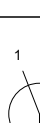


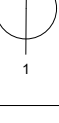
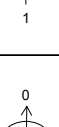
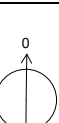
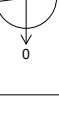
Manhole Number	Cover Level	Coordinates	Depth To Sella	Connections	Pipe			Manhole Size	Types	
					Code	Inverts	Diams		Manhole	Cover
F1	43.554							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 345946.445	1.615			0	1.000	41.789	150			
N. 390092.060				0		40.216	150			
F2	42.103							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346932.496	1.754			0	1.001	40.216	150			
N. 390095.638				0	1.001	39.085	150			
F3	40.980							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346921.456	1.765			0	1.002	39.065	150			
N. 390045.448				0	1.002	36.948	150			
F4	39.092							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346894.199	1.994			0	1.003	36.948	150			
N. 390020.349				0						
F5	40.761							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346841.434	1.717			0	2.000	38.884	150			
N. 390056.926				0	2.000	36.847	150			
F6	38.839							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346819.484	1.842			0	2.001	36.847	150			
N. 390025.587				0	2.001	36.491	150			
F7	38.350							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346835.095	1.709			0	2.002	35.880	150			
N. 390014.400				0	2.002	35.880	150			
F8	37.875							1500	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346846.304	1.845			0	1.004	35.880	150			
N. 386993.942				0						
F9	46.368							1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346854.469	1.585			0	3.000	44.631	150			
N. 390173.435				0	3.000	42.780	150			
F10	44.408							1500	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346828.643	1.478			0	3.001	42.780	150			
N. 390132.815				0						

Manhole Number	Cover Level	Depth To Sifts	Connections	Pipe			Manhole Size	Types	
				Code	Inverts	Diams		Manhole	Cover
F31		32.589		1 5.001 2 1.015	29.193 30.376	150	150	GRP Ladder Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346559.956	3.246								
N. 385751.804				0 1.016	29.193	150			
F32		39.092		1 6.000	37.654	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346579.302	1.888								
N. 389554.482				0 6.000	37.654	150			
F33		39.633		1 6.000	36.527	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346557.645	2.956								
N. 389631.431				0 6.001	36.527	150			
F34		39.695		1 6.001	36.179	150	1200	GRP Ladder Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346542.888	3.306								
N. 389886.684				0 6.002	36.179	150			
F35		39.468		1 6.002	36.009	150	1200	GRP Ladder Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346526.960	3.309								
N. 389670.432				0 6.003	36.009	150			
F36		38.750		1 6.003	35.736	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 348550.013	2.864								
N. 389856.176				0 6.004	35.736	150			
F37		37.667		1 6.004	35.343	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346615.010	2.174								
N. 389687.723				0 6.005	35.343	150			
F38		34.900		1 6.005	32.999	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346634.300	1.751								
N. 389782.234				0 6.006	32.999	150			
F39		34.500		1 6.006	31.871	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346625.552	2.479								
N. 389747.750				0 6.007	31.871	150			
F40		33.000		1 6.007	30.871	150	1200	Plastic Encapsulated Step Ions Type 1	CS 600 x 600 HC3 600 x 750 D400
E. 346612.669	1.979								
N. 389737.751				0 6.008	30.871	150			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
Coordinates	Depth To Spill		Code	Inverts	Dams		Manhole	Cover	
F11	41.519		1	3.001	39.667	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D402
E. 346789.673	1.702								
N. 390072.376			0	3.002	39.667	150			
F12	40.358		1	3.002	38.488	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346764.646	1.720								
N. 390047.383			0	3.003	38.488	150			
F13	39.580		1	3.003	37.693	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346754.500	1.737								
N. 390027.274			0	3.004	37.693	150			
F14	39.070		1	3.004	36.326	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D403
E. 346753.780	2.594								
N. 390012.420			0	3.005	36.326	150			
F15	38.426		1	3.005	36.006	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346759.436	2.270								
N. 389994.358			0	3.006	36.006	150			
F16	37.197		1	1.004	35.312	150	1500	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346780.019	1.735		2	3.006	35.312	150			
N. 389958.246			0	1.005	35.312	150			
F17	37.512		1	1.005	35.054	150	1200	Plastic Encapsulated Step Irons Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346749.741	2.308								
N. 389940.022			0	1.006	35.054	150			
F18	37.826		1	1.006	34.826	150	1200	GRP Ladder Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346725.039	2.850								
N. 389920.281			0	1.007	34.826	150			
F19	38.088		1	1.007	34.621	150	1200	GRP Ladder Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346705.871	3.317								
N. 389900.443			0	1.008	34.621	150			
F20	38.305		1	1.008	34.468	150	1200	GRP Ladder Type 1	C8 600 x 600 HCS 600 x 75 D400
E. 346698.135	3.687								
N. 389881.239			0	1.009	34.468	150			

Manhole Number	Cover Level	Depth To Sight	Connections	Pipe			Manhole Size	Types				
				Code	Inverts	Dams		Manhole	Cover			
F41	35.746											
E. 346558.002	1.246			0	7.000	34.350	150	1500	Plastic Encapsulated Step Irons Type 4	CS 1200 x 675 HCS 1200 x 675 D400		
N. 369906.573				0	7.000	34.350	150					
F42	31.600			1	2	0	6.008	30.250	150	1500	Plastic Encapsulated Step Irons Type 4	CS 1200 x 675 HCS 1200 x 675 D400
E. 346591.522	1.200			0	6.008	30.250	150					
N. 369729.362				0	6.008	30.250	150					
F43	29.537			1	1	0	6.010	28.658	150	1200	Plastic Encapsulated Step Irons Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346600.880	2.023			0	1.016	27.304	150					
N. 369668.445				0	1.016	27.304	150					
F44	29.000			1	1	0	1.016	27.222	150	1200	Plastic Encapsulated Step Irons Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346563.308	1.628			0	1.017	27.147	225					
N. 36979.630				0	1.017	27.147	225					
F45	29.902			1	1	0	1.017	27.222	225	1500	Plastic Encapsulated Step Irons Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346499.619	1.727			0	8.000	26.025	150					
N. 369708.220				0	8.000	26.025	150					
F46	28.378			1	1	0	8.000	26.025	150	1200	Plastic Encapsulated Step Irons Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346516.088	1.703			0	8.001	26.535	150					
N. 369861.913				0	8.001	26.535	150					
F47	27.777			1	1	0	8.001	25.927	150	1200	Plastic Encapsulated Step Irons Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346519.887	1.700			0	8.002	25.927	150					
N. 369663.630				0	8.002	25.927	150					
F48	25.868			1	1	0	9.000	24.528	150	1500	Plastic Encapsulated Step Irons Type 4	CS 1200 x 675 HCS 1200 x 675 D400
E. 346475.242	1.190			0	8.002	25.636	150					
N. 369945.080				0	8.000	23.955	150					
F49	27.677			1	2	0	8.003	23.955	150	1200	GRP Ladder Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346520.631	3.572			0	8.003	23.955	150					
N. 369651.431				0	8.003	23.819	150					
F50	28.119			1	1	0	8.003	23.819	150	1200	GRP Ladder Type 1	CS 600 x 600 HCS 600 x 750 D400
E. 346538.961	4.150			0	8.004	23.819	150					
N. 369651.578				0	8.004	23.819	150					

Manhole Number	Cover Level	Depth To Sight	Connections	Pipe			Manhole Size	Types	
				Code	Inverts	Dams		Manhole	Cover
F21									
		38.504		1	1.009	34.323	150		
E.	346698.598	4.031					1200	GRP Ladder Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389891.686			0	1.010	34.323			
F22									
		37.982		1	1.010	32.296	150		
E.	346723.235	5.546					1200	GRP Ladder Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389787.763			0	1.011	32.296			
F23									
		37.300		1	1.011	31.999	150		
E.	346735.505	5.151					1200	GRP Ladder Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389749.858			0	1.012	31.999			
F24									
		38.228		1			1200	Plastic Encapsulated Step Irons Type 1	C5 600 x 600 HCS 600 x 750 D400
E.	346781.020	2.378							
N.	389904.689			0	4.000	35.700			
F25									
		37.890		1	4.000	35.079	150		
E.	346762.742	2.621					1200	Plastic Encapsulated Step Irons Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389769.340			0	4.001	35.079			
F26									
		37.642		1	4.001	34.916	150		
E.	346799.072	2.576					1200	Plastic Encapsulated Step Irons Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389748.226			0	4.002	34.916			
F27									
		36.800		1	2	33.812	150		
E.	346734.426	4.820			1.012	31.830			
N.	389727.049			0	1.013	31.830	150	GRP Ladder Type 1	C5 600 x 600 HCS 600 x 750 D400
F28									
		34.117		1	1.013	31.476	150		
E.	346680.110	2.491					1200	Plastic Encapsulated Step Irons Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389711.733			0	1.014	31.476			
F29									
		31.279		1			1000	Plastic Encapsulated Step Irons Type 4	C5 1200 x 675 HCS 1200 x 675 D400
E.	346674.548	1.200							
N.	389652.502			0	5.000	29.929			
F30									
		32.040		1	5.000	29.530	150		
E.	346697.494	2.380					1200	Plastic Encapsulated Step Irons Type 1	C5 600 x 600 HCS 600 x 750 D400
N.	389875.354			0	5.001	29.530			

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
Coordinates	Depth To Bottom		Code	Invert/S	Diams		Manhole	Cover
F51	28.450		1	8.004	23.677	150		
E. 346557.312	4.623							
N. 389957.457								
F52	28.745		1	8.005	23.677	150		
E. 346571.039	5.090							
N. 389956.950								
F53 Penslock	28.500		1	1.018	23.470	225		
E. 346581.120	4.933							
N. 389956.267								
F54 Wet Well	28.500		1	1.019	23.352	225		
E. 346583.250	4.957							
N. 389952.291								
F55 Termination Manhole	32.387		1	RM	31.017	150		
E. 346438.696	1.200							
N. 389991.605								
F56	31.896		1	Gravity	30.299	150		
E. 346394.166	1.407							
N. 390067.872								
F57	31.301		1	Gravity	29.835	150		
E. 346368.136	1.316							
N. 390121.056								
F57A	31.545		1	Gravity	29.770	150		
E. 346371.024	1.625							
N. 390126.773								
Saddle Connection			1	Gravity	29.737	150		
E. 346369.892								
N. 390129.506								
F58	30.026		1	6.009	28.745	150		
E. 346608.633	1.131							
N. 389990.910								

Manhole Number		Cover Level	Pipe			Manhole Size	Types	
Coordinates	Depth To Soils	Connections	Code	Inverts	Diams		Manhole	Cover
F21A	38.593	1 	1	1.010	34.246	150		
E. 3467611.747	5.603					1200	GSP Leader Type 1	C8 600 x 600 HCS 600 x 750 C400
N. 388861.702			0	1.011	32.840	150		

This drawing is to be read in conjunction with the construction (design and management) regulations 2015.

2. Construction details to be in accordance with Knowsley Council's design guide.

3. The contractor shall comply with the following:-

a. All operations should be carried out in accordance with the general health and safety policy of Bloor Homes Ltd and all relevant health and safety legislation

- b. The local authority and service companies are to be notified prior to commencement of work on site.
- c. The location and depth of any potential positions and depths of services likely to be affected by the works should be established by means of a hand dig in close liaison with the service companies, the contractor shall immediately advise Leas Roxborough of any services exposed which may affect the design.
- d. The location and depth of any services/apparatus shown is approximate only and has been based on plans received from the statutory undertakers.
- e. Leas Roxborough Ltd do not accept any responsibility for the accuracy of this or any other drawings which indicate the position and/or depth of services/apparatus.
- f. The contractor must contact the relevant statutory undertakers and be in possession of the latest available drawings from the statutory undertakers which shows details of their services/apparatus.

4. All gravity sewerage works to be in accordance with "Sewers for Adoption" 6th Edition and United Utilities standard details. Pump station to be designed to "Sewers for Adoption" 7th Edition and United Utilities standard details.

5. Lees Roxburgh's appointment is restricted to the design of the permanent civil/structural works only and have no site role. The contractor is thus entirely responsible for compliance with the Health and Safety at Work Act. They shall be specifically responsible for all temporary works and for the stability of the affected land and structures.

Note:
Co-ordinates refer to pipe centreline intersections and not manhole centers. refer to 1:20 manhole schedules for alignment of manholes relative to pipe positions.

Rocker pipes will be provided in accordance with UU standard details. All rocker pipe joints to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement.

The details provided on this drawing are subject to comment by all the relevant approving authorities. Until such time as all comments have been received and incorporated onto the drawings, all the information provided and associated costing's, are used at Bloor Homes risk and no liability will be accepted by Lees Roxburgh Ltd.

Prior to any construction, the contractor must confirm the precise location, invert level and pipe diameter of the receiving drainage system, and the existing combined network. Lees Roxburgh must be advised immediately of any variation to that which the design has been based.

T	Amended to phase 2 redesign	CB	23:02.28
S	Outfall route amended	CB	09:18.02
N	F57 details amended	CB	19:05.05
Q	Amended to amended design	NL	17:03.05
S	Manhole F55 cover level amended	NL	18:05.03
N	Amended design details added	NL	19:01.01
M	Manhole F57 added	NL	09:11.01
L	Manhole F55 and F56 added	CB	05:10.07
K	Manhole F48 cover level amended to S278 design	CB	25:03.03
J	Manhole schedules for F44, F52, F53 & F54 details amended.	NL	02:02.02
H	Manhole schedules for F23 & F46 amended.	NL	27:02.01
G	Side fall for F45 & F7,7TH amended	CB	14:11.02
F	Updated Manhole schedules to suit updated drainage design	CB	22:10.02
E	Manhole schedules split into phases	DW	08:04.02
D	Updated Manhole schedules to suit updated drainage design.	DW	08:01.02
C	MH's updated to suit 1-20 schedules.	DW	03:12.01
B	Added manholes F1-16 to the sheet.	DW	21:11.01
A	Added Manhole schedules to suit updated drainage design.	DW	21:11.01

Rev	Revision	By	Date
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Halsnead Garden Village
Whiston

Foul Water Manhole Schedules

LeesRoxburgh
Consulting Engineers

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Science Park South
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Job No. 6238	Drawing No. 02-05-2	Revision. T
Scale NTS@A1		Date April 2018
Drawn By DW	Designed By DW	Checked By CB