

J H U L L T O U

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types			
			Code	Inverts	Diams		Manhole	Cover		
S1	66.640		1	Lateral	62.250	150	1200	C	D400	
	Depth To Soffit			1.240	Coordinates	E. 437182.037				N. 404824.785
	0			1.000	65.175	225				
S2	67.800		1	Lateral	65.072	225	1200	B	D400	
	Depth To Soffit			2.503	Coordinates	E. 437165.004				N. 404828.011
	0			1.001	64.997	300				
S3	64.350		1	Gully	63.000	150	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437223.830				N. 404886.304
	0			2.000	63.000	150				
S4	64.770		2	Gully	62.901	150	1200	B	D400	
	Depth To Soffit			1.719	Coordinates	E. 437218.789				N. 404878.101
	0			2.001	62.826	225				
S5	66.350		3	Gully	62.493	300	1500	A	D400	
	Depth To Soffit			3.557	Coordinates	E. 437176.023				N. 404886.185
	0			1.002	62.418	375				
S6	61.780		2	Lateral	60.342	150	1500	C	D400	
	Depth To Soffit			1.288	Coordinates	E. 437191.627				N. 404970.210
	0			1.003	60.117	375				
S7	61.150		1	Lateral	59.600	375	1500	C	D400	
	Depth To Soffit			1.175	Coordinates	E. 437199.900				N. 404978.677
	0			1.004	59.600	375				
S8	60.550		1	Lateral	58.925	375	1500	C	D400	
	Depth To Soffit			1.250	Coordinates	E. 437210.049				N. 404982.623
	0			1.005	58.850	450				
S9	62.390		0	Lateral	61.040	150	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437209.579				N. 404938.251
	0			3.000	61.040	150				
S10	58.000		2	Lateral	56.350	300	1200	B	D400	
	Depth To Soffit			1.500	Coordinates	E. 437288.801				N. 404923.765
	0			3.001	56.200	300				
S11	56.780		2	Lateral	55.220	450	1500	C	D400	
	Depth To Soffit			1.185	Coordinates	E. 437296.408				N. 404968.600
	0			1.006	55.145	450				

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types			
			Code	Inverts	Diams		Manhole	Cover		
S12	56.280		3	Lateral	54.625	450	1500	C	D400	
	Depth To Soffit			1.205	Coordinates	E. 437106.479				N. 404976.627
	0			1.007	54.625	450				
S13	55.600		3	Lateral	54.250	150	1500	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437318.595				N. 405023.347
	0			4.000	54.175	225				
S14	56.010		2	Lateral	53.976	225	1500	B	D400	
	Depth To Soffit			1.884	Coordinates	E. 437312.742				N. 404990.238
	0			1.008	53.526	600				
S15	55.000		3	Lateral	53.274	150	1800	C	D400	
	Depth To Soffit			1.126	Coordinates	E. 437352.950				N. 404985.094
	0			1.009	53.274	1000				
S16	53.789		2	Lateral	52.524	1000	1900	Unknown	D400	
	Depth To Soffit			0.345	Coordinates	E. 437412.881				N. 404982.727
	0			1.010	52.524	900				
S17 Flow control	53.600		1	Lateral	52.491	900	2100	B	D400	
	Depth To Soffit			0.934	Coordinates	E. 437422.101				N. 404980.683
	0			1.011	52.441	225				
S18 Outfall	53.000		1	Lateral	52.364	225	1500	C	D400	
	Depth To Soffit			0.411	Coordinates	E. 437425.565				N. 404968.476
	0			1.004	59.600	375				
S19	67.820		2	Gully	66.470	150	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437086.130				N. 405032.187
	0			5.000	66.395	225				
S20	66.440		2	Lateral	65.015	225	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437078.772				N. 405057.994
	0			5.001	65.015	225				
S21	65.150		2	Lateral	63.800	150	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437090.128				N. 405073.029
	0			5.002	63.650	300				

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types			
			Code	Inverts	Diams		Manhole	Cover		
S22	67.850		2	Gully	66.425	150	1200	C	D400	
	Depth To Soffit			1.275	Coordinates	E. 437106.465				N. 405010.305
	0			6.000	66.425	150				
S23	66.400		2	Lateral	64.975	150	1200	C	D400	
	Depth To Soffit			1.275	Coordinates	E. 437135.273				N. 405004.897
	0			6.001	64.900	225				
S24	61.650		3	Lateral	60.150	300	1800	C	D400	
	Depth To Soffit			1.275	Coordinates	E. 437146.309				N. 405065.894
	0			5.003	59.925	450				
S25	60.050		2	Lateral	58.475	150	1500	C	D400	
	Depth To Soffit			1.275	Coordinates	E. 437177.748				N. 405058.318
	0			5.004	58.325	450				
S26	60.680		1	Gully	59.330	150	1200	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437198.050				N. 405000.809
	0			7.000	59.255	225				
S27	59.830		2	Lateral	58.436	225	1200	C	D400	
	Depth To Soffit			1.169	Coordinates	E. 437206.491				N. 405045.458
	0			7.001	58.436	225				
S28	59.560		2	Lateral	58.236	150	1200	C	D400	
	Depth To Soffit			1.174	Coordinates	E. 437200.197				N. 405059.361
	0			7.002	58.161	225				
S29	59.380		2	Lateral	57.730	450	1500	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437190.365				N. 405065.364
	0			5.005	57.730	450				
S30	58.670		1	Lateral	57.020	450	1500	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437192.190				N. 405080.512
	0			5.006	56.945	525				
S31	57.250		3	Lateral	55.525	525	1800	C	D400	
	Depth To Soffit			1.200	Coordinates	E. 437198.046				N. 405108.307
	0			5.007	55.525	525				

N O T E S

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

- Yorkshire Water General Notes**
1. All adoptable sewer works and material to be in accordance with Code for Adoption, the relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemark.
 2. Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
 3. Filled ground must be filled and consolidated under the supervision, and to the satisfaction, of Yorkshire Water before any sewer works are carried out.
 4. Cover slabs must carry the BS Kitemark or will be rejected by the Yorkshire Water 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 the Yorkshire Water specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for Kitemarked cover slab opening sizes.
 5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 6. 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).
 7. Sewers to be laid in Class 'D' 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 non-vehicular access areas) then a concrete slab should be provided above the granular bed and surround.
 8. Adoptable plastic sewer pipes to be BS Kitemarked (Certified to MS 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.
 9. 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 benching.
 10. The chamber size of manholes with more than one connection in them may need to be increased on increment to accommodate the connections and bends.
 11. Yorkshire Water policy is not to accept type 'C' brick manhole and 1050mm dia manhole rings. Instead it is preferred that you use a type 'D' 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.
 12. Surface water and foul rising mains to be provided with marker tape above the raising mains.
 13. If plastic pipes are to be used then the following should apply:
 - a. All adoptable sewers to be BS Kitemark (Certified to MS 4-35-01 and BS/EN13476).
 - b. Bedding and backfill material to conform to the requirements of 'Water Industry Specification 4-18-02' (Table A2)
 14. 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.
 15. 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.
 16. Demarcation chambers to be a min. 450mm chamber for 100mm foul & 150mm surface water pipes up to 1.2m deep. For depths greater than 1.2m, restricted access opening to 350mm is required for safety reasons.
 17. Minimum depth of demarcation chamber to be 2m, where depth exceeds 2m, manhole to be constructed as type B manhole.
 18. Yorkshire Water 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 if required.
 19. Sulfate resisting cement (C20-02) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
 20. Strength of vibrated clay pipes (if used) to be 40kN/m for 1000, 400N/m for 1500, 450N/m for 2250 and 720N/m for 3000. All concrete pipes to be Class 120 concrete to EN 1916/BS 5911-1:2002.
 21. All levels of existing drainage to be confirmed prior to work commencing on site.
 22. The contractor must allow for any leech required for road and sewer opening permits, sewer connections and make the appropriate applications.
 23. All excavations in areas of high water tables and granular materials with high sand/silt contents shall be wrapped with a suitable geotextile filter membrane to prevent migration of sands/silts. Full height clay drains across trenches and/or at manhole locations at 25m intervals to restrict water movement along the excavation shall be provided.
 24. Yorkshire Water 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 be required and liaison with the Land Drainage Authority with regard to the disposal of the filter drain/land drainage runoff if necessary.
 25. Do not scale from this drawing.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

A	BHE	25.01.23	Revised to suit new layout Rev.V	RJ	RJ
/	JMG	16.08.22	Issued for approval	RJ	MI
Rev	By	Date	Revision	Chk	Appd.

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TITLE SURFACE WATER MANHOLE SCHEDULES SHEET 1 OF 2

PROJECT BLEACHCROFT WAY

CLIENT HARRON HOMES

DRAWING STATUS PRELIMINARY

Scale	N/A	Date	AUG 22	Drawn	JMG
				Chk.	RJ

Org. No. 0873/82/11.02 Rev A