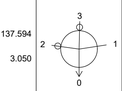
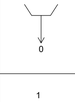
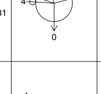
Highway Drain

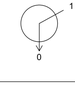
Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe: Code	Inverts	Diams	Manhole Size	Types: Manhole	Cover
S1	140.433		1 GULLY	139.050	150	1350	Type C	D400
E. 418357.699	1.233		0 1.000	139.050	150			
N. 418047.582								
S2	139.683		1 1.000	138.276	150	1350	Type C	D400
E. 418345.815	1.257		0 1.001	138.276	150			
N. 418036.497								
S3	138.728		1 1.001	137.331	150	1350	Type C	D400
E. 418338.413	1.247		0 1.002	137.331	150			
N. 418023.852								
S4	136.211		1 Lateral S1a	134.725	150	1500	Type C	D400
E. 418348.295	1.336		2 Gully	134.725	150			
N. 417958.518			3 Gully	134.725	150			
			4 Lateral S1b	134.725	150			
			0 2.000	134.650	225			
S5	137.594		1 2.000	134.319	225	1500	Type A	D400
E. 418337.344	3.050		2 1.002	135.744	150			
N. 418006.989			3 Lateral S5a	135.894	150			
			0 1.003	134.244	300			
S6	136.944		1 1.003	134.122	300	1200	Type B	D400
E. 418319.039	2.522		0 1.004	134.122	300			
N. 418005.682								

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe: Code	Inverts	Diams	Manhole Size	Types: Manhole	Cover
S7	136.052		1 1.004	134.015	300	1350	Type B	D400
E. 418303.968	1.737		2 Lateral S7a	135.000	150			
N. 418011.229			0 1.005	134.015	300			
S8	135.147		1 1.005	133.237	300	1350	Type B	D400
E. 418294.867	1.610		2 Lateral S8a	133.387	150			
N. 418021.862			0 1.006	133.237	300			
S9	132.945		1 1.006	130.487	300	1500	Type B	D400
E. 418277.863	2.158		2 Lateral S9b	130.637	150			
N. 418050.145			3 Lateral S9a	130.637	150			
			0 1.007	130.487	300			
S10	131.446		1 1.007	128.447	300	1350	Type B	D400
E. 418259.098	2.699		2 Lateral S10a	129.947	150			
N. 418069.300			0 1.008	128.447	300			
S11	129.363		1 1.008	126.548	300	1500	Type B	D400
E. 418231.071	2.515		2 Lateral S11a	127.773	150			
N. 418040.941			0 1.009	126.473	375			
S12	128.306		1 1.009	125.516	375	1500	Type B	D400
E. 418226.317	2.415		1 Lateral S12a	127.016	150			
N. 418026.385			0 1.010	125.516	375			

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe: Code	Inverts	Diams	Manhole Size	Types: Manhole	Cover
S13	127.317		1 1.010	124.150	375	1500	Type B	D400
E. 418229.110	2.792							
N. 418012.252			0 1.011	124.075	450			
S14	127.337		1 1.011	123.950	450	1500	Type B	D400
E. 418248.171	2.937		1 Lateral S14a	124.250	150			
N. 417980.119			0 1.012	123.950	450			
S15	127.883		1 1.012	123.841	450	1500	Type A	D400
E. 418274.589	3.592							
N. 417960.968			0 1.013	123.841	450			
S16	127.901		1 1.013	123.790	450	1500	Type A	D400
E. 418282.527	3.661		2 Lateral S16b	125.290	150			
N. 417947.976			3 Lateral S16a	125.290	150			
			0 1.014	123.790	450			
S17	124.398		1 1.014	122.696	450	1500	Type C	D400
E. 418287.966	1.252							
N. 417891.361			0 1.015	122.696	450			
S18	123.920		1 1.015	122.196	450	1500	Type C	D400
E. 418285.689	1.274							
N. 417884.067			0 1.016	122.196	450			

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe: Code	Inverts	Diams	Manhole Size	Types: Manhole	Cover
S19	123.289		1 1.016	121.609	450	1500	Type C	D400
E. 418278.970	1.230		2 Lateral S19a	121.909	150			
N. 417876.700			0 1.017	121.609	450			
S20	122.215		1 1.017	120.347	450	1500	Type C	D400
E. 418261.199	1.418							
N. 417870.189			0 1.018	120.347	450			
S21						-	Headwall	-
E. 418275.728								
N. 417827.501			0 3.000	117.900	750			
S22	121.638		1 3.000	117.673	750	1800	Type B	D400
E. 418252.657	3.215							
N. 417852.477			0 3.001	117.673	750			
S23	121.515		1 3.001	117.609	750	2700	Type A - Flow control manhole, refer to drawing 2298/03/12.01	D400
E. 418246.665	3.731		2 1.018	119.059	450			
N. 417860.014			3 Lateral S23a	119.109	150			
			4 Gully	119.109	150			
			0 1.019	117.559	225			
S24	115.329		1 1.019	113.800	225	1350	Type C	D400
E. 418183.919	1.304							
N. 417832.642			0 1.020	113.800	225			

Flow Control Manhole

Manhole Number / Coordinates	Cover Level / Depth To Soffit	Connections	Pipe: Code	Inverts	Diams	Manhole Size	Types: Manhole	Cover
S25	112.265		1 1.020	110.237	225	1200	Type B	D400
E. 418151.838	1.803							
N. 417848.151			0 1.021	110.237	225			
S26	107.770		1 1.021	105.546	225	1200	Type B	D400
E. 418113.264	1.999							
N. 417821.459			0 1.022	105.546	225			
S27	106.583		1 1.022	103.782	225	1200	Type B	D400
E. 418095.712	2.576							
N. 417823.236			0 1.023	103.782	225			
S28	100.650(T.B.C.)		1 1.023	99.300	225	1350	Type C	D400
E. 418066.298	1.125 (T.B.C.)							
N. 417780.115			0 1.024	99.300	225			
S10 (SHOP LANE SITE - BY OTHERS SEPERATE S104)	100.850		1 1.024	99.225	225	-	-	D400
E. 418057.272	1.400							
N. 417783.050								

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

N O T E S

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN

Yorkshire Water 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. Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
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 or the width of the canopy at mature height.
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 nonvehicular access areas) then a concrete slab should be provided above granular bed and surround.
8. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
9. Yorkshire Water policy is that Type "C" brick manholes and 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type "B" manhole with 1200mm diameter or 1500mm diameter rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
10. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
11. The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 45KN/m and 300mm dia. 72KN/m. The minimum crushing strength for concrete pipes should be – (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.
12. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
13. There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm ; if crossover is near the rocker then the clearance needed may need to be increased".

General Notes

14. Precast concrete manhole units shall comply with the relevant provisions of BS EN 1917 and BS 5911-3 and shall be manufactured from concrete with a Design Chemical Class DC-4 unless the sewerage company can be satisfied that a lower class will resist attack from soils and groundwater. Units which bed into bases shall be manufactured so that imposed vertical loads are transmitted directly via the full wall thickness of the unit. The profiles of joints between units and the underside of slabs shall be capable of withstanding applied loadings from such slabs and spigot-ended sections shall only be used where the soffit of the slab is recessed to receive them.
15. All levels of existing drainage to be confirmed prior to work commencing on site.
16. The contractor must allow for any fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	Chk	Apvd
/	IC	14.11.25	Preliminary issue	MI	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
MANHOLE SCHEDULE
SURFACE WATER

PROJECT
COCKLEY HILL,
KIRKHEATON

CLIENT
GLEESON HOMES

DRAWING STATUS
FOR APPROVAL

Scale	Date	Drawn
NTS	NOV 25	IC
		Chk. MI

Drg. No. 2298/03/11.01 Rev /