

- 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/must 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 BSI 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 '3' 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 BSI Kitemarked (Certified to WS 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.
- Plastic channel sections in manholes are not acceptable and clayware is preferable. Plastic channels are difficult to set in concrete and a satisfactory finish cannot be obtained on the bedding.
- The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
- 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 BSI Kitemark (certified to WS 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. 450mm³ chamber for 100mm³ foul & 150mm³ 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 in-directly). 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 100³, 40KN/m for 150³, 45KN/m for 225³ and 72KN/m for 300³. 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 008L	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



TITLE SURFACE WATER MANHOLE SCHEDULES SHEET 1 OF 2

PROJECT BLACKMOORFOOT ROAD, HUDDERSFIELD

CLIENT MILLER HOMES YORKSHIRE

DRAWING STATUS PRELIMINARY

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

Dr. No. 0425/92/11.01 Rev F

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diameters (mm)		Manhole	Cover
NW1-S1	245.453		1 Lateral 2 Gully 3 Gully	244.103 244.103 244.103	150 150 150	1500	C	D400
E. 411028.782	1.200							
N. 414663.002			0 1.000	244.028	225			
NW1-S2	250.709		1 Lateral 2 Gully	249.181 249.181	150 150	1200	C	D400
E. 411018.691	1.378							
N. 414576.994			0 2.000	249.181	150			
NW1-S3	248.844		1 2.000	247.494	150			
E. 411003.529	1.200							
N. 414603.525			0 2.001	247.494	150			
NW1-S4	247.682		1 2.001 2 Lateral 3 Lateral	246.332 246.332 246.332	150 150 150	1500	C	D400
E. 411010.585	1.200							
N. 414619.048			0 2.002	246.257	225			
NW1-S5	245.808		1 1.000 2 2.002	243.854 243.854	225 225	1500	B	D400
E. 411044.065	1.729							
N. 414637.888			0 1.001	243.704	375			
NW1-S6	245.725		1 1.001 2 Lateral 3 Lateral	243.622 243.622 243.647	375 150 150	1800	B	D400
E. 411058.062	1.728							
N. 414615.557			0 1.002	243.622	375			
NW1-S7	244.840		1 1.002 2 Gully	243.265 243.490	375 150	1500	C	D400
E. 411078.676	1.200							
N. 414606.956			0 1.003	243.190	450			
NW1-S8	245.284		1 1.003	243.165	450	1500	B	D400
E. 411075.962	1.669							
N. 414597.368			0 1.004	243.165	450			
NW1-S9	245.470		1 1.004 2 Lateral	243.138 243.438	450 150	1500	B	D400
E. 411077.417	1.882							
N. 414586.644			0 1.005	243.138	450			
NW1-S10	245.308		1 1.005 2 Lateral	243.108 243.408	450 150	1500	B	D400
E. 411084.319	1.750							
N. 414576.958			0 1.006	243.108	450			
NW1-S11	240.104		1 1.006 2 Lateral 3 Lateral	238.434 238.734 238.734	450 150 150	1800	C	D400
E. 411160.151	1.220							
N. 414528.485			0 1.007	238.434	450			
NW1-S12	237.361		1 1.007 2 Lateral	235.711 236.011	450 150	1500	C	D400
E. 411196.594	1.200							
N. 414505.764			0 1.008	235.711	450			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diameters (mm)		Manhole	Cover
NW1-S13	236.525		1 1.008 2 Lateral 3 Gully 4 Lateral	234.875 235.175 235.175 235.175	450 150 150 150	1800	C	D400
E. 411216.463	1.200							
N. 414498.142			0 1.009	234.725	600			
NW1-S14	238.538		1 1.009 2 Lateral 3 Lateral	234.652 237.000 237.000	600 150 BD 150 BD	1500	A	D400
E. 411206.547	3.286							
N. 414459.052			0 1.010	234.652	600			
NW1-S15	250.446		1 2 Gully 2 Lateral	248.975 248.975	150 150	1200	C	D400
E. 411033.938	1.321							
N. 414549.596			0 3.000	248.900	225			
NW1-S16	248.902		1 3.000 2 Gully	247.435 247.510	225 150	1200	C	D400
E. 411049.496	1.242							
N. 414530.665			0 3.001	247.435	225			
NW1-S17	243.578		1 3.001 2 Lateral	242.153 242.228	225 150	1200	C	D400
E. 411123.478	1.200							
N. 414483.960			0 3.002	242.078	300			
NW1-S18	239.450		1 1.010 2 3.002 3 Lateral	233.297 237.950 238.100	600 300 BD 150 BD	1800	A	D400
E. 411194.548	5.553							
N. 414439.075			0 1.011	233.297	600			
NW1-S19	239.150		1 1.011	232.623	600	1500	A	D400
E. 411198.649	5.927							
N. 414428.421			0 1.012	232.623	600			
NW1-S19A	236.250		1 1.012	232.518	600	1800	A	D400
E. 411240.976	3.132							
N. 414407.511			0 1.013	231.918	1200			
NW1-S20 Tank Inlet			1 1.013	231.907	1200			
E. 411246.314								
N. 414407.002								
NW1-S21 Tank Outlet			1 4.000	229.950	900			
E. 411269.176								
N. 414389.045								
NW1-S22	233.325		1 Lateral 2 Lateral	231.969 231.969	150 150	1200	C	D400
E. 411272.449	1.206							
N. 414449.787			0 5.000	231.894	225			
NW1-S23	233.785		1 5.000 2 Lateral	231.606 231.681	225 150	1200	B	D400
E. 411288.499	1.954							
N. 414403.924			0 5.001	231.531	300			
NW1-S24	233.931		1 5.001	231.462	300	1200	B	D400
E. 411282.757	2.169							
N. 414388.306			0 5.002	231.462	300			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diameters (mm)		Manhole	Cover
NW1-S25 Flow Control Chamber	234.250		1 5.002 2 4.000	231.471 229.929	300 BD 900	2400		
E. 411273.453	4.146							
N. 414388.687			0 4.001	229.879	225			
NW1-S26	234.269		1 4.001	229.748	225	1200	A	D400
E. 411272.544	4.296							
N. 414366.478			0 4.002	229.748	225			
NW1-S27	229.700		1 4.002	228.275	225	1200	C	D400
E. 411352.390	1.200							
N. 414324.951			0 4.003	228.275	225			
NW1-S28	229.565		1 4.003	228.065	225	1200	C	D400
E. 411354.375	1.275							
N. 414321.665			0 4.004	228.065	225			
NW1-C1	228.980		1 4.004	227.500	225	1200	C	D400
E. 411367.366	1.255							
N. 414324.252								

- For longitudinal sections refer to drawing 425/92/06
- 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 150mm³.
- 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 (Ø_{int}: 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 (ID) ≤ 3.0m'.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES