

Notes:

Adoptable Drainage Notes

- All adoptable sewer works and materials to be in accordance with "Sewers for Adoption" 6th Edition, the Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Cover slabs must carry the BS Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame a load bearing slab shall be fitted above the cover slab to bring the size down to 600mm X 600mm for the Yorkshire Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.
- Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- The chamber size of manholes with more than one connection in them may need to be increased on an increment to accommodate connections and bends.
- Manhole schedule setting out depicts notional pipe intersection points. Manhole chambers are to be positioned in a manner to provide minimum benching/landing requirements.
- Sewers must have 5 metres clearance from trees and hedges (also refer to Figure 2.3 on p33 of SFA 6th edition for restrictions on tree planting adjacent to sewers).
- The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be - (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
- Bedding and backfill material is to conform to the requirements of Water Industry Specification 4-08-02 (Table A2)
- Where depth of cover to top of sewer is less than 1.2m in highways, and less than 0.9m in non-vehicular areas, then concrete concrete slab protection shall be used.
- Location and level of existing sewers and services, including connection points, that are to remain on line of proposed sewers are to be trial holed and recorded prior to commencement of drainage works and the proposed sewer long-section verified.
- Yorkshire Water policy is not to accept Type 'C' brick manholes and 1050mm dia manhole rings. Instead it is preferred that a type 'B1/E' manhole with 1200mm dia or 1500mm dia ring is used, with the opening sited over the channel where depth to pipe soffit is < 1.5m
- No land drainage, watercourses or drainage from retaining walls should be connected to the adopted sewer either directly or indirectly.
- Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- Adoptable sewer pipes are to be laid on maximum 3 metre lengths unless there is a specific operational need to lay longer lengths.
- Sewers to be laid in Class "S" bedding (150mm granular bed & surround). Where depth of cover to top of the sewer is less than 1.2m in highways & verges (or less than 900mm in none vehicular access areas) then a concrete slab should be provided above granular bed & surround.
- Yorkshire Water is not obliged to accept filter/land drainage run-off into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the land drainage run-off will therefore be required & you will have to liaise with the local Authority Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
- Adoptable plastic sewer pipes to be BS Kitemarked (certified to WIS 4-35-01 and BS EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel in manholes. We have found plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.
- Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
- The clearance on the crossover points (min 300mm) between the surface water, foul sewers, rising main and other services should be sufficient clearance to provide 150mm granular bed and surround around both pipes.
- New connections to the public sewer should be connected soffit-soffit unless stated otherwise.

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams Inv-soff		Manhole	Cover
F1	9.681		1 LATERAL 2 LATERAL	8.040 8.040	100 100	1200	Type B	D400
E. 464261.385 N. 421733.958	1.541							
F2	9.080		1 1.000 2 LATERAL 3 LATERAL	7.350 7.400 7.400	150 100 100	1500	Type B	D400
E. 464325.203 N. 421737.480	1.580							
F3	8.715		1 1.001 2 LATERAL	7.050 7.100	150 100	1200	Type B	D400
E. 464364.521 N. 421737.289	1.515							
F4	8.439		1 1.002 2 LATERAL 3 LATERAL	6.770 6.820 6.820	150 100 100	1500	Type B	D400
E. 464402.131 N. 421737.585	1.519							
F5	8.066		1 1.003 2 LATERAL	6.435 6.495	150 100	1200	Type B1/E	D400
E. 464446.503 N. 421744.824	1.481							
F6	7.922		1 1.004 2 LATERAL	6.340 6.390	150 100	1200	Type B1/E	D400
E. 464458.761 N. 421745.387	1.432							

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams Inv-soff		Manhole	Cover
F7	7.396		1 1.005 2 LATERAL	6.030 6.080	150 100	1200	Type B1/E	D400
E. 464498.629 N. 421751.072	1.216							
F8	7.182		1 1.006	5.960	150	1200	Type B1/E	D400
E. 464507.977 N. 421751.131	1.072							
F9	6.948		1 1.007	5.745	150	1200	Type B1/E	D400
E. 464511.170 N. 421722.857	1.053							
F10	6.890		1 1.008	5.745	150	1200	Type B1/E	D400
E. 464517.074 N. 421699.657	1.173							
F11	6.773		1 1.009	5.420	150	1200	Type B1/E	D400
E. 464526.279 N. 421682.725	1.203							
S1	9.489		1 LATERAL 2 GULLY 3 GULLY	7.750 7.750 7.750	150 150 150	1200	Type B1/E	D400
E. 464262.655 N. 421724.944	1.589							

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams Inv-soff		Manhole	Cover
S2	9.731		1 1.000	7.200	300	1500	Type B	D400
E. 464263.021 N. 421735.357	2.231							
S3	9.179		1 1.001 2 LATERAL 3 LATERAL	6.675 6.825 6.825	300 150 150	1500	Type B	D400
E. 464322.010 N. 421739.210	2.204							
S4	8.761		1 1.002	6.265	375	1500	Type B	D400
E. 464366.213 N. 421738.701	2.121							
S5	8.406		1 1.003 2 2.000	5.890 5.965	450 375	1800	Type B	D400
E. 464404.322 N. 421739.748	2.066							
S6	8.023		1 4.000 2 3.000 3 1.004	5.840 5.690 5.690	300 450 450	1800	FLOW CONTROL MANHOLE	D400
E. 464447.982 N. 421746.561	2.233							
S7	NOT USED							
E. 464448.361 N. 421743.696								

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams Inv-soff		Manhole	Cover
S8	7.683		1 LATERAL 2 GULLY 3 GULLY	6.405 6.405 6.405	150 150 150	1500	Type B1/E	D400
E. 464405.019 N. 421714.744	1.128							
S9	CONNECTION TO FP MCCANN TANK							
E. 464447.248 N. 421752.473								
S10	7.607		1 LATERAL 2 GULLY 3 GULLY	6.550 6.550 6.550	150 150 150	1200	Type B1/E	D400
E. 464468.080 N. 421752.433	0.907							

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