

- This drawing is to be read in conjunction with all relevant ARP and Architects drawings and project specifications.
- Survey related to topographical survey supplied by Keepmoat Homes.
- Co-ordinates to be checked prior to works commencing. Any discrepancies to be brought to the immediate attention of ARP.

**Adoption General Notes**

- All adoptable sewer works and materials to be in accordance with Sewerage Sector Guidance (SSG), the relevant British/European and the adopting Water Authority standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision, and to the satisfaction, of IWL before any sewer works are carried out.
- Cover slabs must carry the BS Kitemark or may be rejected by IWL Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the size down to 600x600mm for IWL specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for kitemarked cover slab opening sizes.
- The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges, (please also refer to Figure 2.3 on page 33 in 'Sewers for Adoption' 6th Edition for restrictions on tree planting adjacent to Sewers).
- Sewers to be laid in Class 'S' bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular access areas) then a concrete slab should be provided above the granular bed and surround.
- Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2)
- Adoptable plastic sewer pipes to be BS Kitemarked (Certified to WIS 4-35-01 and BS EN13476). Adoptable sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer.
- IWL's policy is not generally to accept Type 'C' brick manhole and 1050mm dia manhole rings. Instead it is preferred that you use a type 'B' manhole with 1200mm dia or 1500mm dia. rings, with the opening sited over the channel where depth of cover to pipe soffit is 1-1.5m.
- If plastic pipes are to be used then the following should apply:-
  - All adoptable sewers to be BS Kitemark (certified to WIS 4-35-01).
  - Bedding and backfill material to conform to the requirements of Water Industry Specification 4-08-02 (Table A2)
- Where plastic pipes are proposed for adoptable sewers, structural calculations for the plastic pipes and a site investigation report to prove that the ground condition is suitable for the plastic pipes are to be produced.
- Where plastic pipes are installed into the ground prior to getting full technical approval, the developer must provide a CCTV survey of the prospectively adoptable sewers and a deformation test (Light-Line test) of the plastic pipes.
- Demarcation chambers to be a min. 450mm<sup>3</sup> chamber for 100mm<sup>3</sup> foul & 150mm<sup>3</sup> surface water pipes up to 1.2m deep. For depths greater than 1.2m, restricted access opening to 300mm is required for safety reasons.
- Maximum depth of demarcation chamber to be 3m, where depth exceeds 3m, manhole to be constructed as type B manhole.
- 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.
- IWL is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the land drainage runoff will therefore be required and you will have to liaise with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage runoff is required.
- Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- Strength of vitrified clay pipes (if used) to be 40KN/m for 100<sup>3</sup>, 40KN/m for 150<sup>3</sup>, 45KN/m for 225<sup>3</sup> and 72KN/m for 300<sup>3</sup>. All concrete pipes to be Class 120 concrete to EN 1916/BS 5911-1:2002.
- All levels of existing drainage to be confirmed prior to work commencing on site.
- The contractor must allow for any fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.
- There should be enough clearance to accommodate the bedding for both pipes, approx 300mm. If crossover is near rocker then the clearance needed may be increased.

F	MI	18.11.25	Minor revisions to cover & invert levels	MI
E	MI	10.10.25	General updates to suit clients comments	MI
D	MI	10.09.25	Updated to suit revised road levels	MI
C	MI	29.08.25	Updated to suit layout 00BL	MI
B	MI	30.04.25	Amended to IWL comments and Vistry Design	MI
A	JC	04.04.25	Amended to suit latest design	MI
/	MI	FEB 25	Issued for approval	JC
Rev	By	Date	Revision	App'd

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**TITLE SURFACE WATER MANHOLE SCHEDULES SHEET 2 OF 2**

**PROJECT BLACKMOORFOOT ROAD, HUDDERSFIELD**

**CLIENT MILLER HOMES YORKSHIRE**

**DRAWING STATUS PRELIMINARY**

Scale	Date	Drawn	JC
N/A @ A1	28.02.25	Chk.	MI

Drng. No.	Rev
0425/92/11.02	F

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
NW2-S1 Highway Drain	242.505					1200	C	D400
E. 41124.274	1.200							
N. 414567.889								
NW2-S2	241.770		1 1.000 Lateral	240.420 240.420 240.420	150 150 150	1500	C	D400
E. 411133.670	1.200							
N. 414581.162			0 1.001	240.345	225			
NW2-S3	237.165		1 Lateral	235.693 235.693	150 150	1200	C	D400
E. 411192.247	1.322							
N. 414656.810			0 2.000	235.618	225			
NW2-S4	236.804		1 2.000	235.252	225	1200	C	D400
E. 411210.634	1.327		2 1.001	235.252	225			
N. 414625.546			0 1.002	235.177	300			
NW2-S5 Highway Drain	238.923		1 Gully	237.573	150			
E. 411175.099	1.200							
N. 414536.302			0 3.000	237.573	150			
NW2-S6	237.835		1 3.000 Lateral	236.485 236.485 236.485	150 150 150	1500	C	D400
E. 411186.961	1.200							
N. 414554.496			0 3.001	236.410	225			
NW2-S7	234.861		1 3.001 Lateral	232.729 232.804 232.879	300 225 150	1800	B	D400
E. 411235.827	1.832		2 Lateral	232.879	150			
N. 414581.042			0 1.003	232.654	375			
NW2-S8	235.480		1 Lateral	234.130 234.130	150 150	1200	C	D400
E. 411226.796	1.200							
N. 414516.832			0 4.000	234.130	150			
NW2-S9	234.683		1 4.000 Gully	233.291 233.291	150 150	1200	C	D400
E. 411238.833	1.242							
N. 414527.907			0 4.001	233.291	150			
NW2-S10	232.395		1 Gully	230.956	150	1200	C	D400
E. 411284.106	1.289		2 Gully	230.956	150			
N. 414554.559			3 Lateral	230.956	150			
NW2-S11	233.809		1 5.000	230.824	225	1800	B	D400
E. 411259.224	2.760		2 1.003	230.674	375			
N. 414540.418			3 4.001	230.899	150			
			4 Lateral	232.411	150 BD			
			5 Lateral	230.899	150			
NW2-S12	233.214		1 Gully	231.858	150	1200	C	D400
E. 411271.361	1.206		2 Lateral	231.858	150			
N. 414460.876			0 6.000	231.858	150			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
NW2-S13	233.033		1 6.000 Lateral	230.491 231.723	150 150 BD	1200	B	D400
E. 411275.954	2.392							
N. 414478.748			0 6.001	230.416	225			
NW2-S14	232.823		1 1.004	228.892	450	1800	A	D400
E. 411288.584	3.481		2 6.001	229.117	225			
N. 414491.008			3 Lateral	231.516	150 BD			
B-SW1			0 1.005	228.892	450			
Designed by others			1					

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
NW3-S1	242.935		1 Lateral	241.585	150	1500	C	D400
E. 411098.630	1.200		2 Gully	241.585	150			
N. 414625.951			3 Lateral	241.585	150			
NW3-S2	244.960		0 1.000	241.510	225	1200	C	D400
E. 411047.591	1.200							
N. 414663.162			1 Lateral	243.610	150			
NW3-S3	241.350		2 Lateral	239.925	225	1500	C	D400
E. 411096.234	1.200		3 Gully	240.000	150			
N. 414691.246			0 2.001	239.925	225			
NW3-S4	240.826		1 2.001	239.401	225	1500	C	D400
E. 411107.141	1.200							
N. 414688.603			0 2.002	239.326	300			
NW3-S5	240.314		1 2.002	238.814	300	1500	C	D400
E. 411133.351	1.200		2 1.000	238.889	225			
N. 414645.615			3 Lateral	238.964	150			
			4 Lateral	238.964	150			
NW3-S6	237.435		1 1.001	235.799	300	1500	C	D400
E. 411182.502	1.336							
N. 414673.642			0 1.002	235.724	375			
NW3-S7	236.894		1 1.002	235.319	375	1500	C	D400
E. 411172.004	1.200							
N. 414683.571			0 1.003	235.319	375			
NW3-S8	235.811		1 1.003	234.217	375	1500	C	D400
E. 411167.958	1.219							
N. 414713.452			0 1.004	234.217	375			
NW3-S9	240.700		1 Lateral	239.350	150	1500	C	D400
E. 411105.322	1.200		2 Gully	239.350	150			
N. 414704.328			3 Lateral	239.350	150			
			4 Lateral	239.350	150			
NW3-S10	239.588		1 3.000	238.161	225	1500	C	D400
E. 411105.300	1.202		2 Lateral	238.236	150			
N. 414733.562			3 Gully	238.236	150			
NW3-S11	237.820		1 3.001	BD 236.300	225	1200	A	D400
E. 411141.732	3.520							
N. 414734.098			0 3.002	234.175	225			
NW3-S12	234.820		1 3.002	233.238	225	1800	C	D400
E. 411170.226	1.357		2 1.004	233.088	375			
N. 414728.433			3 Lateral	233.313	150			
B-SW37			1 1.005	232.130	375			
Design by others								

- For longitudinal sections refer to drawing 925/92/06
- No services are to be sited directly over, or within 1m of, an adoptable sewer or manhole.
- Private drainage connections to adoptable sewers to be via 45° junction.
- Off site manholes already built must have invert levels checked prior to connection to the off site drainage.
- Any connections to existing sewers/manholes are to be supervised by Yorkshire Water.
- All connections to proposed public sewers to be minimum 150mm<sup>3</sup>.
- Any land drain or water course on site to be diverted as not to pass under proposed buildings. Diversion to be approved and inspected on site by the Local Authority.

**KIRKLEES STRUCTURES P.C.C. MANHOLES >900mm - <3000mm**

- All oversize precast concrete manholes with internal diameter (0.9m ID < 3.0m) and their components including RC cover slabs intended for installation in the highway shall be designed to BS EN 1917 & 'BS 5911-3' and marked as such to confirm that the products represent a manufacturer's declaration that their products meet the requirement of these standards.
- All precast concrete manholes and their components shall be manufactured to Design Chemical Class (DC-4) for an intended design working life of 100 years (min).
- All reinforced concrete cover slabs must be installed with a minimum of 300mm cover to finished levels to comply with National specifications.
- The contractor will need to submit a Construction Compliance Certificate in compliance with Kirklees Council's 'Simplified technical approval for oversize reinforced concrete manholes with circular cover slabs with internal diameter (D) ≤ 3.0m'.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES