

- 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 Miller Homes (Yorkshire) Ltd.
- Co-ordinates to be checked prior to works commencing. Any discrepancies to be brought to the immediate attention of ARP.

Yorkshire Water General Notes

- 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.
- 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 Yorkshire Water before any sewer works are carried out.
- 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.
- 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 'C' 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.
- Adoptable plastic sewer pipes to be BS 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 be 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 benching.
- 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.
- 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.
- Surface water and foul rising mains to be provided with marker tape above the rising mains.
- Plastic pipes are to be used unless otherwise stated. The following should apply:
 - All adoptable sewers to be BS Kitemark (Certified to WS 4-35-01 and BS/EN13476).
 - 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 proposed adoptable sewers and a deformation test (Light-Line test) of the plastic pipes.
- Demonstration chambers to be a min. 450mm dia 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.
- Minimum depth of demonstration chamber to be 2m, where depth exceeds 2m, manhole to be constructed as type B manhole.
- 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 agree with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage runoff is required.
- Supplied resisting cement (C20-C22) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- Strength of vibrated clay pipes (if used) to be 40kN/m for 100, 40kN/m for 150, 45kN/m for 225 and 72kN/m for 300. 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 levels required for road and sewer opening permits, sewer connections and make the appropriate applications.
- 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.
- 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 you will have to agree with the Land Drainage Authority with regard to the disposal of the filter drain/land drainage runoff if necessary.
- Do not scale from this drawing.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	Chk	Apvd
/	JMG	16.08.22	Issued for approval	RJ	MI

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TITLE SURFACE WATER MANHOLE SCHEDULES SHEET 1 OF 2

PROJECT BLEACHCROFT WAY

CLIENT HARRON HOMES

DRAWING STATUS PRELIMINARY

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

Org. No. 0873/82/11.02

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S1	67.775					1200	C	D400
E. 437165.145	1.200							
N. 404828.755			0	1.000	66.350	225		
S2	66.312					1200	C	D400
E. 437175.884	1.200							
N. 404885.453			0	1.001	64.812	300		
S3	61.780					1200	C	D400
E. 437191.827	1.200							
N. 404970.210			0	1.002	60.280	300		
S4	61.175					1200	C	D400
E. 437199.900	1.200							
N. 404978.677			0	1.003	59.675	300		
S5	60.504					1500	C	D400
E. 437211.264	1.200							
N. 404982.426			0	1.004	58.929	375		
S6	56.924					1500	C	D400
E. 437295.536	1.309		1	1.004	55.349	375		
N. 404967.754			2	2.005	55.165	450		
S7	56.361					1500	C	D400
E. 437308.188	1.200							
N. 404975.604			0	1.006	54.711	450		
S8	56.056					1500	B	D400
E. 437313.110	2.001		1	5.000	53.605	450		
N. 404992.932			2	1.006	53.605	450		
S9	55.090					1500	B	D400
E. 437354.981	1.512							
N. 404983.895			0	1.008	52.828	750		
S10	53.769					1800	C	D400
E. 437412.881	0.481		1	6.015	52.538	750		
N. 404982.727			2	1.008	52.538	750		
			0	1.009	52.538	750		

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S11 FLOW CONTROL	53.600					1800		D400
E. 437422.101	0.934		1	1.009	52.491	750		
N. 404980.683			0	1.010	52.441	225		
S12 OUTFALL	53.000					1200	EXISTING	D400
E. 437441.991	0.457		1	1.010	52.318	225		
N. 404976.318			0					
S13	67.000					1200	A	D400
E. 437178.663	3.360							
N. 404825.560			0	2.000	63.395	225		
S14	66.000					1200	B	D400
E. 437200.134	2.596		1	2.000	63.179	225		
N. 404822.050			0	2.001	63.179	225		
S15	62.850					1200	C	D400
E. 437235.013	1.125		1	2.001	61.500	225		
N. 404849.485			0	2.002	61.500	225		
S16	63.280					1200	B	D400
E. 437242.795	2.843		1	3.000	60.137	300		
N. 404872.085			2	2.002	60.212	225		
S17	59.534					1200	B	D400
E. 437283.478	1.734		1	2.003	57.500	300		
N. 404890.410			0	2.004	57.500	300		
S18	58.000					1500	B	D400
E. 437288.801	2.275		1	4.000	55.500	225		
N. 404923.765			2	2.004	55.811	300		
S19	65.800					1200	B	D400
E. 437194.515	1.700							
N. 404881.155			0	3.000	63.800	300		
S20	62.715					1200	B	D400
E. 437207.420	2.090							
N. 404938.666			0	4.000	60.400	225		

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S21	67.810					1200	C	D400
E. 437086.130	1.463							
N. 405032.187			0	6.000	66.122	225		
S22	66.102					1200	C	D400
E. 437078.924	1.125		1	6.000	64.752	225		
N. 405057.461			0	6.001	64.752	225		
S23	64.771					1200	C	D400
E. 437090.979	1.125		1	6.001	63.421	225		
N. 405073.422			0	6.002	63.421	225		
S24	61.104					1500	C	D400
E. 437145.806	1.200		1	6.002	59.679	225		
N. 405063.780			2	7.001	59.679	225		
S25	59.300					1500	C	D400
E. 437179.547	1.275		1	6.003	57.650	375		
N. 405058.010			0	6.004	57.650	375		
S26	58.768					1500	B	D400
E. 437198.272	1.860		1	6.004	56.533	375		
N. 405066.751			2	8.002	56.683	225		
S27	58.545					1500	B	D400
E. 437193.262	2.417		1	6.005	56.533	375		
N. 405080.286			0	6.005	55.753	375		
S28	57.397					1500	A	D400
E. 437198.046	3.136		1	6.006	53.886	375		
N. 405108.307			0	6.007	53.661	600		
S29	55.773					1500	B	D400
E. 437219.140	1.584		1	6.007	53.579	600		
N. 405133.182			0	6.008	53.579	600		
S30	55.300					1500	C	D400
E. 437275.059	1.263		1	6.008	53.437	600		
N. 405123.763			2	9.003	53.662	375		
			0	6.009	53.362	675		