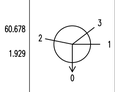
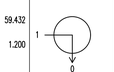
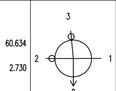
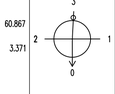
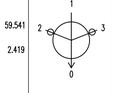
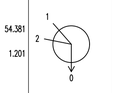
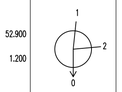
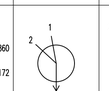
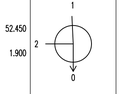
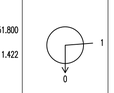
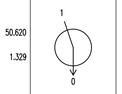
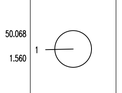
Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit		Code	Inverts	Diams			Manhole	Cover
F26	62.017		1 Lateral	60.100	150				
	1.767						1200	B	D400
E. 440250.993			0 1.000	60.100	150				
N. 402412.046									
F27	60.678		1 1.000	58.599	150				
	1.929		2 Lateral	58.599	150				
			3 Lateral	58.599	150		1500	B	D400
E. 440290.132			0 1.001	58.599	150				
N. 402440.390									
F28	61.959		1 Lateral	60.459	150				
	1.350						1200	C	D400
E. 440214.882			0 2.000	60.459	150				
N. 402461.118									
F29	59.432		1 Lateral	58.082	150				
	1.200						1200	C	D400
E. 440275.619			0 3.000	58.082	150				
N. 402505.173									
F30	60.634		1 3.000	57.754	150				
	2.730		2 2.000	58.754	150 BD				
			3 Lateral	58.754	150 BD		1500	A	D400
E. 440254.410			0 2.001	57.754	150				
N. 402489.741									
F31	60.867		1 2.001	57.346	150				
	3.371		2 1.001	57.346	150				
			3 Lateral	59.236	150 BD		1500	A	D400
E. 440273.543			0 1.002	57.346	150				
N. 402463.296									
F32	59.541		1 1.002	56.972	150				
	2.419		2 Lateral	57.972	150 BD				
			3 Lateral	57.972	150 BD		1200	A	D400
E. 440297.807			0 1.003	56.972	150				
N. 402480.867									
F33	55.216		1 1.003	53.864	150				
	1.202						1200	C	D400
E. 440350.987			0 1.004	53.864	150				
N. 402519.383									
F34	54.381		1 1.004	53.030	150				
	1.201		2 Lateral	53.030	150				
							1200	C	D400
E. 440362.665			0 1.005	53.030	150				
N. 402520.031									
F35	52.748		1 1.005	51.332	150				
	1.266						1200	C	D400
E. 440382.992			0 1.006	51.332	150				
N. 402504.072									

Manhole Number	Cover Level	Connections	Pipe				Manhole Size	Types	
Coordinates	Depth To Soffit		Code	Inverts	Diams			Manhole	Cover
F36	53.951		1 Lateral	52.601	150				
	1.200						1200	C	D400
E. 440362.181			0 4.000	52.601	150				
N. 402459.229									
F37	52.900		1 4.000	51.550	150				
	1.200		2 Lateral	51.550	150				
							1200	C	D400
E. 440388.807			0 4.001	51.550	150				
N. 402478.571									
F38	52.435		1 1.006	51.047	150				
	1.238		2 4.001	51.047	150				
			3 Lateral	51.047	150		1500	C	D400
E. 440398.688			0 1.007	51.047	150				
N. 402487.482									
F39	52.881		1 1.007	50.786	150				
	1.945		2 Lateral	50.786	150				
							1200	B	D400
E. 440413.544			0 1.008	50.786	150				
N. 402472.890									
F40	52.860		1 1.008	50.538	150				
	2.172		2 Lateral	50.538	150				
							1200	B	D400
E. 440425.284			0 1.009	50.538	150				
N. 402457.202									
F41	52.450		1 1.009	50.400	150				
	1.900		2 Lateral	50.400	150				
							1500	B	D400
E. 440430.246			0 1.010	50.400	150				
N. 402447.345									
F42	51.800		1 1.010	50.228	150				
	1.422						1200	C	B125
E. 440435.897			0 1.011	50.228	150				
N. 402434.757									
F43	50.620		1 1.011	49.141	150				
	1.329						1200	C	B125
E. 440453.808			0 1.012	49.141	150				
N. 402441.288									
F44	50.068		1 1.011	48.358	150				
	1.560						1200	Existing	Existing
E. 440467.501			Existing	48.358	150				
N. 402440.939									

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 Kitemarked.
2. 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.
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 BSI 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 "S" 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.
8. Adoptable plastic sewer pipes to be BSI Kitemarked (Certified to WIS 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 slawares 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 an 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 "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.
12. Surface water and foul rising mains to be provided with marker tape above the rising mains.
13. If plastic pipes are to be used then the following should apply:-
    a. All adoptable sewers to be BSI Kitemark (Certified to WIS 4-35-01 and BS/EN13476).
    b. Bedding and backfill material to conform to the requirements of Water Industry Specification 4-08-02 (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. 450mmø chamber for 100mmø foul & 150mmø 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. Maximum 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 is required.
19. Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
20. Strength of vitrified clay pipes (if used) to be 40KN/m for 100ø, 40KN/m for 150ø, 45KN/m for 225ø and 72KN/m for 300ø. 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 fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.
24. 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 stanks across trenches and/or at manhole locations at 25m intervals to restrict water movement along the excavation shall be provided.
25. 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.
26. Do not scale from this drawing.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	Chk	Apvd
D	MI	31.03.23	F32,33,34,35,38 cover levels amended		MI
C	JMG	09.11.22	Drainage updated to avoid services & new outfall levels		MI
B	JMG	08.07.22	Updated for IWNL submission		MI
A	JMG	27.06.22	Revised to Millers Layout		MI
/	JMG	27.05.22	Issued for approval	DJG	MI

ARP ASSOCIATES
Chartered Consulting Engineers
Northwest House ● 5 & 6 Northwest Business Park ● Servia Hill, Leeds ● LS6 2QH
☎ 0113 245 8498 🖷 0113 244 3864 ✉ leeds@arpassociates.co.uk ❁ www.arpassociates.co.uk
ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 3771811, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE
FOUL WATER MANHOLE SCHEDULE NETWORK 2

PROJECT
GYPSY LANE, WOMBWELL

CLIENT
MILLER HOMES (YORKSHIRE) LTD

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn	Chk.
N/A	MAY 22	JMG	DJG

Drg. No. 425/61/11.02 Rev D