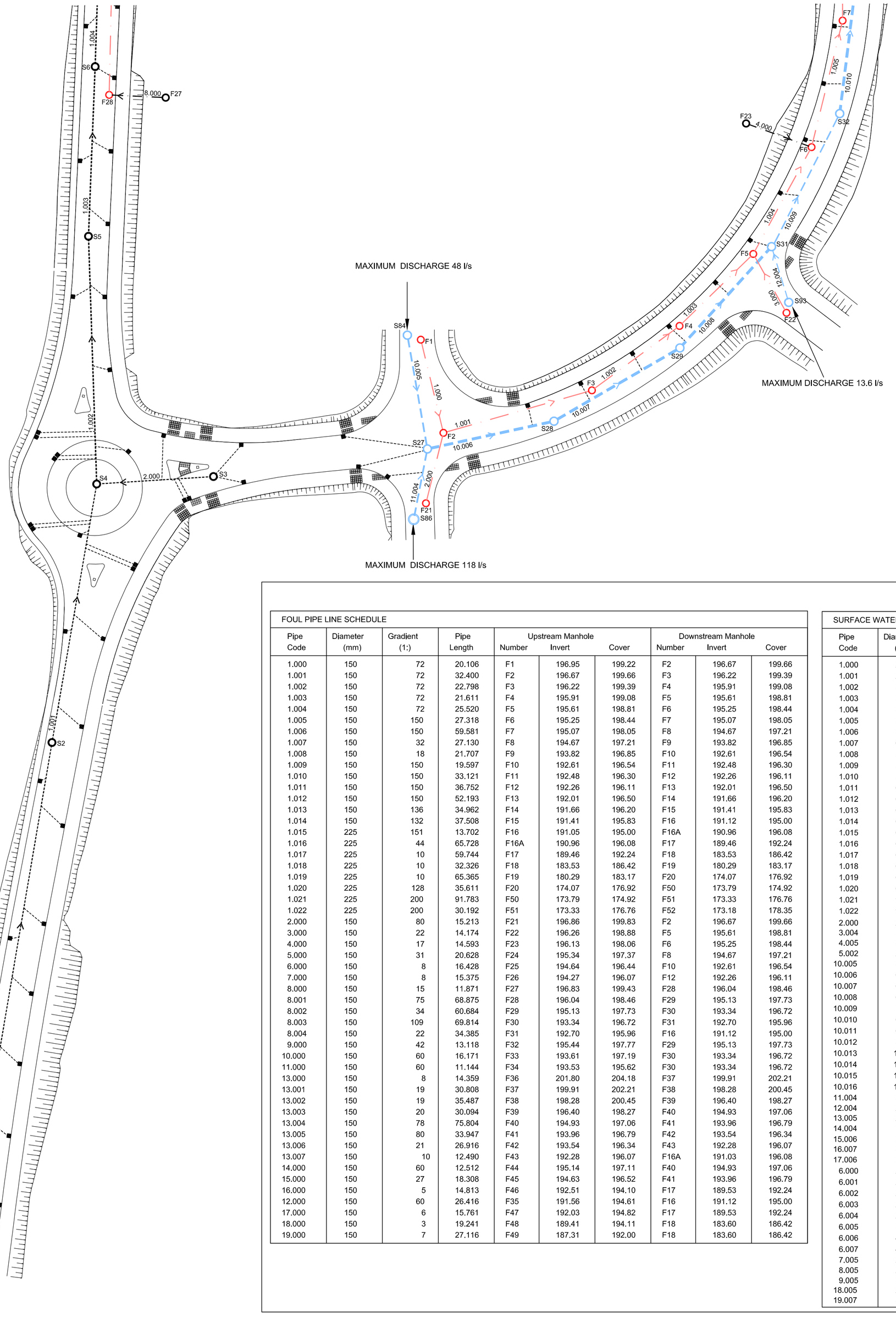
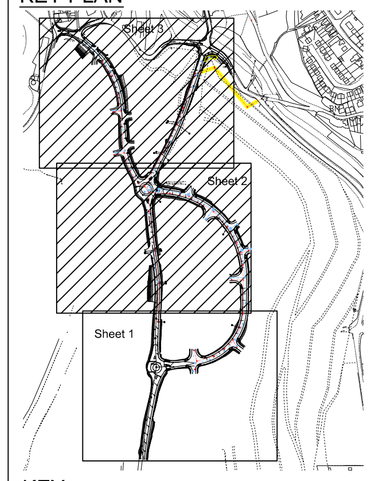


THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

KEY PLAN



KEY

- PROPOSED S104 SURFACE WATER DRAIN.
- PROPOSED S104 FOUL WATER DRAINAGE.
- PROPOSED GULLY AND CONNECTION.
- PROPOSED HIGHWAY DRAIN.
- PRIVATE FOUL WATER CONNECTION.
- PRIVATE STORM WATER CONNECTION.

NOTES.

1. ALL ADOPTABLE DRAINAGE WORKS TO BE INCLUDED IN THE S104 AGREEMENT IS TO BE IN ACCORDANCE WITH 'SEWERS FOR ADOPTION 6th EDITION' AND ALL REQUIREMENTS OF DWR CYMRU WELSH WATER AS THE STATUTORY SEWERAGE UNDERTAKER.
2. THE CONTRACTOR IS TO CONFIRM POSITION LEVELS & SIZE OF EXISTING DRAINAGE & WATERCOURSES PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS, WHERE APPLICABLE.
3. THE FOLLOWING PIPE TYPES & BEDDING HAVE BEEN ASSUMED IN THE DESIGN:

   (i) CARRIER DRAIN 150MM DIA VITRIFIED CLAY TO BS EN 295, MIN CRUSHING STRENGTH 28 KN/M ON TYPE S TRENCH & BEDDING (DEPTH OF COVER 1.2M OR GREATER), OR 150MM CONCRETE BED AND SURROUND (DEPTH OF COVER LESS THAN 1.2M.

   (ii) CARRIER DRAIN 225 & 300MM DIA VITRIFIED CLAY TO BS EN 295, MIN STRENGTH CLASS 160 ON TYPE S TRENCH & BEDDING (DEPTH OF COVER 1.2M OR GREATER), OR 150MM CONCRETE BED AND SURROUND (DEPTH OF COVER LESS THAN 1.2M, OR AS SPECIFIED ON RELEVANT LONG SECTIONS.

   (iii) CARRIER DRAINS 375mm DIA AND ABOVE TO COMPRISE CONCRETE CLASS 120 ON TRENCH AND BEDDING AS SPECIFIED ON RELEVANT LONGITUDINAL SECTIONS.

   (iv) GULLY CONNECTIONS TO COMPRISE 150MM DIA VITRIFIED CLAY TO BS EN 295, MIN STRENGTH 28KN/m WITH 150MM CONCRETE BED AND SURROUND WHERE COVER IS LESS THAN 1.2M.
4. BACKFILLING OF DRAINS AND SEWERS SITUATED BELOW CARRIAGEWAYS, PAVED AREAS AND FOOTWAYS SHALL BE WITH TYPE 1 SUBBASE TO SHW CLAUSE 803.
5. EXISTING ROADS TO BE REINSTATED IN ACCORDANCE WITH THE SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS SECOND EDITION DATED JUNE 2002. ROAD CATEGORY TYPE 2 ALL PERMANENT WHERE APPLICABLE.
6. FOR COVER AND INVERT LEVELS REFER TO THE LONGITUDINAL SECTIONS AND CHAMBER SCHEDULES.
7. ALL HIGHWAY DRAINS TO BE ADOPTED AS PART OF THE SECTION 38 AGREEMENT ARE TO BE CONSTRUCTED TO THE HIGHWAY AUTHORITY (WREXHAM BC) STANDARDS.

FOUL PIPE LINE SCHEDULE

Pipe Code	Diameter (mm)	Gradient (1:)	Pipe Length	Upstream Manhole Number	Upstream Manhole Invert	Upstream Manhole Cover	Downstream Manhole Number	Downstream Manhole Invert	Downstream Manhole Cover
1.000	150	72	20.106	F1	196.95	199.22	F2	196.67	199.66
1.001	150	72	32.400	F2	196.67	199.66	F3	196.22	199.39
1.002	150	72	22.798	F3	196.22	199.39	F4	195.91	199.08
1.003	150	72	21.611	F4	195.91	199.08	F5	195.61	198.81
1.004	150	72	25.520	F5	195.61	198.81	F6	195.25	198.44
1.005	150	150	27.318	F6	195.25	198.44	F7	195.07	198.05
1.006	150	150	59.581	F7	195.07	198.05	F8	194.67	197.21
1.007	150	32	27.130	F8	194.67	197.21	F9	193.82	196.85
1.008	150	18	21.707	F9	193.82	196.85	F10	192.61	196.54
1.009	150	150	19.597	F10	192.61	196.54	F11	192.48	196.30
1.010	150	150	33.121	F11	192.48	196.30	F12	192.26	196.11
1.011	150	150	36.752	F12	192.26	196.11	F13	192.01	196.50
1.012	150	150	52.193	F13	192.01	196.50	F14	191.66	196.20
1.013	150	136	34.962	F14	191.66	196.20	F15	191.41	195.83
1.014	150	132	37.508	F15	191.41	195.83	F16	191.12	195.00
1.015	225	151	13.702	F16	191.05	195.00	F16A	190.96	196.08
1.016	225	44	65.728	F16A	190.96	196.08	F17	189.46	192.24
1.017	225	10	59.744	F17	189.46	192.24	F18	183.53	186.42
1.018	225	10	32.326	F18	183.53	186.42	F19	180.29	183.17
1.019	225	10	65.365	F19	180.29	183.17	F20	174.07	176.92
1.020	225	128	35.611	F20	174.07	176.92	F50	173.79	174.92
1.021	225	200	91.783	F50	173.79	174.92	F51	173.33	176.76
1.022	225	200	30.192	F51	173.33	176.76	F52	173.18	178.35
2.000	150	80	15.213	F21	196.86	199.83	F2	196.67	199.66
3.000	150	22	14.174	F22	196.26	198.88	F5	195.61	198.81
4.000	150	17	14.593	F23	196.13	198.06	F6	195.25	198.44
5.000	150	31	20.628	F24	195.34	197.37	F8	194.67	197.21
6.000	150	8	16.428	F25	194.64	196.44	F10	192.61	196.54
7.000	150	8	15.375	F26	194.27	196.07	F12	192.26	196.11
8.000	150	15	11.871	F27	196.83	199.43	F28	196.04	198.46
8.001	150	75	68.875	F28	196.04	198.46	F29	195.13	197.73
8.002	150	34	60.684	F29	195.13	197.73	F30	193.34	196.72
8.003	150	109	69.814	F30	193.34	196.72	F31	192.70	195.96
8.004	150	22	34.385	F31	192.70	195.96	F16	191.12	195.00
9.000	150	42	13.118	F32	195.44	197.77	F29	195.13	197.73
10.000	150	60	16.171	F33	193.61	197.19	F30	193.34	196.72
11.000	150	60	11.144	F34	193.53	195.62	F30	193.34	196.72
13.000	150	8	14.359	F36	201.80	204.18	F37	199.91	202.21
13.001	150	19	30.808	F37	199.91	202.21	F38	198.28	200.45
13.002	150	19	35.487	F38	198.28	200.45	F39	196.40	198.27
13.003	150	20	30.094	F39	196.40	198.27	F40	194.93	197.06
13.004	150	78	75.804	F40	194.93	197.06	F41	193.96	196.79
13.005	150	80	33.947	F41	193.96	196.79	F42	193.54	196.34
13.006	150	21	26.916	F42	193.54	196.34	F43	192.28	196.07
13.007	150	10	12.490	F43	192.28	196.07	F16A	191.03	196.08
14.000	150	60	12.512	F44	195.14	197.11	F40	194.93	197.06
15.000	150	27	18.308	F45	194.63	196.52	F41	193.96	196.79
16.000	150	5	14.813	F46	192.51	194.10	F17	189.53	192.24
12.000	150	60	26.416	F35	191.56	194.61	F16	191.12	195.00
17.000	150	6	15.761	F47	192.03	194.82	F17	189.53	192.24
18.000	150	3	19.241	F48	189.41	194.11	F18	183.60	186.42
19.000	150	7	27.116	F49	187.31	192.00	F18	183.60	186.42

SURFACE WATER PIPE LINE SCHEDULE

Pipe Code	Diameter (mm)	Gradient (1:)	Pipe Length	Upstream Manhole Number	Upstream Manhole Invert	Upstream Manhole Cover	Downstream Manhole Number	Downstream Manhole Invert	Downstream Manhole Cover
1.000	225	71	100.000	S1	200.06	201.78	S2	198.64	200.39
1.001	225	60	55.001	S2	198.64	200.39	S4	197.73	199.16
1.002	300	73	51.978	S4	197.65	199.16	S5	196.94	198.91
1.003	300	73	35.591	S5	196.94	198.91	S6	196.45	198.42
1.004	300	72	65.542	S6	196.45	198.42	S8	195.55	197.54
1.005	300	37	55.431	S8	195.55	197.54	S11	194.05	196.78
1.006	525	120	68.961	S11	193.82	196.78	S12	193.25	196.01
1.007	675	104	39.383	S12	193.10	196.01	S24	192.72	195.97
1.008	750	400	9.194	S24	192.64	195.97	S44	192.62	195.83
1.009	750	399	17.164	S44	192.62	195.83	S45	192.58	195.64
1.010	750	110	5.169	S45	192.58	195.64	S46	192.53	195.64
1.011	600	130	16.519	S46	191.78	195.64	S47	191.65	195.85
1.012	600	130	31.830	S47	191.65	195.85	S47A	191.41	194.66
1.013	600	25	34.953	S47A	191.41	194.66	S48	190.01	191.93
1.014	600	11	24.154	S48	190.01	191.93	S49	187.77	189.69
1.015	600	10	37.098	S49	187.77	189.69	S51	184.07	185.99
1.016	600	10	67.916	S51	184.07	185.99	S52	177.21	179.14
1.017	600	10	23.792	S52	177.21	179.14	S53	174.83	177.02
1.018	600	10	25.392	S53	174.83	177.02	S54	172.29	175.39
1.019	600	25	16.009	S54	172.29	175.39	S55	171.65	173.54
1.020	600	40	10.549	S55	171.65	173.54	S56	171.39	173.50
1.021	900	501	26.061	S56	169.73	173.50	S200	169.67	173.06
1.022	925	40	24.978	S200	169.65	173.06	S201	169.03	173.50
2.000	225	87	24.540	S3	198.01	199.72	S4	197.73	199.16
3.004	300	200	15.217	S59	195.62	197.70	S8	195.55	197.54
4.005	300	201	15.059	S64	194.12	195.64	S11	194.05	196.78
5.002	225	171	14.360	S135	194.21	197.30	S11	194.12	196.78
10.005	375	319	24.221	S84	197.39	199.27	S27	197.32	199.77
10.006	600	503	27.188	S27	197.09	199.77	S28	197.04	199.58
10.007	600	501	30.551	S28	197.04	199.58	S29	196.98	199.25
10.008	600	503	28.646	S29	196.98	199.25	S31	196.92	198.84
10.009	300	26	31.346	S31	196.92	198.84	S32	195.69	198.44
10.010	600	502	37.663	S32	195.39	198.44	S33	195.31	197.93
10.011	600	503	46.245	S33	195.31	197.93	S35	195.22	197.27
10.012	300	27	49.501	S35	195.22	197.27	S37	193.37	196.65
10.013	1500	501	44.067	S37	192.17	196.65	S39	192.08	196.18
10.014	1500	499	45.928	S39	192.08	196.18	S41	191.99	196.58
10.015	1500	502	52.235	S41	191.99	196.58	S43	191.89	196.31
10.016	1500	500	54.043	S43	191.89	196.31	S46	191.78	195.64
11.004	375	200	15.026	S86	197.39	199.87	S27	197.32	199.77
12.004	225	170	12.231	S93	197.37	198.83	S31	197.29	198.84
13.005	225	171	26.264	S98	195.75	197.43	S35	195.60	197.27
14.004	300	200	16.214	S102	193.45	196.19	S37	193.37	196.65
15.006	300	200	14.422	S108	193.36	195.95	S39	193.29	196.18
16.007	300	201	22.867	S115	193.31	196.21	S41	193.19	196.58
17.006	375	258	10.070	S121	193.05	196.07	S43	193.01	196.31
6.000	225	14	38.771	S13	205.67	207.33	S15	202.90	204.62
6.001	225	18	31.534	S15	202.90	204.62	S16	201.14	203.01
6.002	225	18	36.208	S16	201.14	203.01	S17	199.12	200.99
6.003	225	18	40.412	S17	199.12	200.99	S18	196.87	198.60
6.004	225	21	30.619	S18	196.87	198.60	S20	195.39	197.19
6.005	375	86	73.915	S20	195.24	197.19	S22	194.38	196.64
6.006	450	86	34.855	S22	194.30	196.64	S23	193.90	196.35
6.007	450	50	47.724	S23	193.90	196.35	S24	192.94	195.97
7.005	225	5	10.515	S70	204.84	207.86	S15	202.90	204.62
8.005	225	169	16.767	S75	195.49	197.19	S20	195.39	197.19
9.005	300	200	16.991	S80	194.54	196.54	S22	194.45	196.64
18.005	225	11	14.649	S126	191.75	193.92	S48	190.39	191.93
19.007	300	11	20.815	S133	186.23	193.45	S51	184.37	185.99

PEDESTRIAN REFUGES REMOVED AND INCREASE TO WIDTH OF SPLITTER ISLANDS TO ACCOMMODATE PEDESTRIANS.	SJC/GAL	03.05.13	H
SURFACE WATER SCHEDULES REVISED TO SUIT OUTFALL	SJC/GAL	26.01.12	G
F43 AMENDED IN SCHEDULES GRADIENTS ADJUSTED TO SUIT	SJC/GAL	06.05.11	F
S104 AMENDMENTS	SJC/GAL	27.01.11	E
MINOR MODIFICATIONS TO DRAINAGE	SJC/GAL	20.05.10	D
DRAINAGE RE-DESIGN PLAN AMENDED TO SUIT	SJC/GAL	14.12.09	C
NOTES ADDED.	SJC/GAL	31.01.08	B
LAYOUT UPDATED.	SJC/GAL	28.11.07	A
Revision Details	By / Check	Date	Suffix

Drawing Status

P - PRELIMINARY

Job Title

BRYMBO RECLAMATION AND PROPOSED DEVELOPMENT

Drawing Title

DRAINAGE LAYOUT GENERAL ARRANGEMENT SHEET 1 OF 3

Scale at A1 1:500		Design Office TELFORD	
Drawn SJC	Date 04-04-07	Stage 2 check	Date
Stage 1 check GAL	Date 05-04-51	Approved	Date

Scott Wilson
Pemberton House
Stafford Court, Stafford Park,
Telford, Shropshire, TF3 3AP
Telephone (01952) 235600
Fax (01952) 235650
www.scottwilson.com

Status Drawing Number Rev

P D110252/032 H

Plot Date :
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