

- 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.

NETWORK 2

- 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.
  - 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 Kitemark (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.
  - 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.
  - If plastic pipes are to be used then the following should apply:
    - All adoptable sewers to be BS Kitemark (Certified to MS 4-35-01 and BS/EN13476).
    - Bedding and backfill material to conform to the requirements of Water Industry Specification 4-18-02 (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 ground prior to getting full technical approval (Light-Line test) of the plastic pipes.
  - Demonstration chamber to be a min. 450mm dia chamber for 100mm dia foul & 150mm dia 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 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.
  - Supplied resting 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 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.
  - 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 strakes 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 indirectly). 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.
  - Do not scale from this drawing.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S31	54.900	1	6.009	53.228	675	1500	C	D400
E. 437327.512	0.997	1						
N. 405112.885		0	6.010	53.228	675			
S32	55.126	1	6.010	53.098	675	1500	C	D400
E. 437317.463	1.353	1						
N. 405061.742		0	6.011	53.098	675			
S33	55.208	1	6.011	53.074	675	1800	C	D400
E. 437321.790	1.459	1						
N. 405053.226		0	6.012	52.999	750			
S34	54.753	1	6.012	52.883	750	1800	C	D400
E. 437367.330	1.120	1						
N. 405044.491		0	6.013	52.883	750			
S35	54.600	2	10.000	53.370	225	1800	C	D400
E. 437381.133	1.005	2	6.013	52.848	750			
N. 405046.047		0	6.014	52.845	750			
S36	54.654	1	6.014	52.789	750	1800	C	D400
E. 437384.322	1.115	1						
N. 405023.898		0	6.015	52.789	750			
S37	55.600	1				1200	C	D400
E. 437318.595	1.200	1						
N. 405023.347		0	5.000	53.950	450			
S38	66.985	1				1200	B	D400
E. 437111.914	1.834	1						
N. 405010.236		0	7.000	64.926	225			
S39	65.596	1	7.000	64.171	225	1200	C	D400
E. 437134.251	1.200	1						
N. 405008.379		0	7.001	64.171	225			
S40	60.858	1				1200	C	D400
E. 437196.292	1.355	1						
N. 404991.510		0	8.000	59.278	225			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S41	59.081	1	8.000	57.856	225	1200	C	D400
E. 437206.491	1.200	1						
N. 405045.458		0	8.001	57.856	225			
S42	58.858	1	8.001	57.433	225	1200	C	D400
E. 437205.471	1.200	1						
N. 405058.378		0	8.002	57.433	225			
S43	58.265	1				1200	C	D400
E. 437251.574	1.200	1						
N. 404999.694		0	9.000	56.840	225			
S44	57.645	1	9.000	56.220	225	1200	C	D400
E. 437255.889	1.200	1						
N. 405022.763		0	9.001	56.220	225			
S45	56.665	1	9.001	55.240	225	1200	C	D400
E. 437266.299	1.200	1						
N. 405055.232		0	9.002	55.165	300			
S46	56.001	1	9.002	54.501	300	1500	C	D400
E. 437266.362	1.200	1						
N. 405078.710		0	9.003	54.426	375			
S49	55.231	1				1200	C	D400
E. 437382.090	1.411	1						
N. 405084.048		0	10.000	53.595	225			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
S50	54.350	1	1.000	52.975	225	1200	C	D400
E. 437326.855	1.200	1						
N. 405125.914		0	1.000	52.275	225			
S51	53.700	1	1.000	52.275	225	1200	C	D400
E. 437316.257	1.200	1						
N. 405139.707		0	1.001	52.275	225			
S52	53.850	1	1.001	52.236	225	1200	C	D400
E. 437321.401	1.389	1						
N. 405143.660		0	1.002	52.161	300			
S53	53.650	1	Tank	51.826	300	1200	See Manufacturers DWG	D400
E. 437322.265	1.524	1						
N. 405148.524		0	Tank	51.826	300			
S54	53.600	1	Tank	51.722	300	1200	See Manufacturers DWG	D400
E. 437324.488	1.578	1						
N. 405169.196		0	Tank	51.722	300			
S55 FLOW CONTROL	53.150	1	1.004	51.707	300	1200	See ARP dwg 0873/82/XX	D400
E. 437321.697	1.343	1						
N. 405169.697		0	1.005	51.657	150			
S56 OUTFALL	52.893	1	1.005	51.499	150	1200	EXISTING	D400
E. 437317.928	1.244	1						
N. 405181.789		0						

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TITLE: SURFACE WATER MANHOLE SCHEDULES SHEET 2 OF 2

PROJECT: BLEACHCROFT WAY

CLIENT: HARRON HOMES

DRAWING STATUS: PRELIMINARY

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

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