANDARDS FOR WALES
HIGHWAY DESIGN GUIDE

Drawn	MT
Checked	SZ
Date	Feb '20
Scale	N.T.S.
Drg. No.	509
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