APPENDIX B – SITE DRAINAGE LAYOUTS

2655-21-06-506	-	Road and Main Sewer Layout – Phase 1a
2655-21-06-507	-	Road and Main Sewer Layout – Phase 1b
2655-21-06-508	-	Catchments Plan – Phase 1a
2655-21-06-509	-	Catchments Plan – Phase 1b

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate, any discrepancies shall be notified tg gta prior to works commencing.

2. Tender or billing drawings shall not be used for construction or the issuing of materials.

3. Do not scale. All dimensions and levels to be site confirmed.

4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

5. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

ADOPTABLE MANHOLE SCHEDULE

REF	E	N	COVER LEVEL	INVERT LEVEL	DEPTH (m)	DESCRIPTION	COVER TYPE
LATERAL FOUL WATER CHAMBERS							
FWMH1A	619948.923	161704.429	35.065	33.885	1.180	450mmØ PCC Type 3 (B.18)	B125
FWMH1B	619975.309	161720.272	35.000	33.860	1.140	450mmØ Plastic Type 3 (B.16)	A15
FWMH4.1	619990.944	161678.044	35.075	33.930	1.145	450mmØ Plastic Type 3 (B.16)	A15
FWMH4.2	619971.142	161650.423	34.970	33.770	1.200	450mmØ Plastic Type 3 (B.16)	A15
FWMH4.3	619990.485	161662.033	35.045	33.845	1.200	450mmØ Plastic Type 3 (B.16)	A15
FWMH6.1	620024.030	161650.751	35.100	33.772	1.328	450mmØ Plastic Type 3 (B.16)	A15
FWMH7.1	620026.565	161680.867	35.195	33.905	1.290	450mmØ Plastic Type 3 (B.16)	A15
FWMH9.1	619994.188	161613.599	35.095	33.795	1.300	450mmØ Plastic Type 3 (B.18)	B125
FWMH9.2	620005.580	161620.807	35.095	33.455	1.640	450mmØ PCC Type 3 (B.18)	B125
FWMH9.3	620010.968	161603.798	34.550	33.500	1.050	450mmØ Plastic Type 3 (B.16)	A15
FWMH11.2	620067.956	161641.439	33.909	33.146	0.754	450mmØ PCC Type 3 (B.18)	B125
FWMH11.2	620044.382	161633.506	34.395	32.835	1.560	450mmØ Plastic Type 3 (B.16)	A15
FWMH12.1	620040.370	161604.778	34.450	33.385	1.065	450mmØ Plastic Type 3 (B.16)	A15
FWMH14.1	620034.006	161569.594	34.050	32.985	1.065	450mmØ Plastic Type 3 (B.16)	A15
FWMH29.1	620054.384	161711.640	34.910	33.420	1.490	450mmØ Plastic Type 3 (B.16)	A15
FWMH30.1	620067.802	161709.416	34.845	33.530	1.315	450mmØ Plastic Type 3 (B.16)	A15
FWMH33.1	620115.200	161693.061	34.720	33.285	1.435	450mmØ Plastic Type 3 (B.16)	A15
FWMH36.1	620200.930	161661.186	33.125	31.030	2.095	450mmØ Plastic Type 3 (B.16)	A15
FWMH37.1	620112.554	161659.865	34.170	33.240	0.930	450mmØ Plastic Type 3 (B.16)	A15
FWMH51.1	620192.449	161648.219	33.320	32.310	1.015	450mmØ Plastic Type 3 (B.16)	A15
FWMH53.1	620268.080	161661.884	31.213	30.260	0.953	450mmØ PCC Type 3 (B.18)	D400

STREET LIGHTING SPECIFICATION

1. THE LIGHTING DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH BS5489_2013 TO PROVIDE INDICATIVE COLUMN POSITIONS. FOR TRANSPARENCY AND THE AVOIDANCE OF DOUBT DRAWING no. ASD-SL-170077 IS NOT TO BE USED AS CONSTRUCTION DRAWING AS A SITE SURVEY HAS NOT BEEN CARRIED OUT IN ACCORDANCE WITH CDM 2015 AND HEA GUIDELINES. THEREFORE THE RESPONSIBILITIES OF ELIMINATING AND REDUCING RISK WILL NEED TO MITIGATED BY A COMPETENT PRINCIPLE DESIGNER.
2. ALL LANTERNS TO BE MOUNTED AT 0 DEGREES TILT UNLESS OTHERWISE SPECIFIED. IF A BRACKET ARM AS BEEN UTILISED THE APPOINTED CONTRACTOR WILL BE RESPONSIBLE FOR THE OVERALL TILT ANGLES.
3. COLUMN NUMBERING TO BE CONFIRMED BY THE LOCAL AUTHORITY/CONTRACTOR BEFORE WORKS COMMENCEMENT.
4. 6M LIGHTING COLUMN TO SPECIFICATION WITH 4K POST TOP MOUNTED HWD4KLED1250-S4 : ASD HIGHWAY DIAMOND SYSTER 4000K AUTO DISCONNECT 12 LED 500mA CLO 7PIN NEMA SOCKET S4 OPTIC IP66 MOUNTED AT 0 DEGREES TILT UNLESS OTHERWISE STATED. LANTERNS TO BE CONTROLLED IN LINE WITH THE SPECIFICATION.

Grid 1 (Phase 1a)
Results - Horizontal Illuminance (lux)
Eav = 5.56
Emin = 0.79
Emax = 17.29
Emin/Eav = 0.05
Emin/EaV = 0.14

ADOPTABLE MANHOLE SCHEDULE

REF	E	N	COVER LEVEL	INVERT LEVEL	DEPTH (m)	DESCRIPTION	COVER TYPE
MAIN FOUL WATER MANHOLES							
FWMH1	619969.643	161716.870	35.060	33.582	1.478	450mmØ PCC Type 3 (B.18)	D400
FWMH2	619973.673	161710.158	35.140	33.484	1.656	450mmØ PCC Type 3 (B.18)	D400
FWMH3A	619976.746	161675.935	34.960	33.054	1.906	450mmØ PCC Type 3 (B.18)	D400
FWMH3	619980.975	161669.288	34.850	32.955	1.895	450mmØ PCC Type 3 (B.18)	D400
FWMH4	619991.628	161670.219	34.745	32.174	2.571	1200mmØ PCC Type 2	D400
FWMH5	620037.784	161697.621	34.850	33.500	1.350	450mmØ PCC Type 3 (B.18)	D400
FWMH6	620035.445	161653.050	34.605	33.250	1.355	450mmØ PCC Type 3 (B.18)	D400
FWMH7	620035.519	161674.052	34.890	31.880	3.010	1200mmØ PCC Type 2	D400
						+ BD IL33.540 ON LATERAL	
FWMH8	620041.242	161673.608	35.000	31.841	3.159	1200mmØ PCC Type 1	B125
FWMH8	620041.242	161673.608	35.000	31.841	3.159	1200mmØ PCC Type 1	B125
PHASE 1a NETWORK TO EXISTING FW MH 1401							
FWMH9	620014.873	161619.538	34.700	33.285	1.415	450mmØ PCC Type 3 (B.18)	D400
FWMH10	620032.250	161626.267	34.470	33.052	1.418	450mmØ PCC Type 3 (B.18)	D400
FWMH11	620040.465	161630.024	34.315	32.769	1.546	450mmØ PCC Type 3 (B.18)	D400
FWMH12	620050.495	161604.585	33.960	32.560	1.400	450mmØ PCC Type 3 (B.18)	D400
FWMH13	620058.430	161587.602	33.485	31.220	2.265	1200mmØ PCC Type 2	D400
FWMH13A	620059.341	161582.055	33.300	31.182	2.118	1200mmØ PCC Type 2	D400
FWMH14	620047.082	161573.076	33.565	31.080	2.485	450mmØ Plastic Type 3 (B.16)	A15
FWMH15	620083.175	161563.185	32.570	31.370	1.200	450mmØ Plastic Type 3 (B.16)	A15
FWMH16	620106.066	161559.937	32.070	30.870	1.200	450mmØ Plastic Type 3 (B.16)	A15
FWMH17	620124.769	161567.360	32.290	30.618	1.672	1200mmØ PCC Type 2	B125
FWMH18	620144.868	161561.795	32.050	29.720	2.330	1200mmØ PCC Type 2	B125
FWMH19	620163.473	161537.185	30.900	29.334	1.566	450mmØ Plastic Type 3 (B.16)	A15
FWMH20	620097.674	161490.174	28.250	26.860	1.390	450mmØ Plastic Type 3 (B.16)	A15
FWMHA	620106.057	161607.703	33.345	32.315	1.030	450mmØ PCC Type 3 (B.18)	D400
PHASE 1a NETWORK TO EXISTING FWMH 1501							
FWMH21	620050.580	161751.896	34.620	33.370	1.250	450mmØ Plastic Type 3 (B.16)	A15
FWMH22	620054.437	161761.933	34.400	33.235	1.165	450mmØ Plastic Type 3 (B.16)	A15
FWMH23	620071.618	161776.375	34.550	32.955	1.595	450mmØ Plastic Type 3 (B.16)	A15
FWMH23A	620089.775	161778.848	34.525	32.725	1.800	450mmØ Plastic Type 3 (B.16)	A15
FWMH24	620111.446	161772.281	34.210	32.440	1.770	450mmØ PCC Type 3 (B.18)	D400
FWMH25	620146.744	161786.231	34.150	33.145	1.005	450mmØ Plastic Type 3 (B.16)	A15
FWMH25A	620135.822	161774.074	34.150	32.940	1.210	450mmØ Plastic Type 3 (B.16)	A15
FWMH25B	620129.584	161770.700	33.950	32.850	1.100	450mmØ Plastic Type 3 (B.16)	A15
FWMH26	620123.934	161771.657	34.005	32.778	1.227	450mmØ Plastic Type 3 (B.18)	D400
FWMH27	620118.086	161766.405	34.090	31.982	2.108	1200mmØ PCC Type 2	D400
FWMH28	620103.309	161746.495	34.400	31.816	2.584	1200mmØ PCC Type 2	D400
FWMH28A	620095.902	161730.118	34.630	31.696	2.934	1200mmØ PCC Type 2	D400
FWMH29	620053.246	161704.407	34.730	33.310	1.420	450mmØ PCC Type 3 (B.18)	D400
FWMH30	620065.642	161702.457	34.550	33.150	1.400	450mmØ PCC Type 3 (B.18)	D400
FWMH31	620083.243	161695.939	34.320	31.453	2.867	1200mmØ PCC Type 2	D400
FWMH32	620099.052	161690.083	34.240	31.340	2.900	1200mmØ PCC Type 2	D400
FWMH33	620116.222	161685.603	34.450	31.221	3.229	1200mmØ PCC Type 1	D400
FWMH34	620132.419	161687.822	34.550	31.112	3.438	1200mmØ PCC Type 2	D400
FWMH35A	620158.510	161711.844	34.175	32.735	1.440	450mmØ PCC Type 3 (B.18)	D400
FWMH35	620147.405	161696.604	34.400	30.996	3.404	1200mmØ PCC Type 1	D400
FWMH36	620188.532	161660.218	33.105	30.629	2.476	1200mmØ PCC Type 2	D400
FWMH37	620130.703	161643.801	33.900	32.634	1.266	450mmØ Plastic Type 3 (B.16)	A15
FWMH38	620133.416	161633.238	33.640	32.290	1.350	450mmØ PCC Type 3 (B.18)	D400
FWMH39	620141.031	161626.850	33.505	32.155	1.350	450mmØ PCC Type 3 (B.18)	D400
FWMH40	620154.173	161621.383	33.260	30.283	2.977	1200mmØ PCC Type 2	D400
						+ BD IL 31.780 FROM PN10.002	
FWMH41	620172.113	161605.511	32.660	30.123	2.537	1200mmØ PCC Type 2	D400
FWMH42	620177.144	161797.554	33.925	32.525	1.400	450mmØ PCC Type 3 (B.18)	B125
FWMH43	620192.196	161783.968	33.750	32.153	1.597	450mmØ Plastic Type 3 (B.16)	A15
FWMH44	620176.257	161736.207	33.800	32.450	1.350	450mmØ PCC Type 3 (B.18)	D400
FWMH45	620207.750	161769.057	33.505	31.883	1.622	450mmØ PCC Type 3 (B.18)	D400
FWMH46	620215.092	161762.018	33.655	31.755	1.900	450mmØ Plastic Type 3 (B.16)	A15
FWMH47	620226.539	161719.037	32.600	31.149	1.451	450mmØ Plastic Type 3 (B.16)	A15
FWMH48	620255.513	161693.105	31.500	30.372	1.128	450mmØ PCC Type 3 (B.18)	D400
FWMH49	620242.105	161670.562	31.875	30.041	1.834	1200mmØ PCC Type 2	D400
FWMH50	620231.199	161653.661	32.125	29.906	2.219	1200mmØ PCC Type 2	D400
FWMH51	620210.258	161642.075	32.370	29.746	2.624	1200mmØ PCC Type 2	D400
FWMH52	620216.299	161624.183	31.790	29.620	2.170	1200mmØ PCC Type 2	D400
FWMH53	620276.960	161655.379	31.200	30.079	1.121	450mmØ Plastic Type 3 (B.16)	A15
FWMH54	620289.719	161632.363	30.800	29.750	1.050	450mmØ Plastic Type 3 (B.16)	A15
FWMH55	620264.619	161604.546	30.425	29.075	1.350	450mmØ PCC Type 3 (B.18)	D400
FWMH56	620242.738	161600.518	30.530	28.796	1.734	450mmØ PCC Type 3 (B.18)	D400
FWMH57	620235.260	161595.049	30.650	28.630	2.020	1200mmØ PCC Type 2	D400
FWMH58	620226.272	161579.298	30.735	28.509	2.226	1200mmØ PCC Type 2	D400
FWMH59	620180.409	161553.875	30.600	28.169	2.431	1200mmØ PCC Type 2	B125

ADOPTABLE MANHOLE SCHEDULE

REF	E	N	COVER LEVEL	INVERT LEVEL	DEPTH (m)	DESCRIPTION	COVER TYPE
MAIN SURFACE WATER MANHOLES							
PHASE 1a WESTERN NETWORK							
SWMH1	619941.645	161705.859	34.845	33.070	1.775	1200mmØ PCC Type 2	D400
SWMH2	619957.927	161719.580	35.130	32.944	2.186	1200mmØ PCC Type 2	D400
SWMH3	619978.500	161726.294	34.940	33.240	1.700	1200mmØ PCC Type 2	D400
SWMH4	619969.214	161721.413	35.000	32.876	2.124	1200mmØ PCC Type 2	D400
SWMH5	619974.994	161710.174	35.100	32.726	2.374	1200mmØ PCC Type 2	D400
SWMH6	619979.436	161667.026	34.875	32.548	2.327	1200mmØ PCC Type 2	D400
SWMH7	619998.475	161668.689	34.630	32.470	2.160	1200mmØ PCC Type 2	D400
SWMH8	620029.588	161720.408	34.670	32.895	1.775	1200mmØ PCC Type 2	D400
SWMH9	620045.549	161699.130	34.815	32.738	2.077	1200mmØ PCC Type 2	D400
SWMH10	620035.380	161686.688	34.980	32.568	2.412	1200mmØ PCC Type 2	D400
SWMH11	620032.352	161671.647	34.920	32.331	2.589	1200mmØ PCC Type 2	D400
SWMH12	620067.720	161648.933	34.065	32.290	1.775	1200mmØ PCC Type 2	D400
SWMH13	620057.020	161645.594	34.205	32.224	1.981	1200mmØ PCC Type 2	D400
SWMH14	620036.075	161635.962	34.460	31.938	2.522	1350mmØ PCC Type 2	D400
SWMH15	620009.782	161612.718	34.720	33.034	1.686	1200mmØ PCC Type 2	D400
SWMH15A	620029.043	161624.291	34.500	32.753	1.747	450mmØ PCC Type 3 (B.18)	D400
SWMH16	620039.153	161628.206	34.350	31.912	2.438	1350mmØ PCC Type 2	D400
SWMH17	620049.186	161603.055	33.995	31.828	2.167	1350mmØ PCC Type 2	D400
SWMH19A	620056.904	161585.459	33.500	31.768	1.732	1350mmØ PCC Type 2	D400
SWMH18	620042.964	161566.763	33.600	32.200	1.400	450mmØ PCC Type 3 (B.18)	D400
SWMH19	620057.877	161578.524	33.365	31.746	1.619	1350mmØ PCC Type 2	D400
SWMH20	620066.120	161568.077	33.100	31.175	1.925	1350mmØ PCC Type 2	D400
SWMH20A	620086.868	161554.995	31.995	30.070	1.925	1350mmØ PCC Type 2	D400
SWMH21	620098.531	161552.895	31.670	30.017	1.653	1350mmØ PCC Type 2	D400
SWMH22	620123.050	161560.925	32.090	30.690	1.400	450mmØ PCC Type 3 (B.18)	D400
SWMH23	620099.318	161547.748	31.510	29.925	1.585	1350mmØ PCC Type 2	B125
SWMH23A	620101.685	161633.065	33.950	32.319	1.631	450mmØ Plastic Type 3 (B.16)	B125
SWMH23B	620136.320	161599.805	33.250	31.800	1.450	450mmØ Plastic Type 3 (B.16)	B125
SWMH23C	620151.703	161565.534	32.100	30.700	1.400	450mmØ Plastic Type 3 (B.16)	B125
PHASE 1a EASTERN NETWORK							
SWMH24	620099.502	161782.628	34.420	33.129	2.291	450mmØ PCC Type 3 (B.18)	D400
SWMH25	620134.526	161784.551	34.050	32.432	1.618	1200mmØ PCC Type 2	D400
SWMH26	620120.879	161766.229	34.100	32.222	1.878	1200mmØ PCC Type 2	D400
SWMH27	620107.525	161749.862	34.290	32.135	2.155	1200mmØ PCC Type 2	D400
SWMH27A	620098.826	161733.936	34.540	32.060	2.480	1200mmØ PCC Type 2	D400
SWMH28	620063.689	161701.147	34.530	32.830	1.700	1200mmØ PCC Type 2	D400
SWMH29	620083.836	161693.466	34.240	31.883	2.357	1200mmØ PCC Type 2	D400
SWMH30	620102.983	161686.166	34.230	31.799	2.431	1200mmØ PCC Type 2	D400
SWMH31	620123.768	161683.558	34.465	31.713	2.752	1200mmØ PCC Type 2	D400
SWMH32	620143.415	161690.822	34.430	31.627	2.803	1200mmØ PCC Type 2	D400
SWMH33	620185.248	161797.844	33.845	32.145	1.700	1200mmØ PCC Type 2	D400
SWMH34	620209.625	161768.182	33.465	31.415	2.050	1200mmØ PCC Type 2	D400
SWMH35	620185.734	161744.418	33.600	31.216	2.384	1200mmØ PCC Type 2	D400
SWMH36	620166.845	161718.495	33.980	30.815	3.165	1200mmØ PCC Type 2	D400
SWMH37	620150.857	161696.553	34.305	30.325	3.980	1350mmØ PCC Type 2	D400
SWMH38	620201.725	161651.494	32.575	30.047	2.528	1350mmØ PCC Type 2	D400
SWMH39	620262.854	161677.483	31.400	29.356	2.044	1200mmØ PCC Type 2	D400
SWMH40	620251.502	161683.538	31.625	29.280	2.345	1200mmØ PCC Type 2	D400
SWMH41	620236.579	161656.582	32.000	28.980	3.020	1200mmØ PCC Type 2	D400
SWMH42	620225.593	161647.146	32.200	28.800	3.400	1200mmØ PCC Type 2	D400
SWMH43	620212.394	161645.933	32.375	28.400	3.975	1350mmØ PCC Type 1	D400
SWMH44	620213.134	161636.773	32.150	28.362	3.788	1350mmØ PCC Type 1	D400
SWMH45	620216.779	161626.885	31.805	28.318	3.487	1350mmØ PCC Type 1	D400
SWMH46	620237.760	161594.720	30.585	27.900	2.685	1350mmØ PCC Type 2	D400
						+ BD IL29.875 ON LATERAL	
SWMH47	620261.077	161599.993	30.350	28.650	1.700	1200mmØ PCC Type 2	D400
SWMH48	620123.328	161644.057	33.805	32.105	1.700	1200mmØ PCC Type 2	D400
SWMH49	620136.781	161628.239	33.540	31.521	2.019	1200mmØ PCC Type 2	D400
SWMH50	620174.796	161642.399	33.415	31.640	1.775	1200mmØ PCC Type 2	D400
SWMH51	620153.981	161618.872	33.180	31.330	1.850	1200mmØ PCC Type 2	D400
SWMH52	620169.392	161604.461	32.625	30.775	1.850	1200mmØ PCC Type 2	D400
SWMH53	620177.898	161551.708	30.600	27.569	3.031	1200mmØ PCC Type 2	B125
						+ BD IL29.369 FROM PN14.003	
SWMH54	620207.588	161556.494	29.000	27.337	1.663	1200mmØ PCC Type 2	D400
SWMH55	620250.098	161580.058	28.935	26.813	2.122	1350mmØ PCC Type 2	B125
LATERAL SURFACE WATER CHAMBERS							
SWMH6.1	619971.448	161662.293	35.020	33.620	1.400	450mmØ PCC Type 3 (B.18)	D400
SWMH7.1	619997.960	161674.585	34.840	34.065	0.775	450mmØ PCC Type 3 (B.18)	B125
SWMH8.1	620022.132	161715.821	34.835	33.635	1.200	450mmØ Plastic Type 3 (B.16)	A15
SWMH8.2	620044.065	161758.205	34.450	33.498	0.952	450mmØ PCC Type 3 (B.18)	D400
SWMH8.3	620036.989	161738.714	34.700	33.238	1.462	450mmØ PCC Type 3 (B.18)	D400
SWMH8.4	620036.700	161726.957	34.825	33.091	1.734	450mmØ PCC Type 3 (B.18)	D400
SWMH10.1	620027.615	161688.251	35.250	34.050	1.200	450mmØ Plastic Type 3 (B.16)	A15
SWMH23A.1	620094.428	161629.608	33.600	32.420	1.180	450mmØ PCC Type 3 (B.18)	D400
SWMH23B.1	620113.261	161601.465	33.300	32.450	0.850	450mmØ Plastic Type 3 (B.16)	A15
SWMH23B.2	620117.271	161594.557	33.400	32.250	1.150	450mmØ Plastic Type 3 (B.16)	A15
SWMH31.1	620120.081	161693.530	34.650	33.735	0.915	450mmØ Plastic Type 3 (B.16)	A15
SWMH32.1	620147.565	161685.433	34.635	33.435	1.200	450mmØ Plastic Type 3 (B.16)	A15
SWMH35.1	620178.424	161750.910	33.925	32.645	1.280	450mmØ PCC Type 3 (B.18)	B125
SWMH36.1	620157.790	161725.442	34.300	33.195	1.105	450mmØ Plastic Type 3 (B.16)	A15
SWMH36.2	620191.992	161697.905	33.675	31.750	1.925	450mmØ PCC Type 3 (B.18)	D400
SWMH38.1	620204.602	161657.015	32.730	31.670	1.060	450mmØ PCC Type 3 (B.18)	B125
SWMH39.1	620270.975	161657.363	31.103	29.703	1.400	450mmØ PCC Type 3 (B.18)	D400
SWMH46.1	620199.022	161573.247	31.400	30.665	0.735	450mmØ Plastic Type 3 (B.16)	A15

KEY

- Site Boundary
- Existing Foul Drainage
- Existing Surface Water Drainage
- Existing SW Drainage to be Removed
- Proposed Surface Water Drainage
- Proposed Foul Drainage
- Main Foul Sewer Manhole - Type 2
- Main Foul Sewer Manhole - Type 3
- Main Surface Water Manhole - Type 2
- Main Surface Water Manhole - Type 3
- Road Gully
- Direction of Fall
- Sewer Easement
- Street Nameplate
- Adoptable Lighting Column

GENERAL NOTES

1. ALL ADOPTABLE HIGHWAY CONSTRUCTION WORKS SHALL BE CARRIED OUT TO THE STANDARD LAID DOWN IN THE KENT COUNTY COUNCIL SPECIFICATIONS, WITH A VIEW TO ADOPTION UPON COMPLETION.
2. ALL ADOPTABLE SEWERS AND SHALL BE CONSTRUCTED TO THE STANDARDS LAID DOWN IN "SEWERS FOR ADOPTION" 7th EDITION, AND SOUTHERN WATER SPECIFICATIONS, WITH A VIEW TO ADOPTION UPON COMPLETION.
3. BEFORE CONNECTIONS ARE MADE TO EXISTING DRAINAGE, IT'S LEVELS IS TO BE CHECKED AND CONFIRMED AGAINST LEVELS SHOWN ON THIS DRAWINGS AND THIS OFFICE INFORMED OF ANY SIGNIFICANT DIFFERENCE. **NO CONNECTIONS ARE TO BE MADE TO THE EXISTING PUBLIC SEWERS PRIOR TO A S106 AGREEMENT WITH SOUTHERN WATER.**
4. ALL SEWERS WITH LESS THAN 1.2m OF COVER WHEN LAID BENEATH THE ROADS, OR 0.9m OF COVER IN OTHER AREAS, SHALL BE PROTECTED WITH CONCRETE IN ACCORDANCE WITH EITHER OF THE DETAILS SHOWN ON THE STANDARD DRAWING PROVIDED (FOR BEDDING TYPE LOCATIONS, REFER TO SEWER SECTIONS).
5. THE MINIMUM SIZE OF PIPE CONNECTING GULLIES TO THE DRAINAGE SYSTEM SHALL BE 150mm DIA. LAID AT A MINIMUM GRADIENT OF 1 IN 80.
6. IN ORDER TO MAINTAIN THE SATISFACTORY FUNCTIONING OF THE DRAINAGE SYSTEM, ALL ROAD AND YARD GULLIES ARE TO BE "TRAPPED".
7. ALL NON ADOPTABLE LATERALS BENEATH THE HIGHWAY SHALL BE BACKFILLED WITH LEAN MIX CONCRETE UNLESS OTHERWISE AGREED WITH THE HIGHWAYS ENGINEER.
8. THE DESIGN IS SUCH THAT WATER FROM PRIVATE AREAS DOES NOT SHED TO ADOPTABLE AREAS AND VICA VERSA.
9. THE CONTRACTOR IS TO KEEP A RECORD OF ANY VARIATIONS MADE ON SITE, INCLUDING THE RELOCATION OF SEWERS OR DRAINS, SO THAT AN AS CONSTRUCTED DRAWING CAN BE PREPARED UPON COMPLETION OF THE PROJECT.
10. THE CONTRACTOR SHOULD CHECK ALL DIMENSIONS ON SITE.
11. IT IS THE SUBCONTRACTORS RESPONSIBILITY TO ENSURE COMPLIANCE WITH CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE.

G	DISCLAIMER NOTE REMOVED	06.11.18	DMS ds
F	EXISTING SURFACE WATER DIVERSION REMOVED AS SWS COMMENTS	31.10.18	DMS ds
E	FULL TENDER ISSUE	25.09.18	DMS MR
D	MAIN DRAINAGE UPDATED TO SUIT CURRENT SITE LAYOUT - STORAGE PONDS REDESIGNED IN ACCORDANCE WITH KCC SPECIFICATIONS	03.09.18	DMS MR
C	DRAWING NUMBER UPDATED	18.08.18	DMS MR
B	PLANNING CONDITIONS ISSUE	22.03.18	DMS MR
A	PLANNING ISSUE	01.03.18	DMS MR
-	EXISTING DRAINAGE ISSUE	09.02.18	DMS MR
Rev	Amendments	Date	Dsn Chk

Status: PRELIMINARY

Client: REDROW HOMES

Project: PHASE 1a, HOPLANDS FARM HERSDEN, KENT

Title: ROAD & MAIN SEWER LAYOUT

Date: FEBRUARY 2018	Scale @ A0: 1:500
Base Layout Ref.	CAD File ref.
Clients Ref. 2665	Project Ref. 7178

gta Civils Consulting Engineers
Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS
Tel:01444 871444 Web: www.gtacivils.co.uk

Drawing Number: 2665-21-06-506 Rev. G

CONTROL CHAMBER FITTED WITH HYDRO-BRAKE FLOW CONTROL @ 2.0 l/sec

STORAGE POND PROVIDING 1433m³ STORAGE FOR THE 1 in 100 yr EVENT + 40% CLIMATE CHANGE ALLOWANCE @ 2.0 l/sec OUTFLOW - POND TO INCLUDE 900mm PERMANENT WATER DEPTH

CONTROL CHAMBER FITTED WITH HYDRO-BRAKE FLOW CONTROL @ 24.4 l/sec

OUTFLOW BASED ON 4 l/sec/Ha FOR GREENFIELD AREA OF 6.0978 Ha TO CANTERBURY CC REQUIREMENTS

STORAGE POND PROVIDING 1125m³ STORAGE FOR THE 1 in 100 yr EVENT + 40% CLIMATE CHANGE ALLOWANCE @ 24.4 l/sec OUTFLOW - POND TO INCLUDE 900mm PERMANENT WATER DEPTH

225mm HIGH CONCRETE FILLED SANDBAG CHECK WEIR DAMS AT 10m CENTRES BETWEEN CHAINAGES 60 & 150 BASE OF CHANNEL TO BE FINISHED WITH RIP-RAP STONE THROUGHOUT SWALE LENGTH

SCALE 0 10 20 30 40 50 metres

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Prior to commencement of works the contractor shall provide co-ordinated and dimensioned installation drawings and calculations and allow 10 working days for gta`s checking procedure prior to proceeding with those works or the ordering of materials.

3. Tender or billing drawings shall not be used for construction or the ordering of materials.

4. Do not scale. All dimensions and levels to be site confirmed.

5. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

6. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

7. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

GENERAL NOTES

1. ALL ADOPTABLE HIGHWAY CONSTRUCTION WORKS SHALL BE CARRIED OUT TO THE STANDARD LAID DOWN IN THE KENT COUNTY COUNCIL SPECIFICATIONS, WITH A VIEW TO ADOPTION UPON COMPLETION.

2. ALL ADOPTABLE SEWERS AND SHALL BE CONSTRUCTED TO THE STANDARDS LAID DOWN IN "SEWERS FOR ADOPTION" 7th EDITION, AND SOUTHERN WATER SPECIFICATIONS, WITH A VIEW TO ADOPTION UPON COMPLETION.

3. BEFORE CONNECTIONS ARE MADE TO EXISTING DRAINAGE, IT'S LEVEL IS TO BE CHECKED AND CONFIRMED AGAINST LEVELS SHOWN ON THIS DRAWINGS AND THIS OFFICE INFORMED OF ANY SIGNIFICANT DIFFERENCE. **NO CONNECTIONS ARE TO BE MADE TO THE EXISTING PUBLIC SEWERS PRIOR TO A S106 AGREEMENT WITH SOUTHERN WATER.**

4. ALL SEWERS WITH LESS THAN 1.2m OF COVER WHEN LAID BENEATH THE ROADS, OR 0.9m OF COVER IN OTHER AREAS, SHALL BE PROTECTED WITH CONCRETE IN ACCORDANCE WITH EITHER OF THE DETAILS SHOWN ON THE STANDARD DRAWING PROVIDED (FOR BEDDING TYPE LOCATIONS, REFER TO SEWER SECTIONS).

5. THE MINIMUM SIZE OF PIPE CONNECTING GULLIES TO THE DRAINAGE SYSTEM SHALL BE 150mm DIA. LAID AT A MINIMUM GRADIENT OF 1 IN 80.

6. IN ORDER TO MAINTAIN THE SATISFACTORY FUNCTIONING OF THE DRAINAGE SYSTEM, ALL ROAD AND YARD GULLIES ARE TO BE "TRAPPED".

7. ALL NON ADOPTABLE LATERALS BENEATH THE HIGHWAY SHALL BE BACKFILLED WITH LEAN MIX CONCRETE UNLESS OTHERWISE AGREED WITH THE HIGHWAYS ENGINEER.

8. THE DESIGN IS SUCH THAT WATER FROM PRIVATE AREAS DOES NOT SHED TO ADOPTABLE AREAS AND VICA VERSA.

9. THE CONTRACTOR IS TO KEEP A RECORD OF ANY VARIATIONS MADE ON SITE, INCLUDING THE RELOCATION OF SEWERS OR DRAINS, SO THAT AN AS CONSTRUCTED DRAWING CAN BE PREPARED UPON COMPLETION OF THE PROJECT.

10. THE CONTRACTOR SHOULD CHECK ALL DIMENSIONS ON SITE.

11. IT IS THE SUBCONTRACTORS RESPONSIBILITY TO ENSURE COMPLIANCE WITH CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE.

KEY

- Site Boundary
- Existing Foul Drainage
- Existing Surface Water Drainage
- Existing SW Drainage to be Removed
- Proposed Surface Water Drainage
- Proposed Foul Drainage
- Main Foul Sewer Manhole - Type 2
- Main Foul Sewer Manhole - Type 3
- Main Surface Water Manhole - Type 2
- Main Surface Water Manhole - Type 3
- Road Gully
- Direction of Fall
- Sewer Easement
- Street Nameplate
- Adoptable Lighting Column
- Adoptable 'Mid-Hinged'

STREET LIGHTING SPECIFICATION

1. THE LIGHTING DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH BS5489_2015 TO PROVIDE INDICATIVE COLUMN POSITIONS. FOR TRANSPARENCY AND THE AVOIDANCE OF DOUBT DRAWING no. ASD-SL-170077 IS NOT TO BE USED AS CONSTRUCTION DRAWING AS A SITE SURVEY HAS NOT BEEN CARRIED OUT IN ACCORDANCE WITH CDM 2015 AND HEA GUIDELINES. THEREFORE THE RESPONSIBILITIES OF ELIMINATING AND REDUCING RISK WILL NEED TO MITIGATED BY A COMPETENT PRINCIPLE DESIGNER.
2. ALL LANTERNS TO BE MOUNTED AT 0 DEGREES TILT UNLESS OTHERWISE SPECIFIED. IF A BRACKET ARM AS BEEN UTILISED THE APPOINTED CONTRACTOR WILL BE RESPONSIBLE FOR THE OVERALL TILT ANGLES.
3. COLUMN NUMBERING TO BE CONFIRMED BY THE LOCAL AUTHORITY/CONTRACTOR BEFORE WORKS COMMENCEMENT.
4. 6M LIGHTING COLUMN TO SPECIFICATION WITH 4K POST TOP MOUNTED HWD4KLED1250-S4 : ASD HIGHWAY DIAMOND OYSTER 4000K AUTO DISCONNECT 12 LED 500mA CLO 7PIN NEMA SOCKET S4 OPTIC 1P66 MOUNTED AT 0 DEGREES TILT UNLESS OTHERWISE STATED. LANTERNS TO BE CONTROLLED IN LINE WITH THE SPECIFICATION.

Grid (Phase 1b)
Results - Horizontal Illuminance (lux)
Eav = 5.70
Emin = 0.80
Emax = 18.88
Emin/Emax = 0.04
Emin/EaV = 0.14

STORAGE POND PROVIDING 606m³ STORAGE FOR THE 1 in 100 yr EVENT + 40% CLIMATE CHANGE ALLOWANCE

CONTROL CHAMBER FITTED WITH HYDRO-BRAKE FLOW CONTROL @ 5.1 l/sec

OUTFLOW BASED ON 4 l/sec/Ha FOR GREENFIELD AREA OF 1.2757 Ha TO CANTERBURY CC REQUIREMENTS

225mm HIGH CONCRETE FILLED SANDBAG CHECK WEIR DAMS AT 10m CENTRES BETWEEN CHAINAGES 10 & 120 BASE OF CHANNEL TO BE FINISHED WITH RIP-RAP STONE THROUGHOUT SWALE LENGTH

300mmø PIPED OUTFALL TO EXISTING DITCH

ADOPTABLE MANHOLE SCHEDULE

REF	E	N	COVER LEVEL	INVERT LEVEL	DEPTH (m)	DESCRIPTION	COVER TYPE
MAIN FOUL WATER MANHOLES							
PHASE 1b NETWORK							
FWMH60	620554.167	162022.491	30.750	29.400	1.350	450mmø PCC Type 3 (B.18)	D400
FWMH61	620570.244	161990.079	30.400	28.897	1.503	450mmø PCC Type 3 (B.18)	D400
FWMH62	620575.991	161954.393	29.900	28.154	1.746	450mmø PCC Type 3 (B.18)	D400
FWMH63	620568.538	161942.146	30.060	27.435	2.625	1200mmø PCC Type 2	D400
FWMH64	620546.091	161931.011	30.400	27.267	3.133	1200mmø PCC Type 2	D400
FWMH65	620501.262	161985.565	31.195	29.845	1.350	450mmø PCC Type 3 (B.18)	D400
FWMH66	620495.876	161961.537	31.250	29.537	1.713	450mmø PCC Type 3 (B.18)	D400
FWMH67	620499.392	161938.472	30.950	29.245	1.705	450mmø PCC Type 3 (B.18)	D400
FWMH68	620503.682	161928.014	30.810	29.103	1.707	450mmø PCC Type 3 (B.18)	D400
FWMH69	620513.898	161915.043	30.510	27.027	3.483	1200mmø PCC Type 1 + BD IL 28.896 FROM PN15.003	D400
FWMH70	620520.217	161900.913	30.310	26.923	3.387	1200mmø PCC Type 1	D400
FWMH71	620534.057*	161873.012*	29.600	24.645*	*4.955	1200mmø PCC Type 1 New Manhole on Existing 300mmø FWS Assumed Location and Depth * to be confirmed on site	B125
MAIN SURFACE WATER MANHOLES							
PHASE 1b NETWORK							
SWMH56	620556.027	162024.366	30.780	29.005	1.775	1200mmø PCC Type 2	D400
SWMH57	620540.456	161972.971	30.400	28.550	1.850	1200mmø PCC Type 2	D400
SWMH58	620534.995	161983.980	30.365	28.499	1.866	1200mmø PCC Type 2	D400
SWMH59	620567.951	162000.327	30.500	28.348	2.152	1200mmø PCC Type 2	D400
SWMH60	620574.810	161986.499	30.240	28.284	1.956	1200mmø PCC Type 2	D400
SWMH61	620577.765	161951.887	29.850	27.925	1.925	1350mmø PCC Type 2	D400
SWMH62	620570.532	161941.280	30.000	27.885	2.115	1350mmø PCC Type 2	D400
SWMH63	620539.757	161925.237	30.440	27.778	2.662	1350mmø PCC Type 2	D400
SWMH64	620500.863	161992.493	31.170	29.470	1.700	1200mmø PCC Type 2	D400
SWMH65	620494.199	161970.331	31.400	29.180	2.222	1200mmø PCC Type 2	D400
SWMH66	620498.087	161935.573	30.970	28.667	2.303	1200mmø PCC Type 2	D400
SWMH67	620505.197	161922.409	30.775	28.480	2.295	1200mmø PCC Type 2	D400
SWMH68	620513.308	161912.116	30.530	27.687	2.843	1350mmø PCC Type 2	D400
SWMH69	620596.711	161913.970	28.900	27.200	1.700	1200mmø PCC Type 2	D400
SWMH70	620568.205	161922.607	29.710	28.010	1.700	1200mmø PCC Type 2	D400
SWMH71	620578.218	161902.422	29.180	26.832	2.348	1200mmø PCC Type 2	D400
SWMH72	620529.779	161878.428	29.700	26.536	3.164	1350mmø PCC Type 2	B125
SWMH73	620512.414	161884.740	29.950	26.479	3.471	1350mmø PCC Type 1	B125
SWMH74	620499.337	161878.253	29.720	26.434	3.286	1350mmø PCC Type 2	B125
SWMH75	620536.682	161799.207	22.780	20.855	1.925	1350mmø PCC Type 2	B125
LATERAL FOUL WATER CHAMBERS							
FWMH60.1	620533.802	162012.390	30.960	29.905	1.055	450mmø Plastic Type 3 (B.16)	A15
FWMH64.1	620542.226	161938.802	30.855	29.595	1.260	450mmø Plastic Type 3 (B.16)	A15
LATERAL SURFACE WATER CHAMBERS							
SWMH56.1	620527.593	162010.262	30.925	29.725	1.200	450mmø PCC Type 3 (B.18)	B125
SWMH63.1	620543.036	161934.887	30.670	29.775	0.895	450mmø PCC Type 3 (B.18)	B125

Rev	Amendments	Date	Dsn	Chk
F	DISCLAIMER NOTE REMOVED	06.11.18	DMS	ds
E	SWALE CROSSING OF EXISTING WATER MAIN HIGHLIGHTED	31.10.18	DMS	ds
D	FULL TENDER ISSUE	25.09.18	DMS	MR
C	MAIN DRAINAGE UPDATED TO SUIT CURRENT SITE LAYOUT - STORAGE PONDS REDESIGNED IN ACCORDANCE WITH KCC SPECIFICATIONS	03.09.18	DMS	MR
B	DRAWING NUMBER UPDATED	18.08.18	DMS	MR
A	PLANNING CONDITIONS ISSUE	22.03.18	DMS	MR
-	PLANNING ISSUE	01.03.18	DMS	MR

Status: PRELIMINARY

Client: REDROW HOMES

Project: PHASE 1b, HOPLANDS FARM HERSDEN, KENT

Title: ROAD AND MAIN SEWER LAYOUT

Date	Scale @ A0
FEBRUARY 2018	1:500
Base Layout Ref.	CAD File ref.
Clients Ref. 2665	Project Ref. 7178

gtaCivils Consulting Engineers
Gloucester House, 66a Church Walk,
Burgess Hill. West Sussex. RH15 9AS
Tel.01444 871444 Web: www.gtacivils.co.uk

Drawing Number: 2665-21-06-507 Rev. F

SCALE 0 10 20 30 40 50 metres (2 4 6 8)

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Tender or billing drawings shall not be used for construction or the ordering of materials.

3. Do not scale. All dimensions and levels to be site confirmed.

4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

N

SSTR WORKS LIMIT

STORAGE POND PROVIDING 1433m³ STORAGE FOR THE 1 in 100 yr EVENT + 40% CLIMATE CHANGE ALLOWANCE@ 2.0 l/sec OUTFLOW

PN1.011 460m²

PN1.012 127m²

PN1.013 160m²

PN1.014 115m²

PN1.015 135m²

PN7.000 562m²

DEVELOPMENT AREA = 172,280m² (17.228 Ha)

STORAGE POND PROVIDING 1125m³ STORAGE FOR THE 1 in 100 yr EVENT + 40% CLIMATE CHANGE ALLOWANCE@ 24.4 l/sec OUTFLOW

SWALE OUTFALL TO EXISTING DITCH

OUTFLOW BASED ON 4 l/sec/Ha FOR GREENFIELD AREA OF 6.0978 Ha TO CANTERBURY CC REQUIREMENTS

SCALE 0 10 20 30 40 50 metres

Rev	Amendments	Date	Dsn	Chk
B	DISCLAIMER NOTE REMOVED	06.11.18	DMS	ds
A	FULL TENDER ISSUE	25.09.18	DMS	MR
-	INITIAL ISSUE	04.09.18	DMS	MR

Status: TENDER

Client: REDROW HOMES

Project: PHASE 1a, HOPLANDS FARM HERSDEN, KENT

Title: CATCHMENTS PLAN

Date: SEPTEMBER 2018	Scale @ A0: 1:500
Base Layout Ref.	CAD File ref.
Clients Ref.: 2665	Project Ref.: 7178

gtaCivils Consulting Engineers
Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS
Tel.01444 871444 Web: www.gtacivils.co.uk

Drawing Number: 2665-21-06-508 Rev. B

GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.

2. Prior to commencement of works the contractor shall provide co-ordinated and dimensioned installation drawings and calculations and allow 10 working days for gta`s checking procedure prior to proceeding with those works or the ordering of materials.

3. Tender or billing drawings shall not be used for construction or the ordering of materials.

4. Do not scale. All dimensions and levels to be site confirmed.

5. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements

6. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

7. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

N

5278 WORKS LIMIT

PN17.000
1080m²

PN17.001
200m²

PN17.002
688m²

PN17.003
157m²

PN17.004
211m²

PN17.005
680m²

PN17.006
288m²

PN18.000
479m²

PN18.001
309m²

PN19.000
599m²

PN19.001
292m²

PN19.002
201m²

PN19.003
290m²

PN20.000
499m²

PN20.001
186m²

PN20.002
230m²

PN21.000
567m²

GREENFIELD
DEVELOPMENT AREA =
12757m² (1.2757 Ha)

DEVELOPMENT AREA =
15781m² (1.5781 Ha)

STORAGE POND PROVIDING 606m³ STORAGE
FOR THE 1 in 100 yr EVENT + 40% CLIMATE
CHANGE ALLOWANCE@ 5.1 l/sec OUTFLOW

OUTFLOW BASED ON
4 l/sec/Ha FOR GREENFIELD
AREA OF 1.2757 Ha TO
CANTERBURY CC REQUIREMENTS

SWALE OUTFALL TO
EXISTING DITCH

SWALE OUTFALL TO
EXISTING DITCH

0 10 20 30 40 50
2 4 6 8
SCALE metres

Rev	Amendments	Date	Dsn	Chk
B	DISCLAIMER NOTE REMOVED	06.11.18	DMS	ds
A	FULL TENDER ISSUE	25.09.18	DMS	MR
-	INITIAL ISSUE	04.09.18	DMS	MR

Status
TENDER

Client
REDROW HOMES

Project
PHASE 1b, HOPLANDS FARM
HERSDEN, KENT

Title
CATCHMENTS PLAN

Date	Scale @ A0
SEPTEMBER 2018	1:500
Base Layout Ref.	CAD File ref.
Clients Ref. 2665	Project Ref. 7178

gtaCivils Consulting Engineers
Gloucester House, 66a Church Walk,
Burgess Hill, West Sussex, RH15 9AS
Tel.01444 871444 Web: www.gtacivils.co.uk

Drawing Number	Rev.
2665-21-06-509	B