

Appendix 1



Hazelind Consultants Ltd
Grayshaws
London Road
Crowborough TN6 1TD

File: P21126-HZL-CA-D-2500
Network: Storm 1
Rev. S4-P1
25/03/2025

Page 1
Proposed Development
Hatchgate Cottage, Hatchgate
Cuckfield

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Inverts
Additional Flow (%)	0	Minimum Backdrop Height (m)	1.000
CV	0.750	Preferred Cover Depth (m)	0.750
Time of Entry (mins)	4.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
S5-1	0.007	4.00	94.400	450	0.795
S5-2	0.004	4.00	94.400	450	0.806
S5-3	0.003	4.00	94.400	450	1.011
S07			94.350	600	1.057
S06			94.250	900	1.350
S4-1	0.004	4.00	94.400	450	0.975
S4-2	0.004	4.00	94.400	450	1.103
S4-3	0.002	4.00	94.400	450	1.189
S4-5	0.005	4.00	94.400	450	0.905
S4-4			94.400	450	1.360
S05			94.300	900	1.700
S3-1	0.009	4.00	94.100	450	0.779
S3-2	0.003	4.00	94.000	450	0.817
S3-3	0.003	4.00	93.975	450	1.061
S3-4	0.005	4.00	94.000	450	1.234
S12	0.051	4.00	94.175	600	1.013
S10	0.014	4.00	93.750	600	1.071
S09			93.959	600	1.487
S2-1	0.010	4.00	94.075	450	0.648
S2-2	0.005	4.00	94.000	450	0.722
S2-3	0.004	4.00	94.000	450	1.066
S2-4	0.004	4.00	93.750	450	0.975
S08 Junction			93.600	150	1.343
S04			93.600	1200	1.393
S1-1	0.004	4.00	94.150	450	0.713
S1-2	0.004	4.00	94.150	450	0.895
S1-3	0.004	4.00	94.100	450	1.084
S1-4	0.003	4.00	93.975	450	1.198
S03 Junction			93.500	150	1.315
S02			93.500	1200	1.374
S01			92.410	600	0.510



Links

Name	US Node	DS Node	Length (m)	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	S5-1	S5-3	12.846	93.605	93.389	0.216	59.5	100
2.000	S5-2	S5-3	12.113	93.594	93.389	0.205	59.1	100
1.001	S5-3	S07	5.676	93.389	93.293	0.096	59.1	100
1.002	S07	S06	17.278	93.293	92.900	0.393	44.0	150
3.000	S12	S06	6.856	93.162	92.900	0.262	26.2	150
1.003	S06	S05	30.853	92.900	92.600	0.300	102.8	150
4.000	S4-1	S4-2	12.905	93.425	93.297	0.128	100.8	100
4.001	S4-2	S4-3	8.581	93.297	93.211	0.086	99.8	100
4.002	S4-3	S4-4	17.195	93.211	93.040	0.171	100.6	150
5.000	S4-5	S4-4	8.953	93.495	93.040	0.455	19.7	100
4.003	S4-4	S05	4.663	93.040	92.600	0.440	10.6	150
1.004	S05	S04	28.262	92.600	92.207	0.393	71.9	225
6.000	S3-1	S3-2	13.840	93.321	93.183	0.138	100.3	100
6.001	S3-2	S3-3	13.806	93.183	92.914	0.269	51.3	100
6.002	S3-3	S3-4	14.925	92.914	92.766	0.148	100.8	100
6.003	S3-4	S09	1.355	92.766	92.472	0.294	4.6	150
7.000	S10	S09	20.875	92.679	92.472	0.207	100.8	150
6.004	S09	S08 Junction	21.613	92.472	92.257	0.215	100.5	150
8.000	S2-1	S2-2	13.843	93.427	93.278	0.149	92.9	100
8.001	S2-2	S2-4	14.119	93.278	92.775	0.503	28.1	100
9.000	S2-3	S2-4	11.903	92.934	92.775	0.159	74.9	100
8.002	S2-4	S08 Junction	1.264	92.775	92.257	0.518	2.4	150

Name	US Node	DS Node	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)
1.000	S5-1	S5-3	7.9	0.9	0.695	0.911	0.007
2.000	S5-2	S5-3	7.9	0.5	0.706	0.911	0.004
1.001	S5-3	S07	7.9	1.9	0.911	0.957	0.014
1.002	S07	S06	26.9	1.9	0.907	1.200	0.014
3.000	S12	S06	34.9	6.9	0.863	1.200	0.051
1.003	S06	S05	17.5	8.8	1.200	1.550	0.065
4.000	S4-1	S4-2	6.0	0.5	0.875	1.003	0.004
4.001	S4-2	S4-3	6.0	1.1	1.003	1.089	0.008
4.002	S4-3	S4-4	17.7	1.4	1.039	1.210	0.011
5.000	S4-5	S4-4	13.7	0.6	0.805	1.260	0.005
4.003	S4-4	S05	55.0	2.1	1.210	1.550	0.015
1.004	S05	S04	61.4	10.9	1.475	1.168	0.080
6.000	S3-1	S3-2	6.0	1.2	0.679	0.717	0.009
6.001	S3-2	S3-3	8.5	1.7	0.717	0.961	0.012
6.002	S3-3	S3-4	6.0	2.1	0.961	1.134	0.016
6.003	S3-4	S09	83.5	2.9	1.084	1.337	0.021
7.000	S10	S09	17.7	1.9	0.921	1.337	0.014
6.004	S09	S08 Junction	17.7	4.7	1.337	1.193	0.035
8.000	S2-1	S2-2	6.3	1.4	0.548	0.622	0.010
8.001	S2-2	S2-4	11.5	2.1	0.622	0.875	0.016
9.000	S2-3	S2-4	7.0	0.5	0.966	0.875	0.004
8.002	S2-4	S08 Junction	114.9	3.1	0.825	1.193	0.023

Links

Name	US Node	DS Node	Length (m)	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
6.005	S08 Junction	S04	5.030	92.257	92.207	0.050	100.6	150
1.005	S04	S03 Junction	3.537	92.207	92.185	0.022	160.8	225
10.000	S1-1	S1-2	11.282	93.437	93.255	0.182	62.0	100
10.001	S1-2	S1-4	15.988	93.255	92.777	0.478	33.4	100
11.000	S1-3	S1-4	15.026	93.016	92.777	0.239	62.9	100
10.002	S1-4	S03 Junction	2.098	92.777	92.185	0.592	3.5	150
1.006	S03 Junction	S02	9.640	92.185	92.128	0.057	169.1	225
1.007	S02	S01	4.000	92.126	91.900	0.226	17.7	150

Name	US Node	DS Node	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)
6.005	S08 Junction	S04	17.7	7.8	1.193	1.243	0.058
1.005	S04	S03 Junction	40.9	18.7	1.168	1.090	0.138
10.000	S1-1	S1-2	7.7	0.5	0.613	0.795	0.004
10.001	S1-2	S1-4	10.5	1.0	0.795	1.098	0.008
11.000	S1-3	S1-4	7.6	0.5	0.984	1.098	0.004
10.002	S1-4	S03 Junction	95.3	2.0	1.048	1.165	0.015
1.006	S03 Junction	S02	39.9	20.7	1.090	1.147	0.153
1.007	S02	S01	42.5	20.7	1.224	0.360	0.153

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	2 year (l/s)	2.0
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	2.0
Summer CV	0.750	Additional Storage (m³/ha)	20.0	100 year (l/s)	2.0
Winter CV	0.840	Starting Level (m)		Check Discharge Volume	x
Analysis Speed	Normal	Check Discharge Rate(s)	✓		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	------

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	40	0	0
100	45	0	0
1000	0	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	2.40
Greenfield Method	IH124	Growth Factor 100 year	3.19
Positively Drained Area (ha)	0.400	Betterment (%)	0
SAAR (mm)	769	QBar	2.2
Soil Index	4	Q 2 year (l/s)	1.9
SPR	0.47	Q 30 year (l/s)	5.2
Region	7	Q 100 year (l/s)	6.9
Growth Factor 2 year	0.88		



Hazelind Consultants Ltd
Grayshaws
London Road
Crowborough TN6 1TD

File: P21126-HZL-CA-D-2500
Network: Storm 1
Rev. S4-P1
25/03/2025

Page 4
Proposed Development
Hatchgate Cottage, Hatchgate
Cuckfield

Node S02 Online Hydro -Brake® Control

Flap Valve x
Replaces Downstream Link x
Invert Level (m) 92.126
Design Depth (m) 0.900
Design Flow (l/s) 2.0
Objective (HE) Minimise upstream storage
Sump Available ✓
Product Number CTL-SHE-0069-2000-0900-2000
Min Outlet Diameter (m) 0.100
Min Node Diameter (mm) 1200

Node S05 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	92.600
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	138.2	0.0	0.700	138.2	0.0	0.701	0.0	0.0

Node S12 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	93.675	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.300
Safety Factor	2.0	Width (m)	4.500	Inf Depth (m)	
Porosity	0.30	Length (m)	71.000		

Node S10 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	93.124	Slope (1:X)	40.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Depth (m)	0.300
Safety Factor	2.0	Width (m)	4.500	Inf Depth (m)	
Porosity	0.30	Length (m)	29.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S5-1	10	93.629	0.024	1.0	0.0078	0.0000	OK
15 minute winter	S5-2	10	93.613	0.019	0.6	0.0048	0.0000	OK
15 minute winter	S5-3	10	93.427	0.038	2.1	0.0086	0.0000	OK
15 minute winter	S07	10	93.321	0.028	2.1	0.0079	0.0000	OK
15 minute summer	S06	10	93.010	0.109	9.8	0.0696	0.0000	OK
15 minute winter	S4-1	10	93.446	0.021	0.6	0.0051	0.0000	OK
15 minute winter	S4-2	10	93.328	0.031	1.2	0.0072	0.0000	OK
15 minute winter	S4-3	10	93.242	0.031	1.6	0.0062	0.0000	OK
15 minute winter	S4-5	10	93.510	0.015	0.7	0.0041	0.0000	OK
15 minute summer	S4-4	10	93.063	0.023	2.2	0.0037	0.0000	OK
180 minute winter	S05	136	92.671	0.071	4.4	9.3964	0.0000	OK
15 minute summer	S3-1	10	93.353	0.032	1.3	0.0124	0.0000	OK
15 minute winter	S3-2	10	93.214	0.031	1.8	0.0076	0.0000	OK
15 minute winter	S3-3	11	92.962	0.048	2.3	0.0107	0.0000	OK
15 minute winter	S3-4	10	92.786	0.020	3.0	0.0048	0.0000	OK
15 minute winter	S12	10	93.210	0.048	7.8	0.0622	0.0000	OK
15 minute winter	S10	10	92.714	0.035	2.1	0.0188	0.0000	OK
180 minute winter	S09	136	92.672	0.199	1.4	0.0565	0.0000	SURCHARGED
15 minute summer	S2-1	10	93.462	0.035	1.6	0.0166	0.0000	OK
15 minute summer	S2-2	10	93.313	0.035	2.4	0.0108	0.0000	OK
15 minute summer	S2-3	11	92.952	0.018	0.5	0.0042	0.0000	OK
15 minute summer	S2-4	10	92.793	0.018	3.5	0.0041	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S5-1	1.000	S5-3	1.0	0.492	0.127
15 minute winter	S5-2	2.000	S5-3	0.6	0.329	0.076
15 minute winter	S5-3	1.001	S07	2.1	0.924	0.263
15 minute winter	S07	1.002	S06	2.0	0.300	0.076
15 minute summer	S06	1.003	S05	10.1	1.532	0.578
15 minute winter	S4-1	4.000	S4-2	0.6	0.369	0.099
15 minute winter	S4-2	4.001	S4-3	1.2	0.569	0.195
15 minute winter	S4-3	4.002	S4-4	1.5	0.719	0.086
15 minute winter	S4-5	5.000	S4-4	0.7	0.715	0.051
15 minute summer	S4-4	4.003	S05	2.2	1.923	0.040
180 minute winter	S05	1.004	S04	2.4	0.305	0.039
15 minute summer	S3-1	6.000	S3-2	1.3	0.610	0.216
15 minute winter	S3-2	6.001	S3-3	1.8	0.627	0.212
15 minute winter	S3-3	6.002	S3-4	2.2	0.979	0.373
15 minute winter	S3-4	6.003	S09	3.0	0.900	0.036
15 minute winter	S12	3.000	S06	7.8	0.930	0.223
15 minute winter	S10	7.000	S09	2.1	0.494	0.119
180 minute winter	S09	6.004	S08 Junction	1.4	0.447	0.080
15 minute summer	S2-1	8.000	S2-2	1.6	0.655	0.255
15 minute summer	S2-2	8.001	S2-4	2.4	1.456	0.208
15 minute summer	S2-3	9.000	S2-4	0.5	0.530	0.072
15 minute summer	S2-4	8.002	S08 Junction	3.5	0.873	0.030

Results for 2 year Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S08 Junction	136	92.671	0.414	2.2	0.0075	0.0000	SURCHARGED
180 minute winter	S04	136	92.671	0.464	3.5	0.5251	0.0000	SURCHARGED
15 minute summer	S1-1	10	93.456	0.019	0.6	0.0049	0.0000	OK
15 minute winter	S1-2	10	93.280	0.025	1.2	0.0061	0.0000	OK
15 minute summer	S1-3	10	93.036	0.020	0.6	0.0045	0.0000	OK
15 minute winter	S1-4	10	92.793	0.016	2.3	0.0034	0.0000	OK
180 minute winter	S03 Junction	132	92.671	0.486	3.0	0.0087	0.0000	SURCHARGED
180 minute winter	S02	136	92.671	0.545	2.5	0.6161	0.0000	SURCHARGED
30 minute summer	S01	78	91.922	0.022	2.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
180 minute winter	S08 Junction	6.005	S04	2.2	0.493	0.127
180 minute winter	S04	1.005	S03 Junction	2.4	0.381	0.059
15 minute summer	S1-1	10.000	S1-2	0.6	0.478	0.078
15 minute winter	S1-2	10.001	S1-4	1.2	1.046	0.113
15 minute summer	S1-3	11.000	S1-4	0.6	0.633	0.078
15 minute winter	S1-4	10.002	S03 Junction	2.3	1.094	0.024
180 minute winter	S03 Junction	1.006	S02	2.5	0.225	0.062
180 minute winter	S02	1.007	S01	2.0	1.193	0.047

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S5-1	11	93.656	0.051	3.6	0.0164	0.0000	OK
15 minute winter	S5-2	12	93.644	0.050	2.1	0.0127	0.0000	OK
15 minute winter	S5-3	12	93.637	0.248	7.5	0.0561	0.0000	SURCHARGED
15 minute winter	S07	12	93.579	0.286	6.8	0.0809	0.0000	SURCHARGED
15 minute winter	S06	12	93.559	0.659	26.5	0.4192	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.467	0.042	2.2	0.0101	0.0000	OK
15 minute winter	S4-2	10	93.365	0.068	4.5	0.0160	0.0000	OK
15 minute winter	S4-3	10	93.274	0.063	5.8	0.0125	0.0000	OK
15 minute summer	S4-5	10	93.525	0.030	2.6	0.0078	0.0000	OK
15 minute summer	S4-4	9	93.082	0.042	8.3	0.0067	0.0000	OK
240 minute winter	S05	232	93.026	0.426	12.9	56.1432	0.0000	SURCHARGED
15 minute summer	S3-1	10	93.392	0.071	4.8	0.0272	0.0000	OK
15 minute winter	S3-2	12	93.337	0.154	6.6	0.0373	0.0000	SURCHARGED
15 minute winter	S3-3	12	93.246	0.332	8.0	0.0746	0.0000	SURCHARGED
15 minute winter	S3-4	12	93.094	0.328	9.3	0.0813	0.0000	SURCHARGED
15 minute winter	S12	11	93.702	0.540	27.8	0.9389	0.0000	SURCHARGED
15 minute winter	S10	12	93.104	0.425	8.6	0.2295	0.0000	SURCHARGED
15 minute winter	S09	12	93.086	0.614	13.9	0.1739	0.0000	SURCHARGED
15 minute winter	S2-1	10	93.505	0.078	5.6	0.0370	0.0000	OK
15 minute summer	S2-2	9	93.349	0.071	8.5	0.0219	0.0000	OK
240 minute winter	S2-3	228	93.026	0.092	0.4	0.0207	0.0000	OK
240 minute winter	S2-4	236	93.027	0.252	2.4	0.0591	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S5-1	1.000	S5-3	3.6	0.655	0.458
15 minute winter	S5-2	2.000	S5-3	2.1	0.427	0.266
15 minute winter	S5-3	1.001	S07	6.8	1.195	0.857
15 minute winter	S07	1.002	S06	9.7	0.556	0.359
15 minute winter	S06	1.003	S05	27.5	1.707	1.573
15 minute winter	S4-1	4.000	S4-2	2.2	0.500	0.365
15 minute winter	S4-2	4.001	S4-3	4.5	0.821	0.740
15 minute winter	S4-3	4.002	S4-4	5.7	1.069	0.323
15 minute summer	S4-5	5.000	S4-4	2.6	1.041	0.189
15 minute summer	S4-4	4.003	S05	8.4	2.250	0.153
240 minute winter	S05	1.004	S04	-4.8	0.139	-0.079
15 minute summer	S3-1	6.000	S3-2	4.8	0.837	0.797
15 minute winter	S3-2	6.001	S3-3	6.1	0.853	0.726
15 minute winter	S3-3	6.002	S3-4	6.3	1.125	1.056
15 minute winter	S3-4	6.003	S09	8.2	1.103	0.098
15 minute winter	S12	3.000	S06	23.8	1.355	0.683
15 minute winter	S10	7.000	S09	6.0	0.621	0.339
15 minute winter	S09	6.004	S08 Junction	12.7	0.719	0.715
15 minute winter	S2-1	8.000	S2-2	5.6	0.933	0.891
15 minute summer	S2-2	8.001	S2-4	8.8	1.826	0.765
240 minute winter	S2-3	9.000	S2-4	0.4	0.504	0.057
240 minute winter	S2-4	8.002	S08 Junction	2.3	0.471	0.020

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S08 Junction	228	93.026	0.769	5.3	0.0138	0.0000	SURCHARGED
240 minute winter	S04	228	93.028	0.821	6.0	0.9281	0.0000	SURCHARGED
15 minute winter	S1-1	10	93.472	0.035	2.0	0.0091	0.0000	OK
15 minute summer	S1-2	10	93.304	0.049	4.2	0.0122	0.0000	OK
15 minute summer	S1-3	10	93.053	0.037	2.0	0.0083	0.0000	OK
240 minute winter	S1-4	232	93.026	0.249	1.7	0.0538	0.0000	SURCHARGED
240 minute winter	S03 Junction	232	93.028	0.843	3.1	0.0152	0.0000	SURCHARGED
240 minute winter	S02	232	93.025	0.899	2.3	1.0172	0.0000	SURCHARGED
960 minute summer	S01	1140	91.922	0.022	2.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
240 minute winter	S08 Junction	6.005	S04	6.0	0.527	0.341
240 minute winter	S04	1.005	S03 Junction	2.3	0.385	0.057
15 minute winter	S1-1	10.000	S1-2	2.0	0.657	0.260
15 minute summer	S1-2	10.001	S1-4	4.2	1.482	0.399
15 minute summer	S1-3	11.000	S1-4	2.0	0.886	0.262
240 minute winter	S1-4	10.002	S03 Junction	2.6	0.326	0.027
240 minute winter	S03 Junction	1.006	S02	2.3	0.316	0.059
240 minute winter	S02	1.007	S01	2.0	1.193	0.047

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S5-1	12	93.788	0.183	4.7	0.0594	0.0000	SURCHARGED
15 minute winter	S5-2	12	93.758	0.164	2.8	0.0420	0.0000	SURCHARGED
15 minute winter	S5-3	12	93.743	0.354	9.1	0.0801	0.0000	SURCHARGED
15 minute winter	S07	12	93.643	0.350	7.1	0.0990	0.0000	SURCHARGED
15 minute winter	S06	13	93.613	0.713	28.9	0.4536	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.474	0.049	2.9	0.0118	0.0000	OK
15 minute winter	S4-2	10	93.383	0.086	5.9	0.0202	0.0000	OK
15 minute winter	S4-3	10	93.284	0.073	7.5	0.0145	0.0000	OK
15 minute summer	S4-5	10	93.529	0.034	3.4	0.0090	0.0000	OK
360 minute winter	S4-4	344	93.188	0.148	1.5	0.0235	0.0000	OK
360 minute winter	S05	344	93.188	0.588	11.9	77.5539	0.0000	SURCHARGED
15 minute winter	S3-1	12	93.617	0.296	6.3	0.1141	0.0000	SURCHARGED
15 minute winter	S3-2	12	93.551	0.368	8.2	0.0890	0.0000	SURCHARGED
15 minute winter	S3-3	12	93.435	0.521	8.6	0.1171	0.0000	SURCHARGED
15 minute winter	S3-4	12	93.240	0.474	9.8	0.1177	0.0000	SURCHARGED
15 minute winter	S12	12	93.756	0.594	36.4	2.9792	0.0000	SURCHARGED
15 minute winter	S10	12	93.258	0.579	9.8	0.5241	0.0000	SURCHARGED
15 minute winter	S09	12	93.231	0.759	14.7	0.2148	0.0000	SURCHARGED
15 minute winter	S2-1	11	93.594	0.167	7.3	0.0790	0.0000	SURCHARGED
15 minute winter	S2-2	11	93.429	0.151	10.4	0.0465	0.0000	SURCHARGED
360 minute winter	S2-3	344	93.188	0.254	0.3	0.0574	0.0000	SURCHARGED
360 minute winter	S2-4	344	93.188	0.413	2.2	0.0966	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S5-1	1.000	S5-3	4.0	0.677	0.510
15 minute winter	S5-2	2.000	S5-3	2.7	0.449	0.344
15 minute winter	S5-3	1.001	S07	7.1	1.175	0.897
15 minute winter	S07	1.002	S06	10.6	0.622	0.396
15 minute winter	S06	1.003	S05	29.0	1.760	1.655
15 minute winter	S4-1	4.000	S4-2	2.9	0.528	0.482
15 minute winter	S4-2	4.001	S4-3	5.8	0.871	0.962
15 minute winter	S4-3	4.002	S4-4	7.4	1.147	0.420
15 minute summer	S4-5	5.000	S4-4	3.4	1.145	0.248
360 minute winter	S4-4	4.003	S05	1.5	0.916	0.027
360 minute winter	S05	1.004	S04	-4.1	0.179	-0.067
15 minute winter	S3-1	6.000	S3-2	5.8	0.848	0.961
15 minute winter	S3-2	6.001	S3-3	6.5	0.885	0.763
15 minute winter	S3-3	6.002	S3-4	6.5	1.126	1.076
15 minute winter	S3-4	6.003	S09	8.8	1.110	0.105
15 minute winter	S12	3.000	S06	24.9	1.416	0.714
15 minute winter	S10	7.000	S09	7.1	0.652	0.403
15 minute winter	S09	6.004	S08 Junction	14.8	0.839	0.834
15 minute winter	S2-1	8.000	S2-2	6.6	0.872	1.049
15 minute winter	S2-2	8.001	S2-4	10.3	1.804	0.894
360 minute winter	S2-3	9.000	S2-4	0.3	0.465	0.043
360 minute winter	S2-4	8.002	S08 Junction	2.0	0.480	0.018

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S08 Junction	344	93.188	0.931	5.0	0.0168	0.0000	SURCHARGED
360 minute winter	S04	344	93.188	0.981	4.9	1.1091	0.0000	SURCHARGED
15 minute winter	S1-1	10	93.477	0.040	2.6	0.0105	0.0000	OK
15 minute summer	S1-2	9	93.310	0.055	5.5	0.0137	0.0000	OK
360 minute winter	S1-3	344	93.188	0.172	0.4	0.0388	0.0000	SURCHARGED
360 minute winter	S1-4	344	93.188	0.411	1.5	0.0887	0.0000	SURCHARGED
360 minute winter	S03 Junction	344	93.188	1.003	2.7	0.0180	0.0000	SURCHARGED
360 minute winter	S02	344	93.187	1.061	2.2	1.2004	0.0000	SURCHARGED
360 minute winter	S01	344	91.923	0.023	2.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
360 minute winter	S08 Junction	6.005	S04	4.9	0.499	0.278
360 minute winter	S04	1.005	S03 Junction	2.5	0.378	0.061
15 minute winter	S1-1	10.000	S1-2	2.6	0.742	0.338
15 minute summer	S1-2	10.001	S1-4	5.7	1.505	0.540
360 minute winter	S1-3	11.000	S1-4	0.4	0.509	0.052
360 minute winter	S1-4	10.002	S03 Junction	1.3	0.327	0.014
360 minute winter	S03 Junction	1.006	S02	2.2	0.200	0.055
360 minute winter	S02	1.007	S01	2.1	1.214	0.050

Results for 1000 year Critical Storm Duration. Lowest mass balance: 94.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S5-1	12	93.788	0.183	4.7	0.0594	0.0000	SURCHARGED
15 minute winter	S5-2	12	93.758	0.164	2.8	0.0420	0.0000	SURCHARGED
15 minute winter	S5-3	12	93.743	0.354	9.1	0.0801	0.0000	SURCHARGED
15 minute winter	S07	12	93.643	0.350	7.1	0.0990	0.0000	SURCHARGED
15 minute winter	S06	13	93.613	0.713	28.8	0.4534	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.473	0.048	2.8	0.0115	0.0000	OK
15 minute winter	S4-2	10	93.381	0.084	5.8	0.0198	0.0000	OK
15 minute winter	S4-3	10	93.284	0.073	7.4	0.0144	0.0000	OK
15 minute winter	S4-5	10	93.529	0.034	3.4	0.0090	0.0000	OK
480 minute winter	S4-4	448	93.244	0.204	1.3	0.0324	0.0000	SURCHARGED
480 minute winter	S05	448	93.244	0.644	10.2	84.8976	0.0000	SURCHARGED
15 minute winter	S3-1	12	93.613	0.292	6.3	0.1122	0.0000	SURCHARGED
15 minute winter	S3-2	12	93.547	0.364	8.3	0.0880	0.0000	SURCHARGED
15 minute winter	S3-3	12	93.430	0.516	8.5	0.1162	0.0000	SURCHARGED
480 minute winter	S3-4	448	93.243	0.477	2.1	0.1184	0.0000	SURCHARGED
15 minute winter	S12	12	93.756	0.594	36.3	2.9725	0.0000	SURCHARGED
15 minute winter	S10	12	93.257	0.578	9.8	0.5210	0.0000	SURCHARGED
480 minute winter	S09	448	93.243	0.771	2.8	0.2183	0.0000	SURCHARGED
15 minute winter	S2-1	11	93.588	0.161	7.2	0.0761	0.0000	SURCHARGED
15 minute winter	S2-2	11	93.425	0.147	10.3	0.0453	0.0000	SURCHARGED
480 minute winter	S2-3	440	93.243	0.309	0.3	0.0699	0.0000	SURCHARGED
480 minute winter	S2-4	448	93.243	0.468	2.0	0.1096	0.0000	SURCHARGED

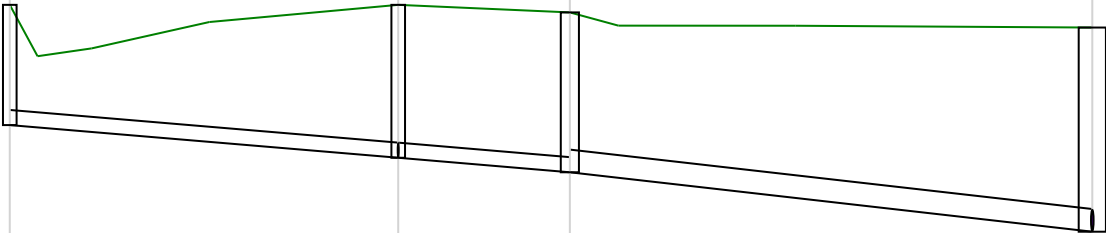
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S5-1	1.000	S5-3	4.0	0.677	0.509
15 minute winter	S5-2	2.000	S5-3	2.7	0.449	0.344
15 minute winter	S5-3	1.001	S07	7.1	1.175	0.896
15 minute winter	S07	1.002	S06	10.7	0.623	0.397
15 minute winter	S06	1.003	S05	29.0	1.761	1.656
15 minute winter	S4-1	4.000	S4-2	2.8	0.520	0.465
15 minute winter	S4-2	4.001	S4-3	5.7	0.868	0.948
15 minute winter	S4-3	4.002	S4-4	7.4	1.143	0.416
15 minute winter	S4-5	5.000	S4-4	3.4	1.177	0.248
480 minute winter	S4-4	4.003	S05	1.3	0.855	0.024
480 minute winter	S05	1.004	S04	-3.5	0.229	-0.056
15 minute winter	S3-1	6.000	S3-2	5.9	0.844	0.981
15 minute winter	S3-2	6.001	S3-3	6.4	0.885	0.761
15 minute winter	S3-3	6.002	S3-4	6.5	1.126	1.074
480 minute winter	S3-4	6.003	S09	1.7	0.572	0.020
15 minute winter	S12	3.000	S06	24.9	1.417	0.714
15 minute winter	S10	7.000	S09	7.1	0.653	0.404
480 minute winter	S09	6.004	S08 Junction	2.7	0.372	0.154
15 minute winter	S2-1	8.000	S2-2	6.5	0.871	1.045
15 minute winter	S2-2	8.001	S2-4	10.3	1.804	0.895
480 minute winter	S2-3	9.000	S2-4	0.3	0.411	0.043
480 minute winter	S2-4	8.002	S08 Junction	1.9	0.489	0.016

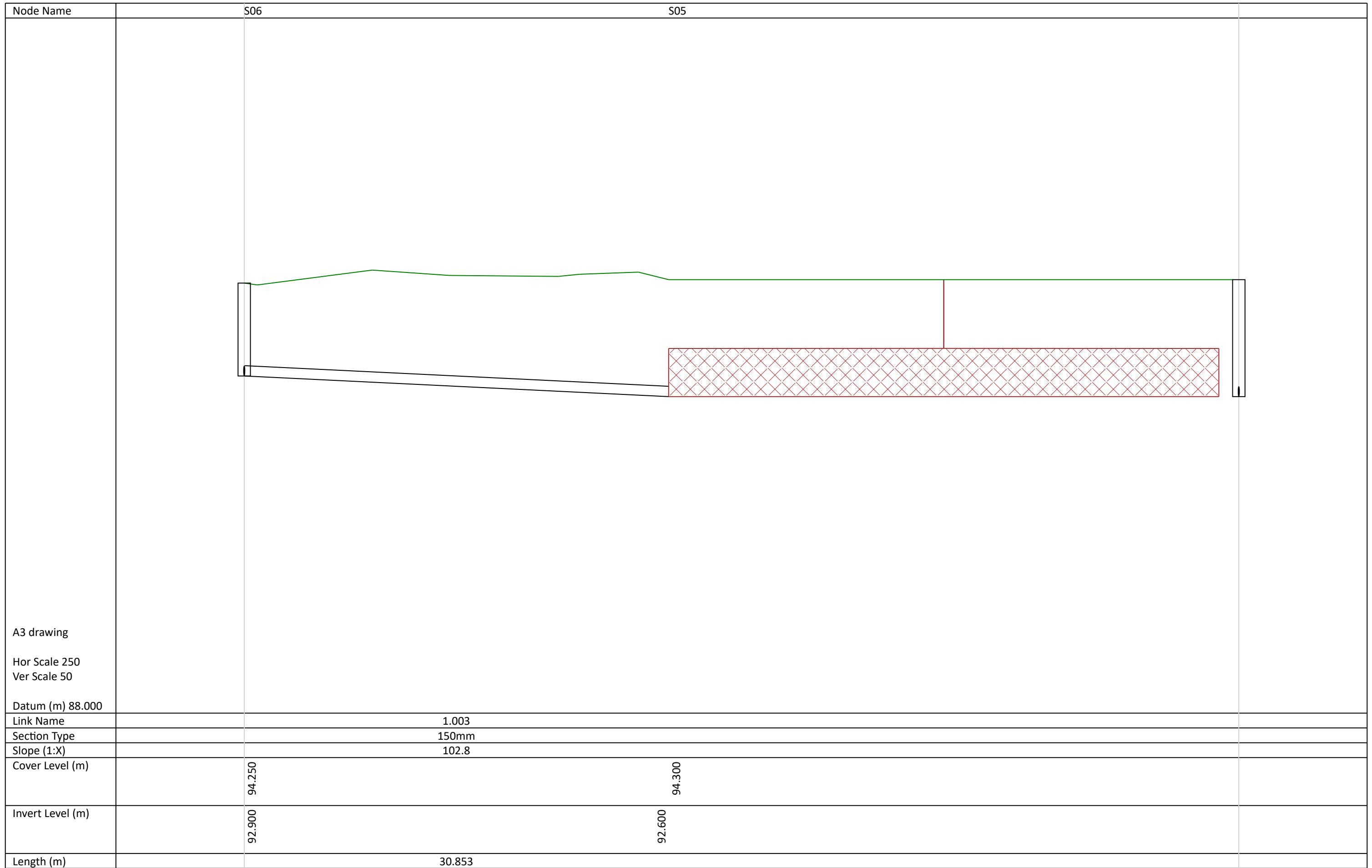
Results for 1000 year Critical Storm Duration. Lowest mass balance: 94.48%

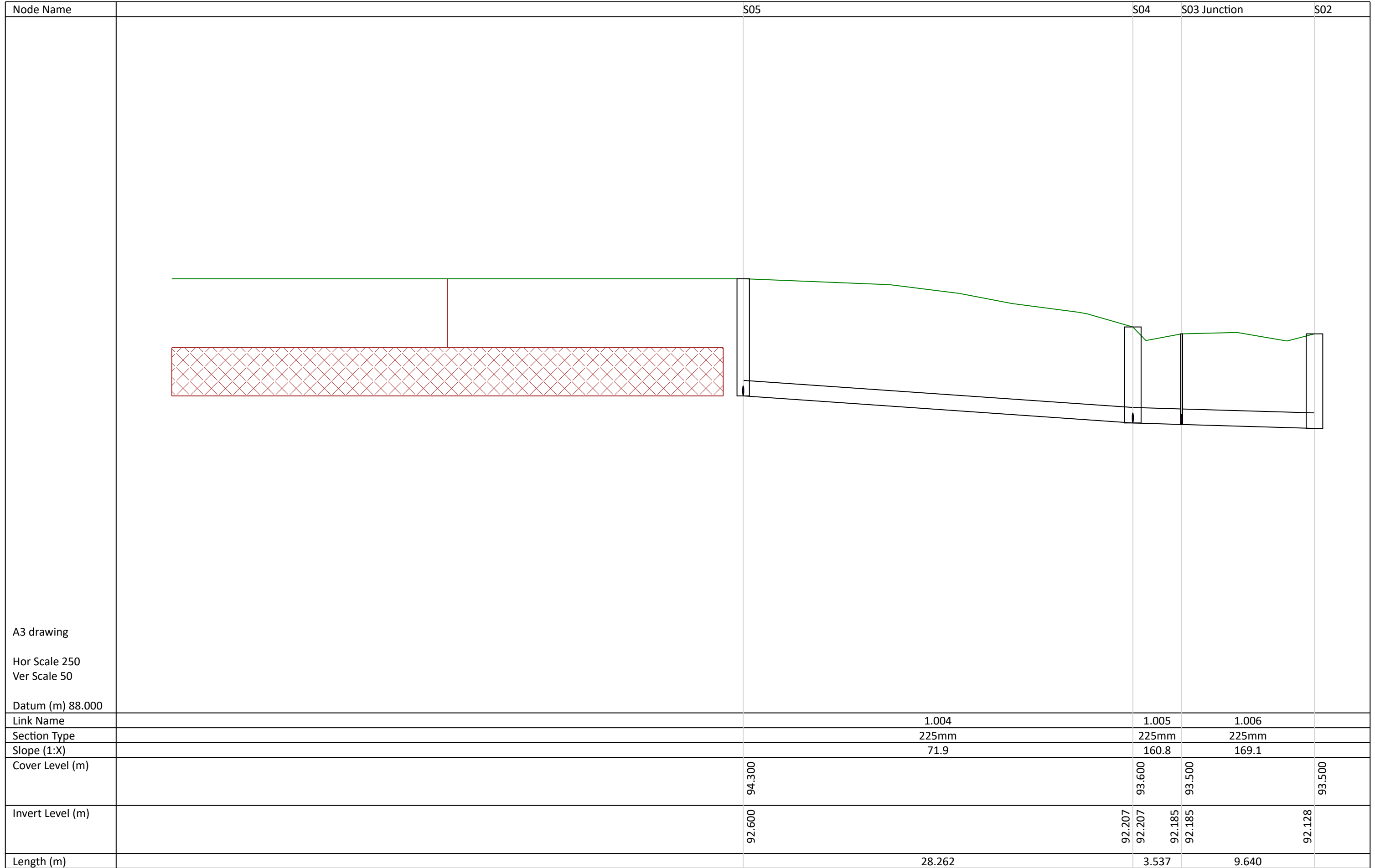
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S08 Junction	448	93.243	0.986	4.6	0.0178	0.0000	SURCHARGED
480 minute winter	S04	448	93.243	1.036	4.5	1.1720	0.0000	SURCHARGED
15 minute winter	S1-1	10	93.477	0.040	2.6	0.0105	0.0000	OK
15 minute summer	S1-2	9	93.310	0.055	5.5	0.0137	0.0000	OK
480 minute winter	S1-3	440	93.243	0.227	0.3	0.0513	0.0000	SURCHARGED
480 minute winter	S1-4	448	93.243	0.466	1.2	0.1007	0.0000	SURCHARGED
480 minute winter	S03 Junction	448	93.243	1.058	3.0	0.0190	0.0000	FLOOD RISK
480 minute winter	S02	448	93.243	1.117	2.3	1.2631	0.0000	FLOOD RISK
480 minute winter	S01	448	91.923	0.023	2.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
480 minute winter	S08 Junction	6.005	S04	4.5	0.451	0.255
480 minute winter	S04	1.005	S03 Junction	2.8	0.389	0.068
15 minute winter	S1-1	10.000	S1-2	2.6	0.742	0.338
15 minute summer	S1-2	10.001	S1-4	5.7	1.513	0.543
480 minute winter	S1-3	11.000	S1-4	0.3	0.514	0.039
480 minute winter	S1-4	10.002	S03 Junction	1.7	0.301	0.018
480 minute winter	S03 Junction	1.006	S02	2.3	0.231	0.057
480 minute winter	S02	1.007	S01	2.2	1.221	0.051



Node Name	S5-1	S5-3	S07	S06
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 89.000				
Link Name	1.000	1.001	1.002	
Section Type	100mm	100mm	150mm	
Slope (1:X)	59.5	59.1	44.0	
Cover Level (m)	94.400	94.400	94.350	94.250
Invert Level (m)	93.605	93.389 93.389	93.293 93.293	92.900
Length (m)	12.846	5.676	17.278	

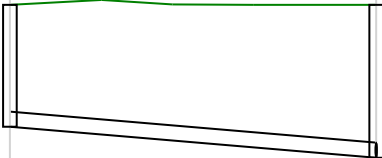


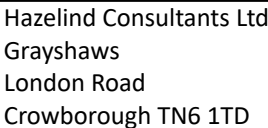




Node Name	S02	S01
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 88.000		
Link Name	1.007	
Section Type	150mm	
Slope (1:X)	17.7	
Cover Level (m)	93.500	92.410
Invert Level (m)	92.126	91.900
Length (m)	4.000	



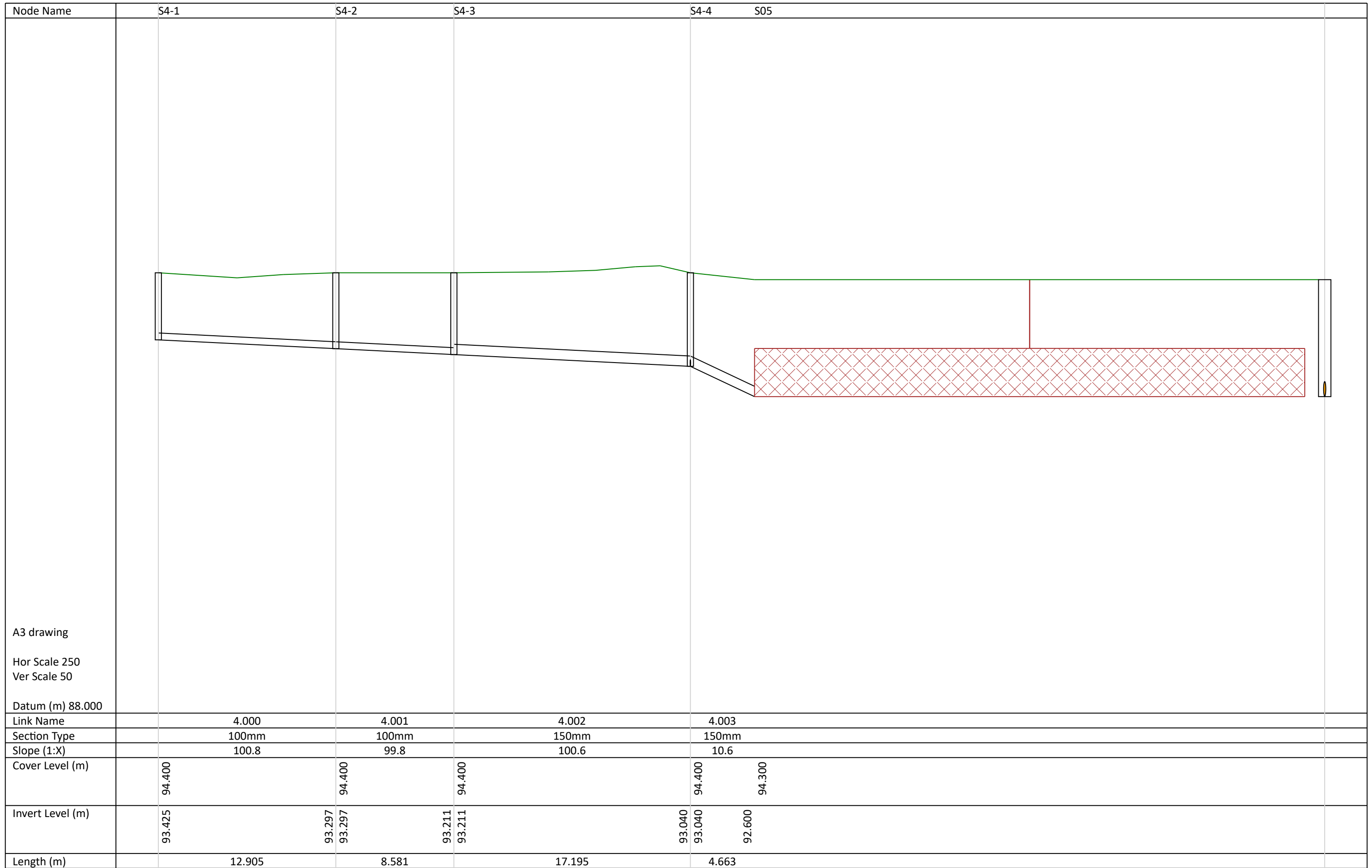
Node Name	S5-2	S5-3
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 89.000		
Link Name	2.000	
Section Type	100mm	
Slope (1:X)	59.1	
Cover Level (m)	94.400	94.400
Invert Level (m)	93.594	93.389
Length (m)	12.113	



File: P21126-HZL-CA-D-2500_Drainage Calcs_Px.pfd
Network: Storm 1
Rev. S4-P1
25/03/2025

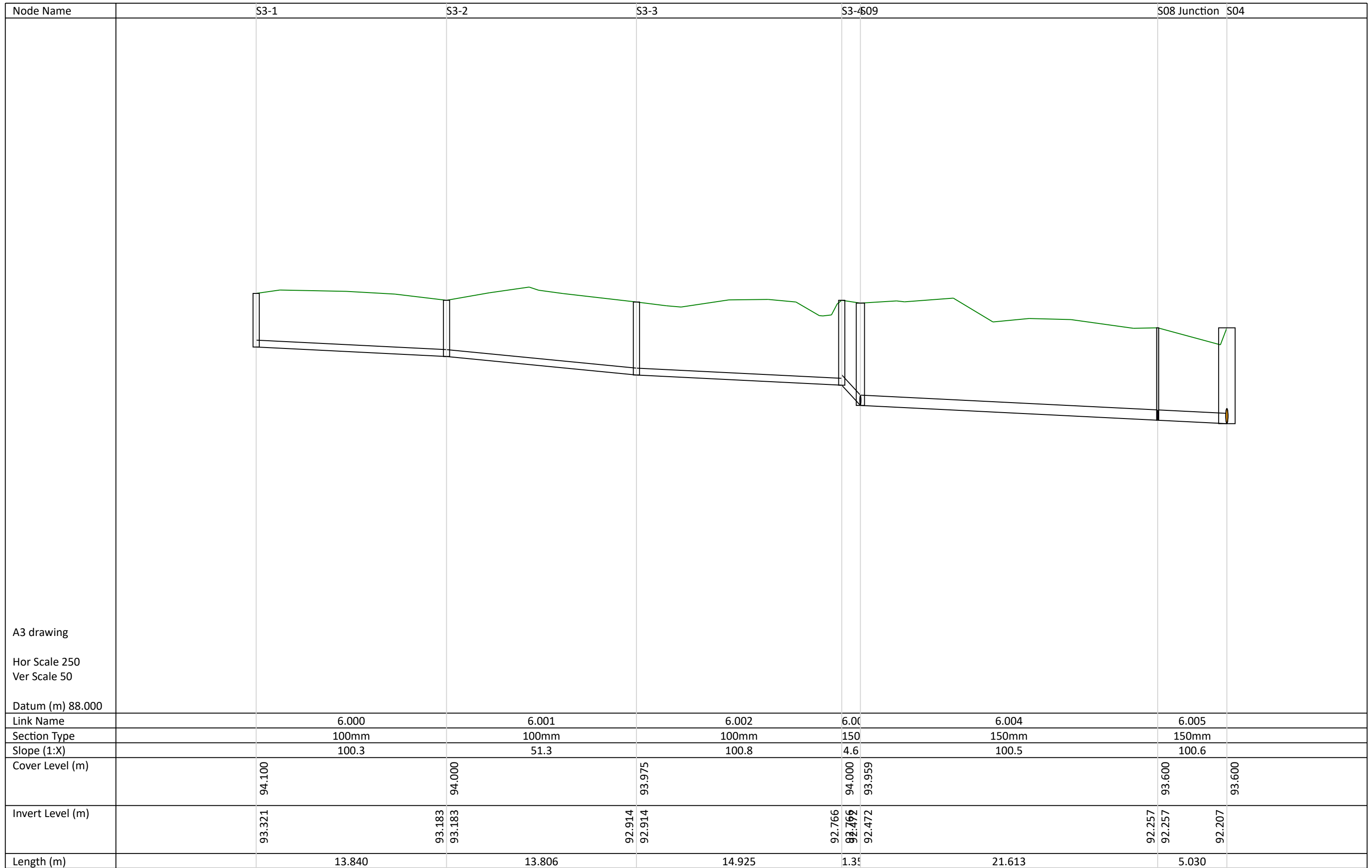
Page 6
Proposed Development
Hatchgate Cottage, Hatchgate Lane,
Cuckfield

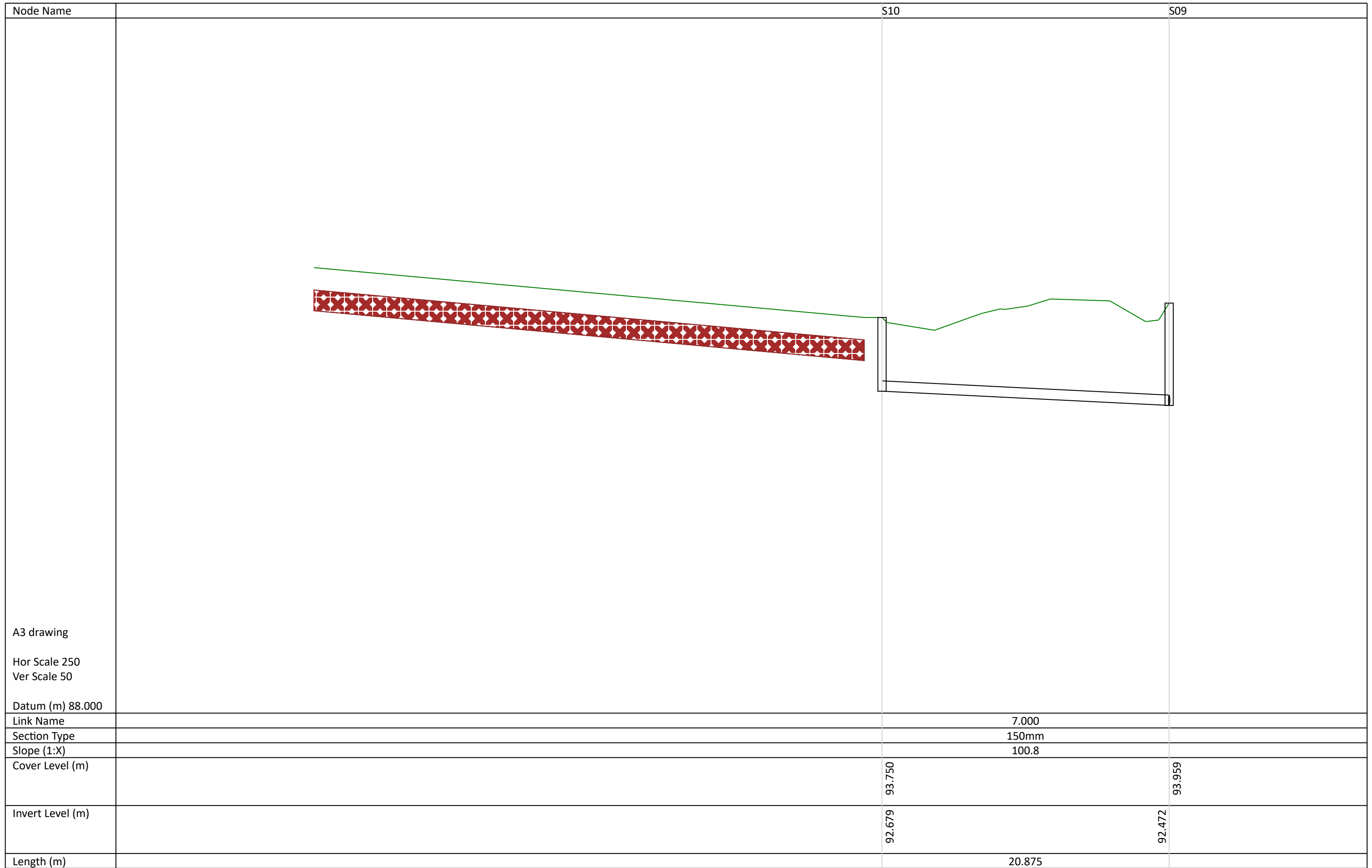
Node Name	S12		S06
A3 drawing			
Hor Scale 250			
Ver Scale 50			
Datum (m) 89.000			
Link Name	3.000		
Section Type	150mm		
Slope (1:X)	26.2		
Cover Level (m)	94.175	94.250	
Invert Level (m)	93.162	92.900	
Length (m)	6.856		

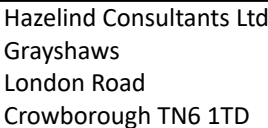




Node Name	S4-5	S4-4
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 89.000		
Link Name	5.000	
Section Type	100mm	
Slope (1:X)	19.7	
Cover Level (m)	94.400	94.400
Invert Level (m)	93.495	93.040
Length (m)	8.953	





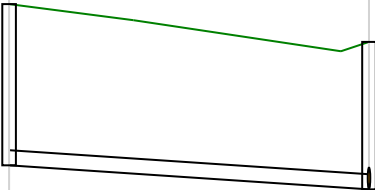


File: P21126-HZL-CA-D-2500_Drainage Calcs_Px.pfd
Network: Storm 1
Rev. S4-P1
25/03/2025

Page 11
Proposed Development
Hatchgate Cottage, Hatchgate Lane,
Cuckfield

Node Name	S2-1		S2-2		S2-3		S2-4		S2-5		S2-6		S2-7		S2-8		S2-9		S2-10		S2-11		S2-12		S2-13		S2-14		S2-15		S2-16		S2-17		S2-18		S2-19		S2-20		S2-21		S2-22		S2-23		S2-24		S2-25		S2-26		S2-27		S2-28		S2-29		S2-30		S2-31		S2-32		S2-33		S2-34		S2-35		S2-36		S2-37		S2-38		S2-39		S2-40		S2-41		S2-42		S2-43		S2-44		S2-45		S2-46		S2-47		S2-48		S2-49		S2-50		S2-51		S2-52		S2-53		S2-54		S2-55		S2-56		S2-57		S2-58		S2-59		S2-60		S2-61		S2-62		S2-63		S2-64		S2-65		S2-66		S2-67		S2-68		S2-69		S2-70		S2-71		S2-72		S2-73		S2-74		S2-75		S2-76		S2-77		S2-78		S2-79		S2-80		S2-81		S2-82		S2-83		S2-84		S2-85		S2-86		S2-87		S2-88		S2-89		S2-90		S2-91		S2-92		S2-93		S2-94		S2-95		S2-96		S2-97		S2-98		S2-99		S2-100		S2-101		S2-102		S2-103		S2-104		S2-105		S2-106		S2-107		S2-108		S2-109		S2-110		S2-111		S2-112		S2-113		S2-114		S2-115		S2-116		S2-117		S2-118		S2-119		S2-120		S2-121		S2-122		S2-123		S2-124		S2-125		S2-126		S2-127		S2-128		S2-129		S2-130		S2-131		S2-132		S2-133		S2-134		S2-135		S2-136		S2-137		S2-138		S2-139		S2-140		S2-141		S2-142		S2-143		S2-144		S2-145		S2-146		S2-147		S2-148		S2-149		S2-150		S2-151		S2-152		S2-153		S2-154		S2-155		S2-156		S2-157		S2-158		S2-159		S2-160		S2-161		S2-162		S2-163		S2-164		S2-165		S2-166		S2-167		S2-168		S2-169		S2-170		S2-171		S2-172		S2-173		S2-174		S2-175		S2-176		S2-177		S2-178		S2-179		S2-180		S2-181		S2-182		S2-183		S2-184		S2-185		S2-186		S2-187		S2-188		S2-189		S2-190		S2-191		S2-192		S2-193		S2-194		S2-195		S2-196		S2-197		S2-198		S2-199		S2-200		S2-201		S2-202		S2-203		S2-204		S2-205		S2-206		S2-207		S2-208		S2-209		S2-210		S2-211		S2-212		S2-213		S2-214		S2-215		S2-216		S2-217		S2-218		S2-219		S2-220		S2-221		S2-222		S2-223		S2-224		S2-225		S2-226		S2-227		S2-228		S2-229		S2-230		S2-231		S2-232		S2-233		S2-234		S2-235		S2-236		S2-237		S2-238		S2-239		S2-240		S2-241		S2-242		S2-243		S2-244		S2-245		S2-246		S2-247		S2-248		S2-249		S2-250		S2-251		S2-252		S2-253		S2-254		S2-255		S2-256		S2-257		S2-258		S2-259		S2-260		S2-261		S2-262		S2-263		S2-264		S2-265		S2-266		S2-267		S2-268		S2-269		S2-270		S2-271		S2-272		S2-273		S2-274		S2-275		S2-276		S2-277		S2-278		S2-279		S2-280		S2-281		S2-282		S2-283		S2-284		S2-285		S2-286		S2-287		S2-288		S2-289		S2-290		S2-291		S2-292		S2-293		S2-294		S2-295		S2-296		S2-297		S2-298		S2-299		S2-300		S2-301		S2-302		S2-303		S2-304		S2-305		S2-306		S2-307		S2-308		S2-309		S2-310		S2-311		S2-312		S2-313		S2-314		S2-315		S2-316		S2-317		S2-318		S2-319		S2-320		S2-321		S2-322		S2-323		S2-324		S2-325		S2-326		S2-327		S2-328		S2-329		S2-330		S2-331		S2-332		S2-333		S2-334		S2-335		S2-336		S2-337		S2-338		S2-339		S2-340		S2-341		S2-342		S2-343		S2-344		S2-345		S2-346		S2-347		S2-348		S2-349		S2-350		S2-351		S2-352		S2-353		S2-354		S2-355		S2-356		S2-357		S2-358		S2-359		S2-360		S2-361		S2-362		S2-363		S2-364		S2-365		S2-366		S2-367		S2-368		S2-369		S2-370		S2-371		S2-372		S2-373		S2-374		S2-375		S2-376		S2-377		S2-378		S2-379		S2-380		S2-381		S2-382		S2-383		S2-384		S2-385		S2-386		S2-387		S2-388		S2-389		S2-390		S2-391		S2-392		S2-393		S2-394		S2-395		S2-396		S2-397		S2-398		S2-399		S2-400		S2-401		S2-402		S2-403		S2-404		S2-405		S2-406		S2-407		S2-408		S2-409		S2-410		S2-411		S2-412		S2-413		S2-414		S2-415		S2-416		S2-417		S2-418		S2-419		S2-420		S2-421		S2-422		S2-423		S2-424		S2-425		S2-426		S2-427		S2-428		S2-429		S2-430		S2-431		S2-432		S2-433		S2-434		S2-435		S2-436		S2-437		S2-438		S2-439		S2-440		S2-441		S2-442		S2-443		S2-444		S2-445		S2-446		S2-447		S2-448		S2-449		S2-450		S2-451		S2-452		S2-453		S2-454		S2-455		S2-456		S2-457		S2-458		S2-459		S2-460		S2-461		S2-462		S2-463		S2-464		S2-465		S2-466		S2-467		S2-468		S2-469		S2-470		S2-471		S2-472		S2-473		S2-474		S2-475		S2-476		S2-477		S2-478		S2-479		S2-480		S2-481		S2-482		S2-483		S2-484		S2-485		S2-486		S2-487		S2-488		S2-489		S2-490		S2-491		S2-492		S2-493		S2-494		S2-495		S2-496		S2-497		S2-498		S2-499		S2-500		S2-501		S2-502		S2-503		S2-504		S2-505		S2-506		S2-507		S2-508		S2-509		S2-510		S2-511		S2-512		S2-513		S2-514		S2-515		S2-516		S2-517		S2-518		S2-519		S2-520		S2-521		S2-522		S2-523		S2-524		S2-525		S2-526		S2-527		S2-528		S2-529		S2-530		S2-531		S2-532		S2-533		S2-534		S2-535		S2-536		S2-537		S2-538		S2-539		S2-540		S2-541		S2-542		S2-543		S2-544		S2-545		S2-546		S2-547		S2-548		S2-549		S2-550		S2-551		S2-552		S2-553		S2-554		S2-555		S2-556		S2-557		S2-558		S2-559		S2-560		S2-561		S2-562		S2-563		S2-564		S2-565		S2-566		S2-567		S2-568		S2-569		S2-570		S2-571		S2-572		S2-573		S2-574		S2-575		S2-576		S2-577		S2-578		S2-579		S2-580		S2-581		S2-582		S2-583		S2-584		S2-585		S2-586		S2-587		S2-588		S2-589		S2-590		S2-591		S2-592		S2-593		S2-594		S2-595		S2-596		S2-597		S2-598		S2-599		S2-600		S2-601		S2-602		S2-603		S2-604		S2-605		S2-606		S2-607		S2-608		S2-609		S2-610		S2-611		S2-612		S2-613		S2-614		S2-615		S2-616		S2-617		S2-618		S2-619		S2-620		S2-621		S2-622		S2-623		S2-624		S2-625		S2-626		S2-627		S2-628		S2-629		S2-630		S2-631		S2-632		S2-633		S2-634		S2-635		S2-636		S2-637		S2-638		S2-639		S2-640		S2-641		S2-642		S2-643		S2-644		S2-645		S2-646		S2-647		S2-648		S2-649		S2-650		S2-651		S2-652		S2-653		S2-654		S2-655		S2-656		S2-657		S2-658		S2-659		S2-660		S2-661		S2-662		S2-663		S2-664		S2-665		S2-666		S2-667		S2-668		S2-669		S2-670		S2-671		S2-672		S2-673		S2-674		S2-675		S2-676		S2-677		S2-678		S2-679		S2-680		S2-681		S2-682		S2-683		S2-684		S2-685		S2-686		S2-687		S2-688		S2-689		S2-690		S2-691		S2-692		S2-693		S2-694		S2-695		S2-696		S2-697		S2-698		S2-699		S2-700		S2-701		S2-702		S2-703		S2-704		S2-705		S2-706		S2-707		S2-708		S2-709		S2-710		S2-711		S2-712		S2-713		S2-714		S2-715		S2-716		S2-717		S2-718		S2-719		S2-720		S2-721		S2-722		S2-723		S2-724		S2-725		S2-726		S2-727		S2-728		S2-729		S2-730		S2-731		S2-732		S2-733		S2-734		S2-735		S2-736		S2-737		S2-738		S2-739		S2-740		S2-741		S2-742		S2-743		S2-744		S2-745		S2-746		S2-747		S2-748		S2-749		S2-750		S2-751		S2-752		S2-753		S2-754		S2-755		S2-756		S2-757		S2-758		S2-759		S2-760		S2-761		S2-762		S2-763		S2-764		S2-765		S2-766		S2-767		S2-768		S2-769		S2-770		S2-771		S2-772		S2-773		S2-774		S2-775		S2-776		S2-777		S2-778		S2-779		S2-780		S2-781		S2-782		S2-783		S2-784		S2-785		S2-786		S2-787		S2-788		S2-789		S2-790		S2-791		S2-792		S2-793		S2-794		S2-795		S2-796		S2-797		S2-798		S2-799		S2-800		S2-801		S2-802		S2-803		S2-804		S2-805		S2-806		S2-807		S2-808		S2-809		S2-810		S2-811		S2-812		S2-813		S2-814		S2-815		S2-816		S2-817		S2-818		S2-819		S2-820		S2-821		S2-822		S2-823		S2-824		S2-825		S2-826		S2-827		S2-828		S2-829		S2-830		S2-831		S2-832		S2-833		S2-834		S2-835		S2-836		S2-837		S2-838		S2-839		S2-840		S2-841		S2-842		S2-843		S2-844		S2-845		S2-846		S2-847		S2-848		S2-849		S2-850		S2-851		S2-852		S2-853		S2-854		S2-855		S2-856		S2-857		S2-858		S2-859		S2-860		S2-861		S2-862		S2-863		S2-864		S2-865		S2-866		S2-867		S2-868		S2-869		S2-870		S2-871		S2-872		S2-873		S2-874		S2-875		S2-876		S2-877		S2-878		S2-879		S2-880		S2-881		S2-882		S2-883		S2-884		S2-885		S2-886		S2-887		S2-888		S2-889		S2-890		S2-891		S2	
-----------	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	--------	--	----	--

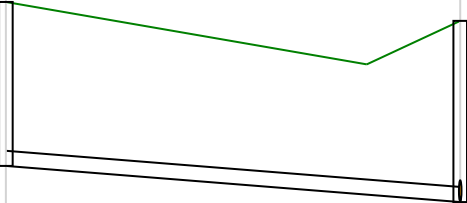


Node Name	S2-3		S2-4
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 88.000			
	Link Name	9.000	
	Section Type	100mm	
	Slope (1:X)	74.9	
	Cover Level (m)	94.000	93.750
	Invert Level (m)	92.934	92.775
	Length (m)	11.903	



Node Name	S1-1	S1-2	S1-4	S03 Junction
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 88.000				
Link Name	10.000	10.001	10.00	
Section Type	100mm	100mm	150m	
Slope (1:X)	62.0	33.4	3.5	
Cover Level (m)	94.150	94.150	93.975	93.500
Invert Level (m)	93.437	93.255	92.777	92.185
Length (m)	11.282	15.988	2.098	



Node Name	S1-3	S1-4
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 88.000		
Link Name	11.000	
Section Type	100mm	
Slope (1:X)	62.9	
Cover Level (m)	94.100	93.975
Invert Level (m)	93.016	92.777
Length (m)	15.026	

Appendix 2

General Notes

All dimensions shown are in millimetres unless otherwise stated. They should not be scaled from the drawings and must be checked on site, by the Contractor, from the actual work wherever possible.

These notes shall be read directly in conjunction with Hazelind Consultant's other relevant drawings and the Architect's details, together with any subsequent revisions and amendments.

The Contractor shall be responsible for all temporary and permanent support works necessary.

Legend

- Existing foul drainage run
- New foul water drainage run constructed to adoptable standards
- New private foul drainage run
- SVP Soil & vent pipe, open to outside air
- SP Soil pipe with air admittance valve
- SS Stub stack @ low level (e.g. under sink)
- BIG Back inlet gully
- G Trapped floor gully
- Existing surface water drainage run
- New surface water drainage run constructed to adoptable standards
- New private surface water drainage run
- RE Rodding eye
- RA Rodding access @ low level (e.g. above floor)
- RWP Rainwater down pipe
- G External gully
- RG Road gully
- Channel drain
- Cellular storage attenuation tanks. No infiltration.
- Flow control chamber Type HBC.
- Manhole Types MH1b & MH2.
- Inspection Chamber Type IC3. Typically <1.0m deep and not included within MH Schedules. Final CLs and ILs to be determined on site.
- Sump filter chamber Type SFC.
- Cellular unit inspection shaft Type ISC.
- Permeable block paving: System 'C'. No infiltration. Standard parking bay construction.
- Permeable Macadam paving: System 'C'. No infiltration. Standard road construction.
- Permeable paving collection drain.

Contours shown
0.25m & 1.00m intervals



For Approval

P2 25/03/25 Issued for planning submission.
P1 20/03/25 Issued for review.
Rev Use Approved

Hazelind Consultants Limited
Consulting Structural & Civil Engineers

Graythwaite
London Road
Crawley
East Sussex TN11 7TD
office 07815 297135
email projects@hazelind.com



Hatchgate Cottage
Architect
MJB

Project
Hatchgate Lane
Cuckfield
Drawing
Proposed Development of 5 Houses
Site & Drainage Plan

Scale
As shown @ A1
Date
march 2025
By
jml
Rev
P21126-HZL- 00-DR-D- [2201]
Rev
S4

Proposed Site & Drainage Plan (1:200)

A1

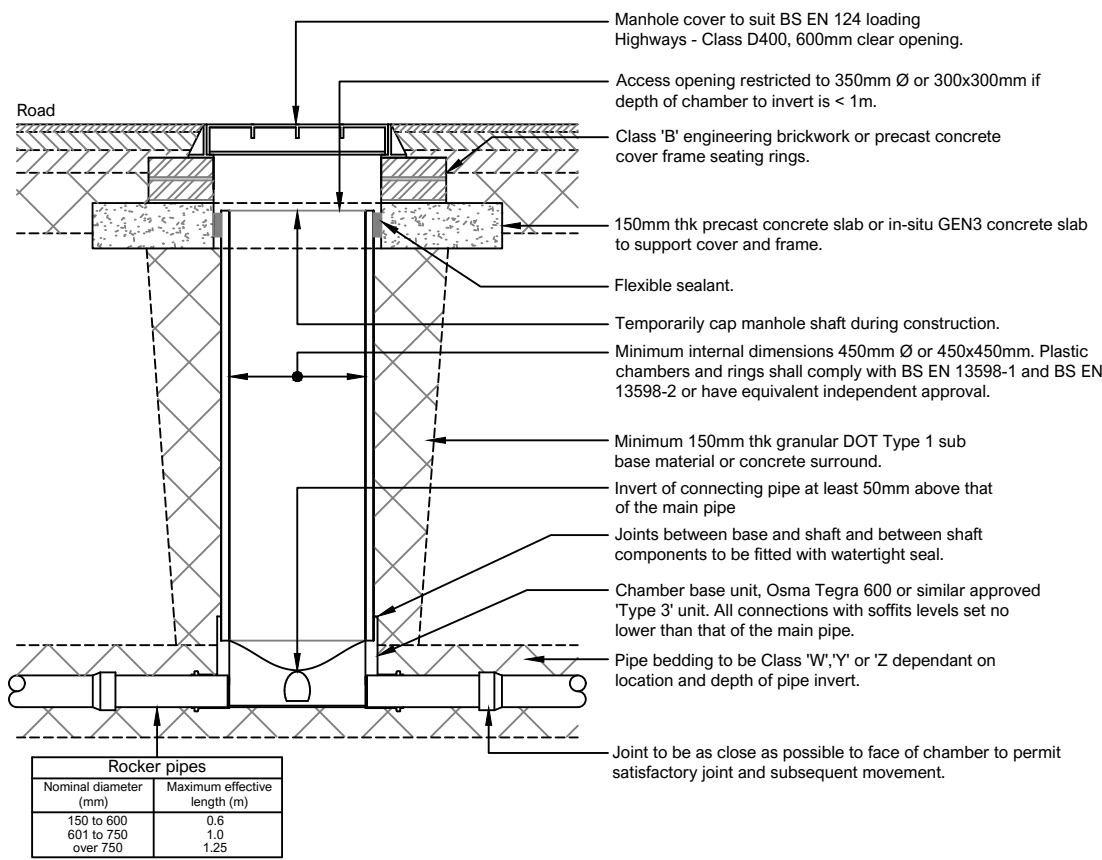
1:20 @ A3
1:10 @ A1 0.2m 0.4m 0.6m 0.8m 1.0m

1:50 @ A3
1:25 @ A1 0.5m 1.0m 1.5m 2.0m 2.5m

1:100 @ A3
1:50 @ A1 1m 2m 3m 4m 5m

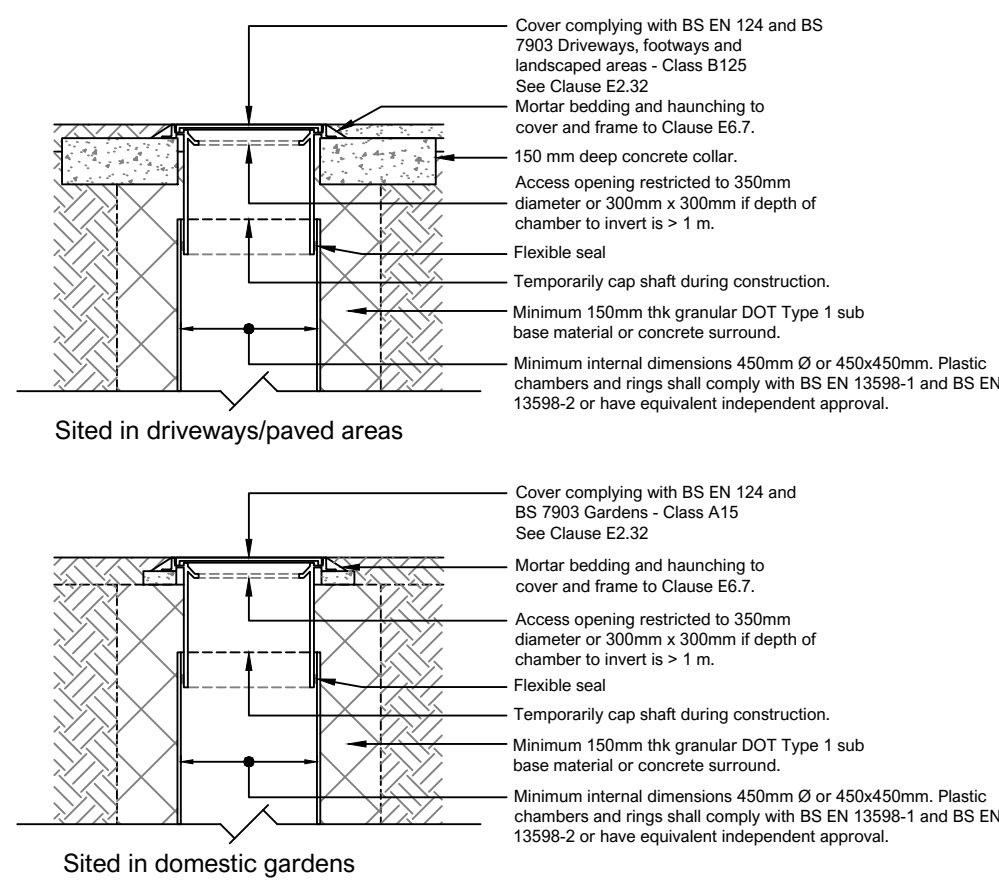
1:200 @ A3
1:100 @ A1 2m 4m 6m 8m 10m

1:500 @ A3
1:250 @ A1 5m 10m 15m 20m 25m



'IC3' Typical Inspection Chamber Detail (1:25)
Type 3' (Flexible material detail)

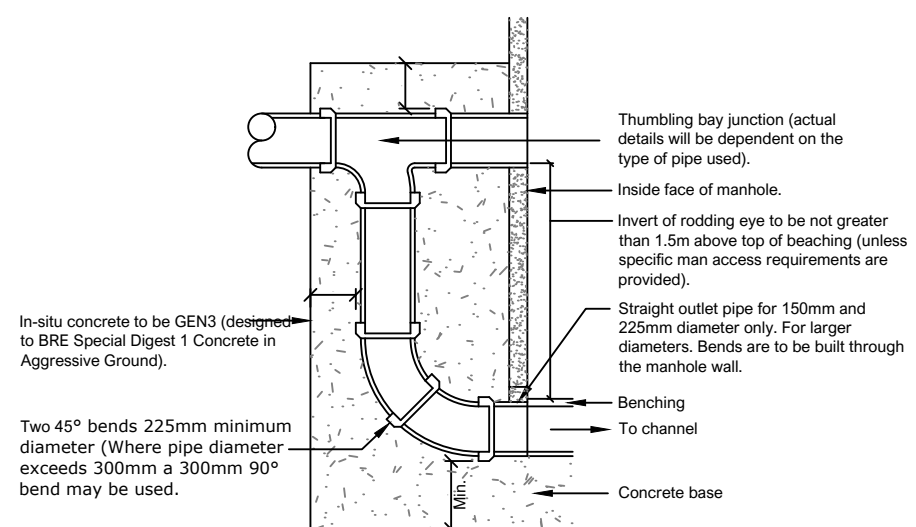
Maximum depth from cover level to soffit of pipe in areas subject to vehicle loading 3.0m, non entry.
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements
Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or have equivalent independent approval
Figure B.16



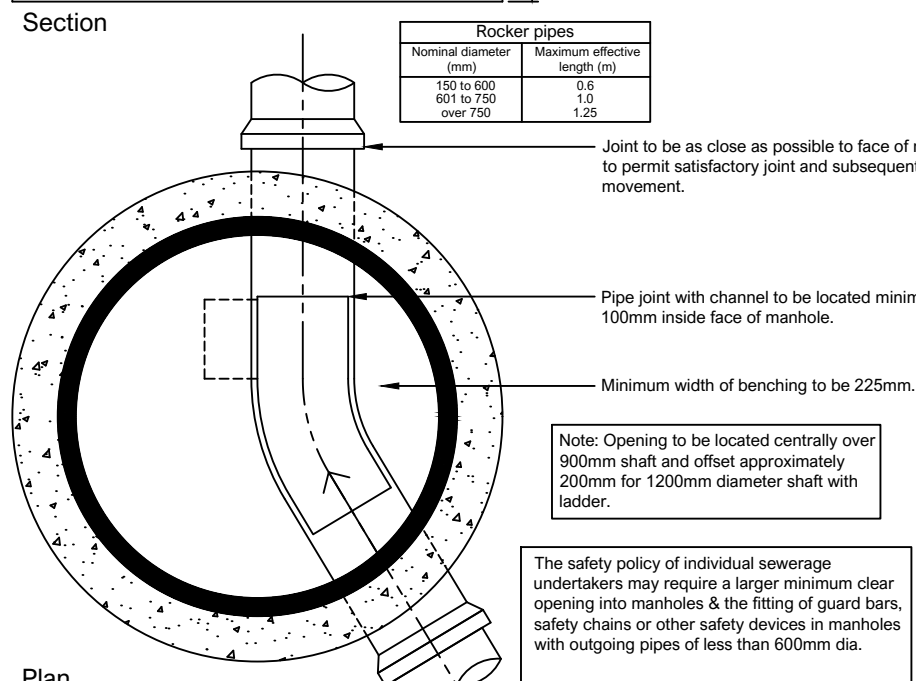
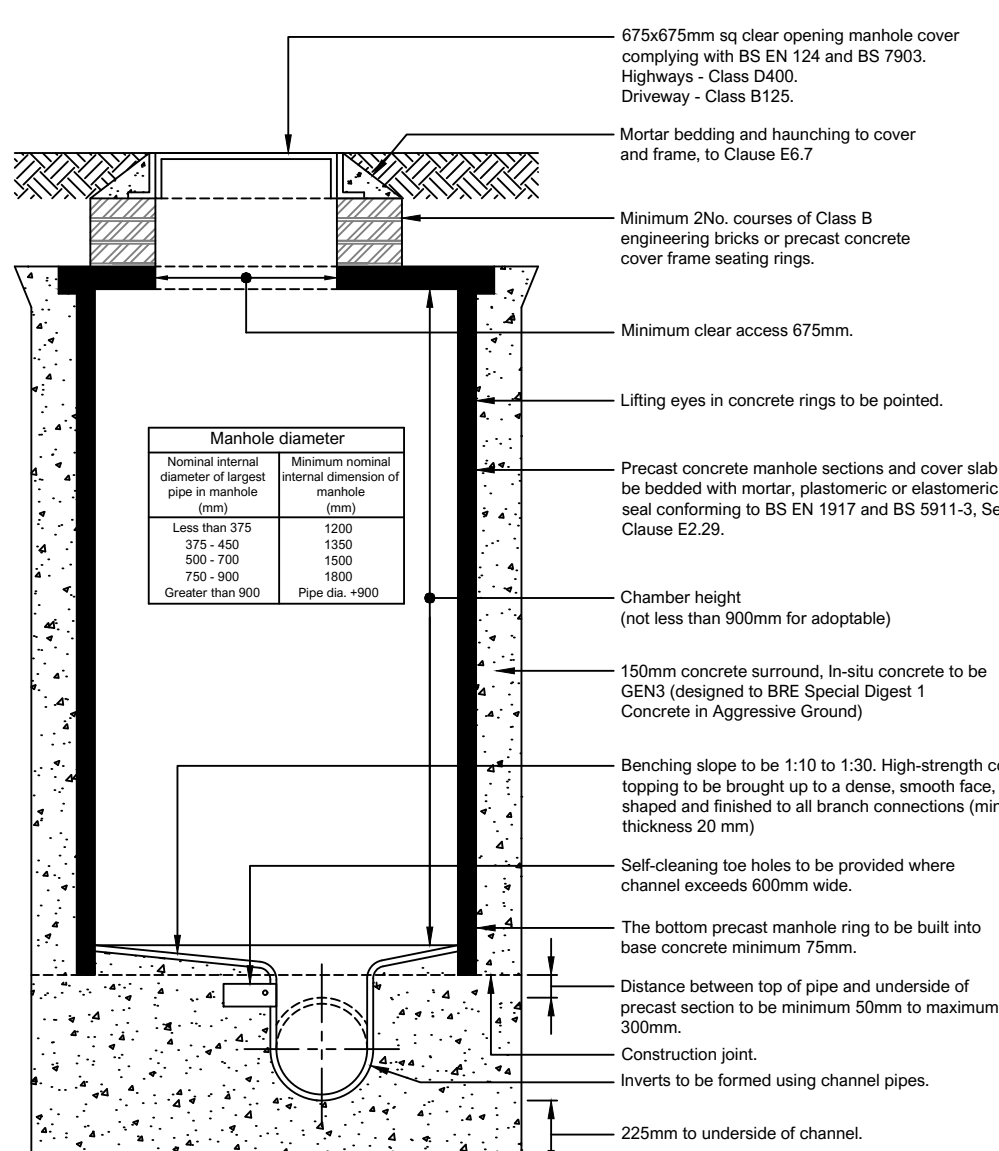
'IC3' Alternative Inspection Chamber Details (nts)
Type 3' (Flexible material detail)

For light vehicle loading and landscaped areas

Note: Where the access chamber is in the highway the Highway Authority can have specific requirements
Figure B.17

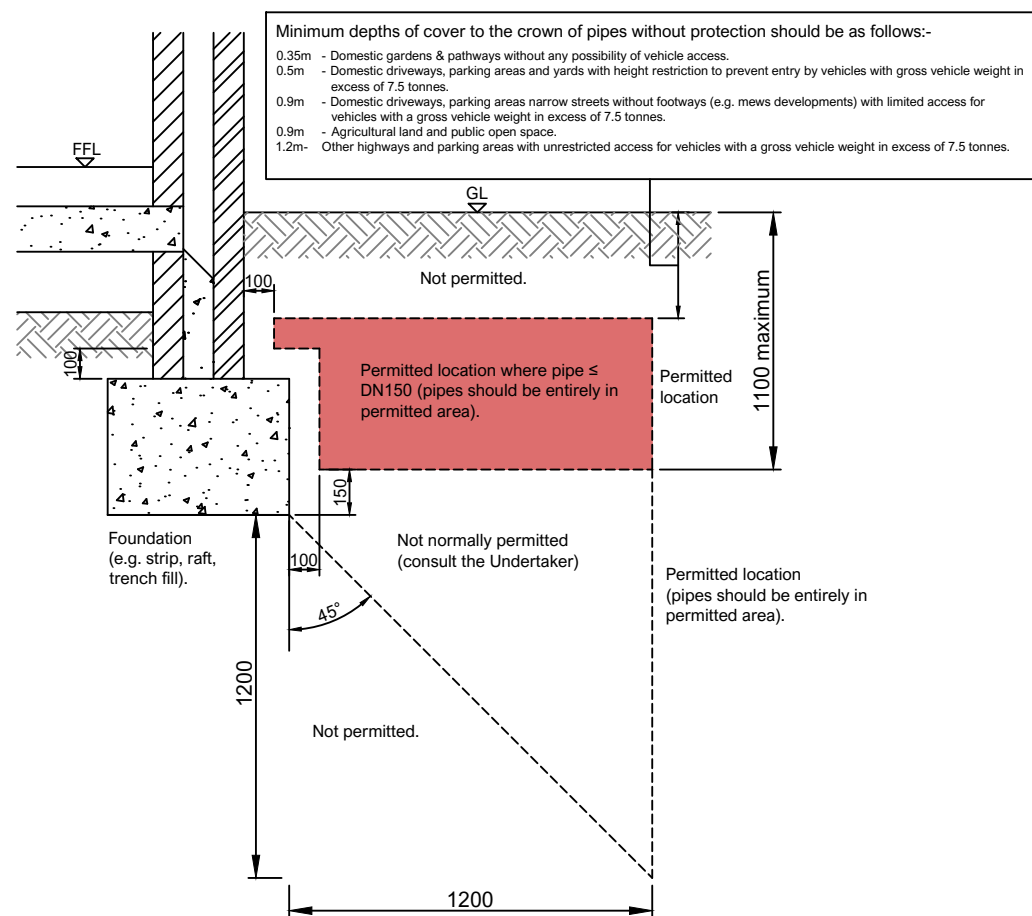


Typical Vertical Backdrop (1:25)

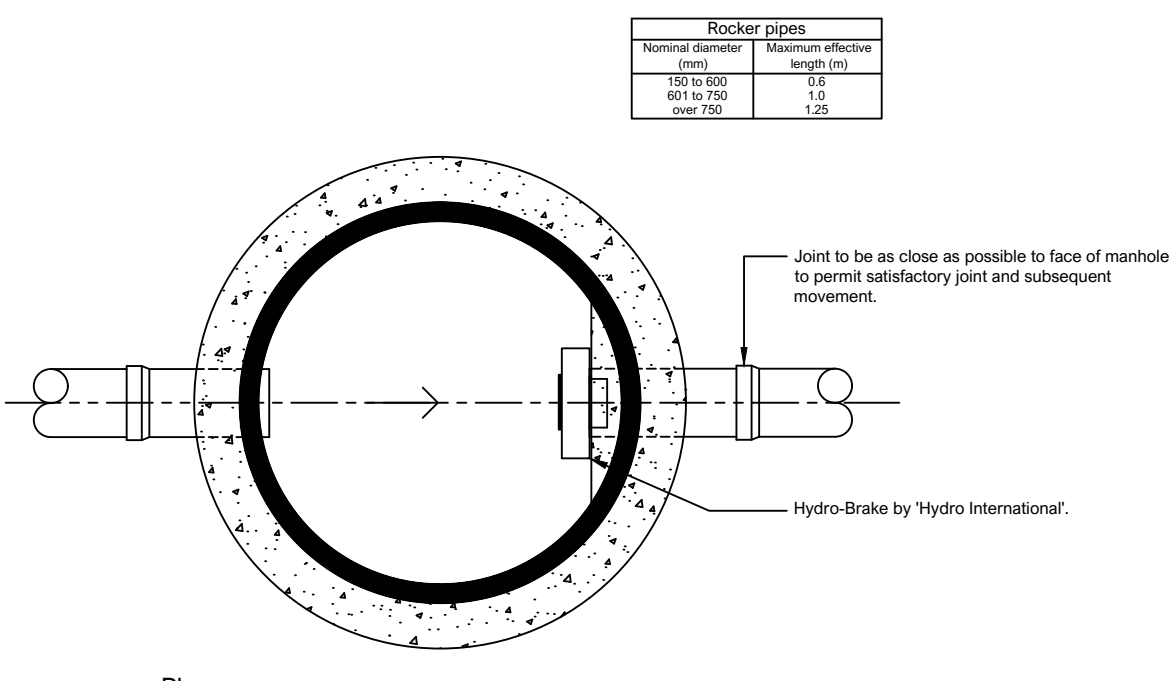
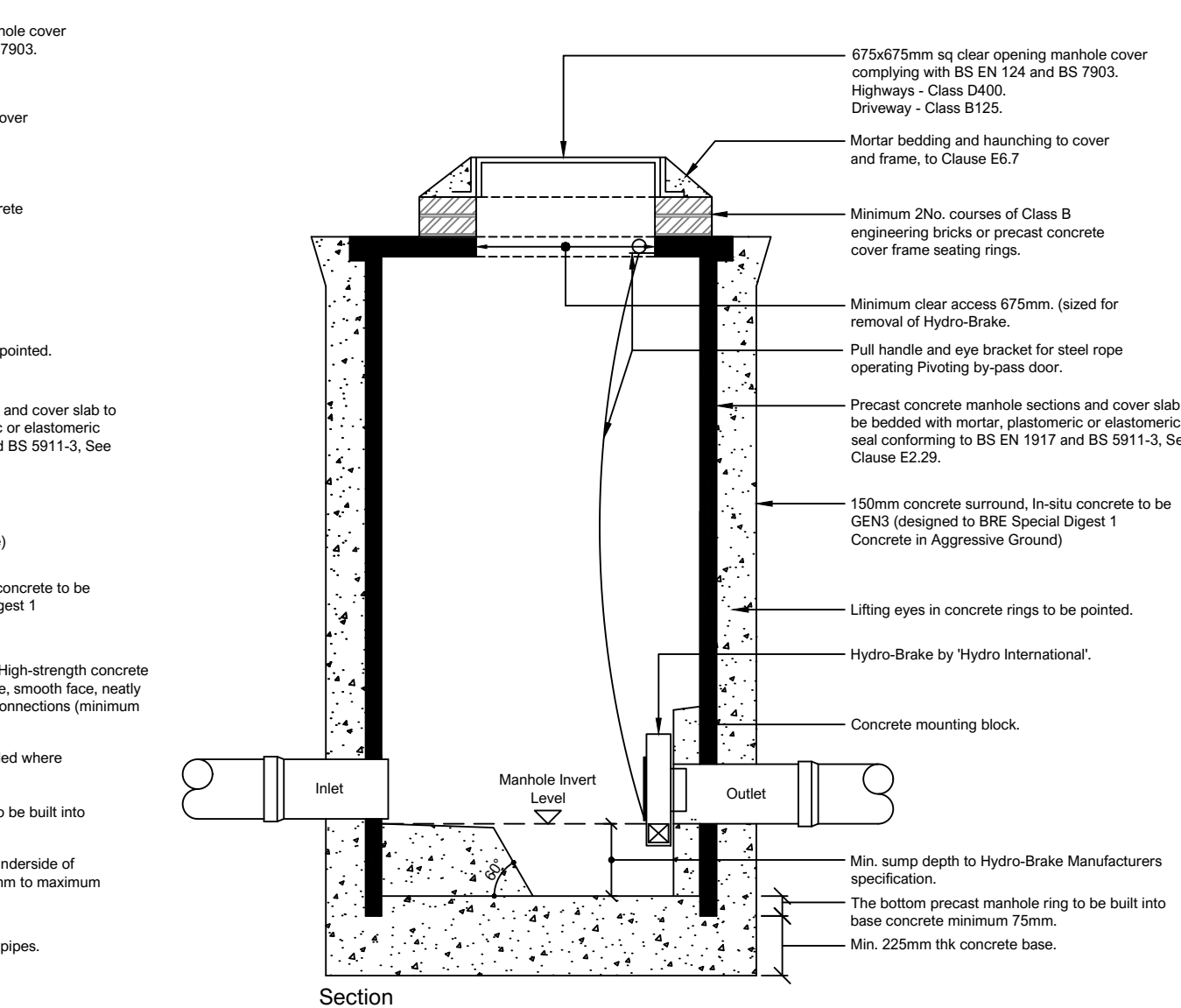


Typical Manhole Detail (1:25)
Type 'MH1b' - Depth from cover level to soffit of pipe 3.0m to 6.0m.
Type 'MH2' - Maximum depth from cover level to soffit of pipe 3.0m

Figure B.18 & B.12

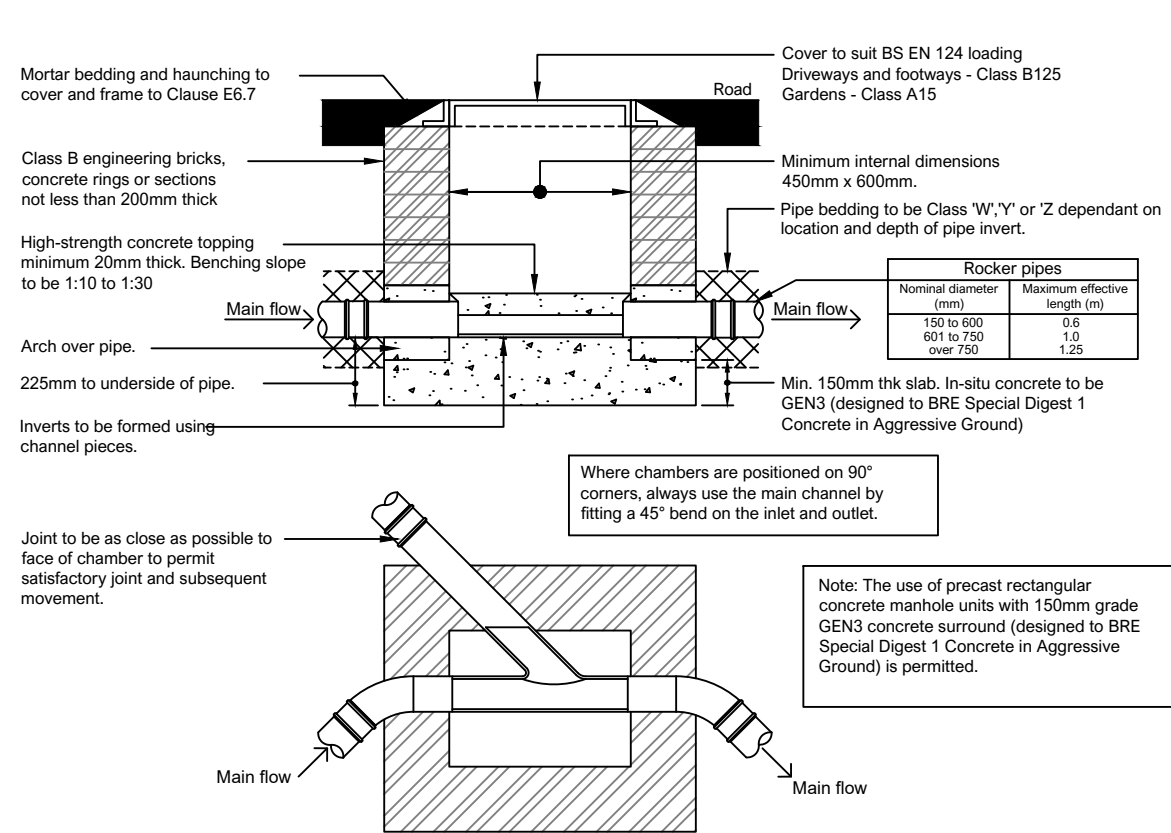


Permitted Location of Sewers and Lateral Drains in Proximity to Building (1:25)
Figure B.1



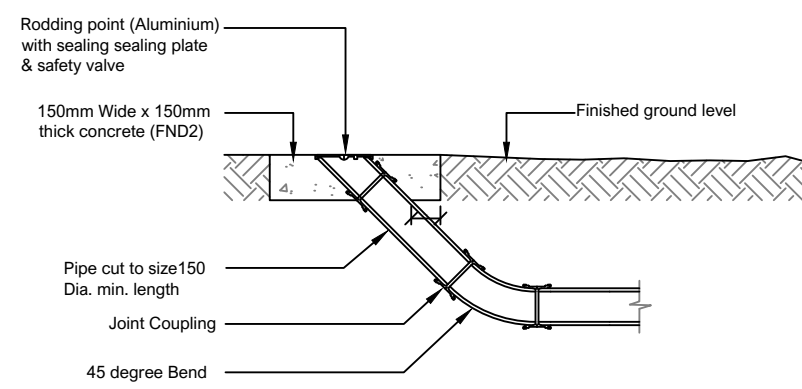
'HBC' Typical Hydro-Brake Detail (1:25)

Hydro-brake Chambers to be constructed in strict accordance with manufacturer's specifications.
Source: Hydro International Stormwater dwg No. HBC-SST
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements
Figure B.18

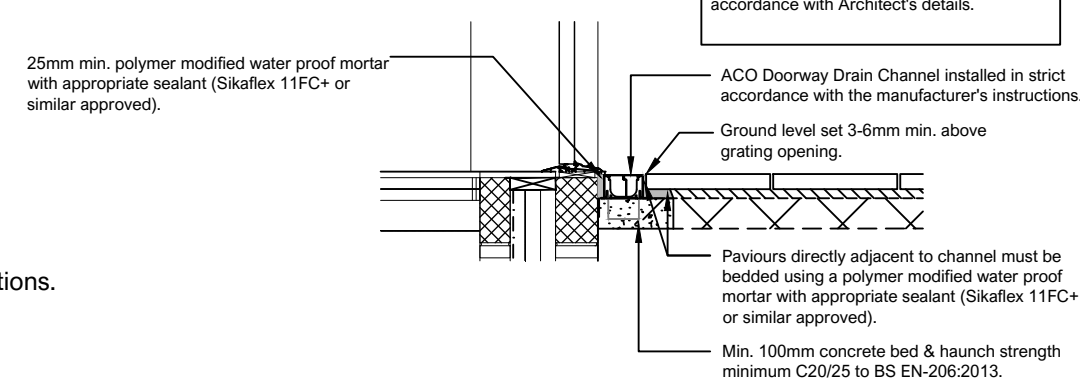


Typical Alternative Brick Construction Detail For Shallow Inspection Chambers (1:25)

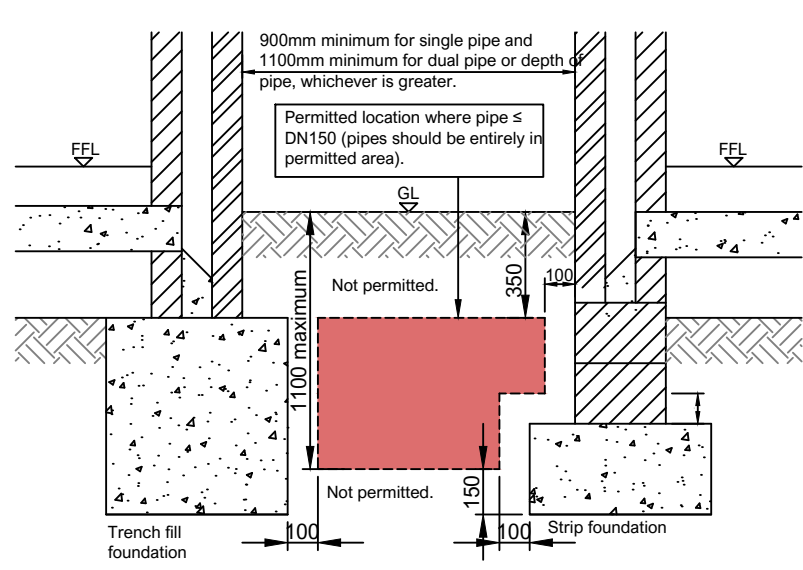
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements
Figure B.23



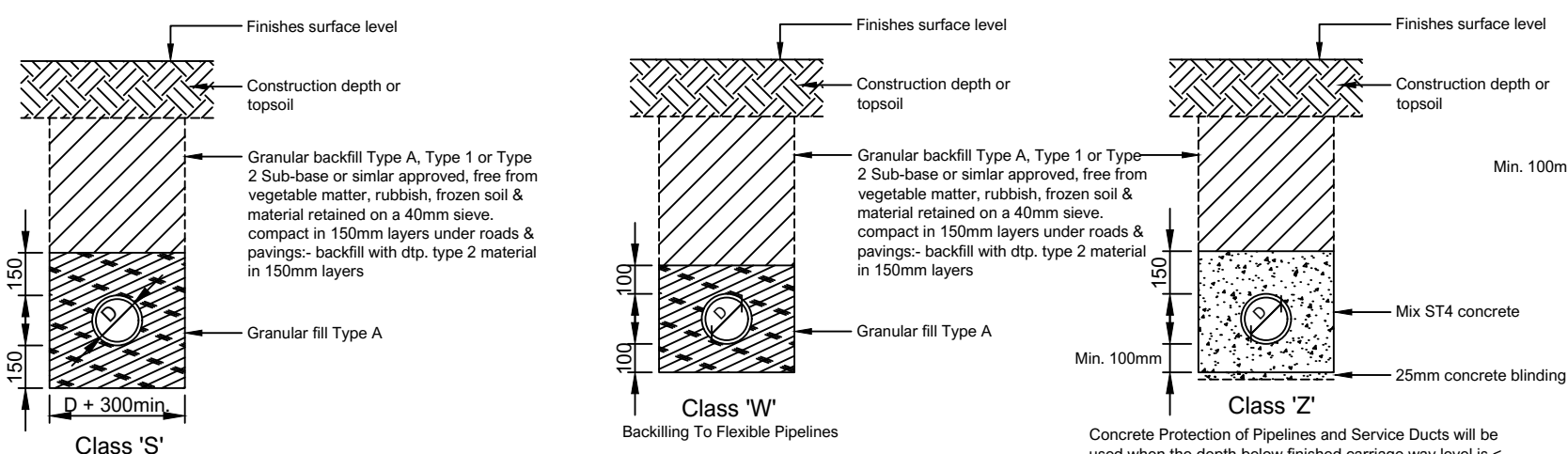
Rodding Eye Detail (1:25)



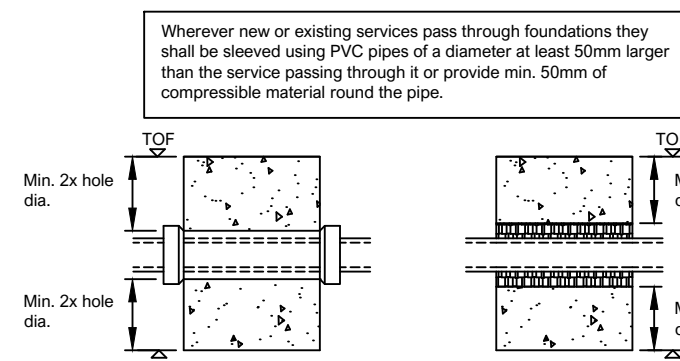
Typical Threshold Drain Detail (1:25)
Patio door drain channel similar detail.



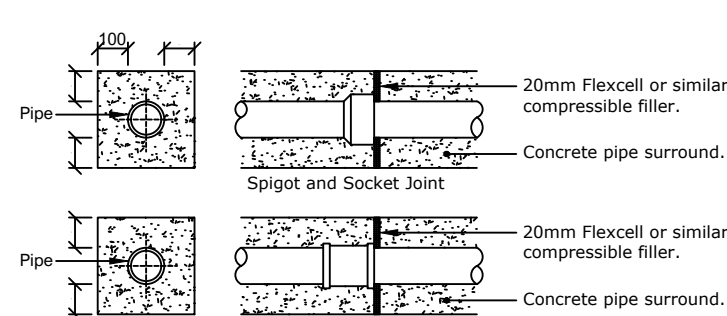
Additional Detail - Permitted Location of Sewers and Lateral Drains Between Buildings (1:25)
(Where Figure B.1 is not applicable)
Figure B.2



Typical Pipe Bedding Details (1:25)



Typical Foundation Sleeve Details (1:25)



Joints For Concrete Encased Pipes (1:25)

Drainage Notes

All dimensions shown are in millimeters unless otherwise stated.

These notes shall be read directly in conjunction with the design team's other relevant drawings, details and specification, together with any subsequent revisions and amendments.

The Contractor shall be responsible for all temporary and permanent support works necessary.

In general, no fall shall be less than:-
1 in 40 for foul under a structure or 1 in 80 elsewhere.
1 in 100 for surface water.

Pipe work and fittings to all sewers shall be adequately durable and projected against damage.

Drain materials and components shall be in accordance with the following standards:-

Vitrified Clay- BS 65 or BS EN 295
Precast Concrete - BS 5911
Plastic - BS 4962, BS 4660 or BS EN 1401-1

Adoptable sewers and laterals are to be vitrified clay.

All other drainage shall comply with Local Building Authority and relevant Structural Warranty provider standards.

Special protection may be required where pipes are near the ground surface or where they could be damaged by the weight of backfill or traffic load form above.

For flexible pipes, and where greater safety is needed, the bedding class and grading of backfill should comply with BS EN 13242.

All drain runs from RWP & SVP stacks to be 102/110mm diameter unless noted otherwise.

All pipes within close proximity to and deeper than new or existing foundations shall be encased in concrete and backfilled in concrete up to the level of those foundations.

Adequate sleeves or bridges shall be provided wherever drains pass through walls or foundations.

Manhole & access chamber cover to suit BS EN 124 loading:-
Grade A15 - Gardens
Grade B125 - Driveways & footways.
Grade D400 - Roads & carriageways.

Internal manhole & access chambers to be fitted with lockable triple-sealed aluminium recessed covers and frames.

Two sets of lifting keys to be provided to client for each type of cover at handover.

Cover levels given are conservative values and may require adjustment to suit Approved Documents Part M access and final ground levels.

All pipes to be bedding class ('S'/'Y' or 'Z') depending on position with granular surround as shown on detail drawing if crown of pipe is within 450mm of finished ground level then to be encased in concrete class 'Y' or 'Z'

Sewers to be abandoned should be removed form ground not grouted up.

Easements to public sewers are not required where the gravity sewer is less than 300mm diameter and less than 3.0m deep or in a public highway.

Soakaways/attenuation units should be a minimum 5.0m away from a Public Sewer.

Flow Controls

The design of flow control devices to include the following features:

Flow controls may be static (such as vortex flow controls or fixed orifice plates) or variable (such as pistons or slide valves).

A bypass should be included with a surface operated penstock or valve.

Access should be provided to the upstream and downstream sections of a flow control device to allow maintenance.

For Approval

P1 Rev 25/03/25 Issued for approval.

Hazellind Consultants Limited
Consulting Structural & Civil Engineers

Grayhams
London Road
Crowborough
East Sussex TN8 1TD
office 07815 207135
email projects@hazellind.com

Silver Homes (Cuckfield) Limited
Architect
MJB

Project
Hatchgate Cottage
Hatchgate Lane, Cuckfield

Drawn
Proposed Development
Drainage & External Works Details 1

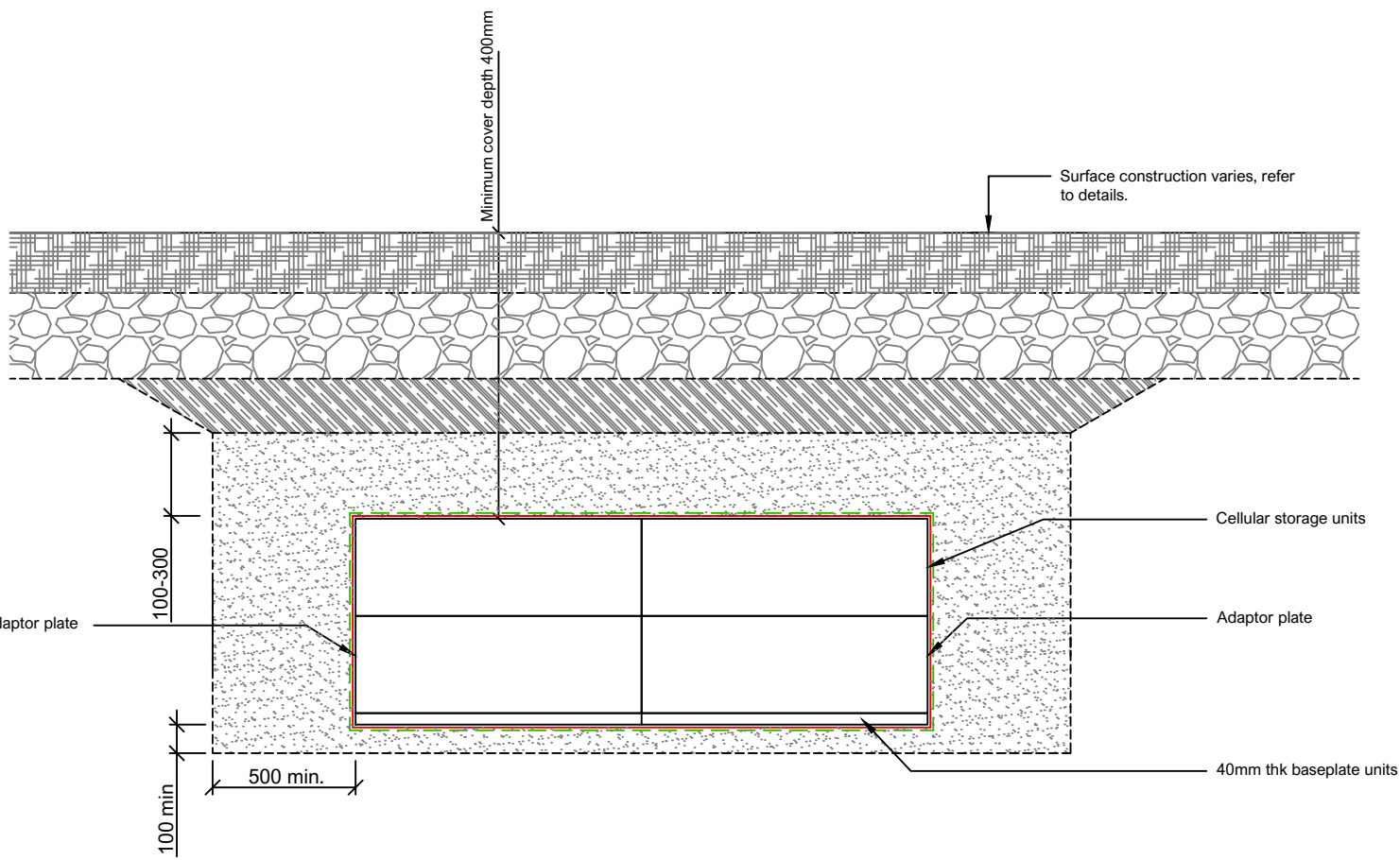
Scale
As shown @ A1

Date
march 2025

By
jml

Revision
P21126-HZL- ZZ-DR-D- [2221]

Rev
S4



Typical Attenuation Tank Details (nts)

Underground Attenuation

Provide Graf cellular storage units, 0.8x0.8x0.35m deep to the levels and extents as shown on the plans, with:-

- 2x inspection shafts for inspection and maintenance.
- Ventilation, specialist manufacturer to confirm requirements.
- Inspection channel, for inspection, cleaning and maintenance.
- Sump filter chambers provided upstream of storage units to capture and retain silt, preventing ingress into SuDS.

Units shall be wrapped in:-

- Inner layer to be 1mm thick Excalfiter Edge impermeable membrane. Sheet widths of 5.6m and supplied in lengths to suit installation. All joints to be wedge welded to form a watertight seal.
- Outer layer to be 300gsm² (smw40) non-woven geotextile. Installed with a min. overlap of 300mm

Provide 10 to 16mm single sized non-angular stone immediately around tank to the dimensions shown.

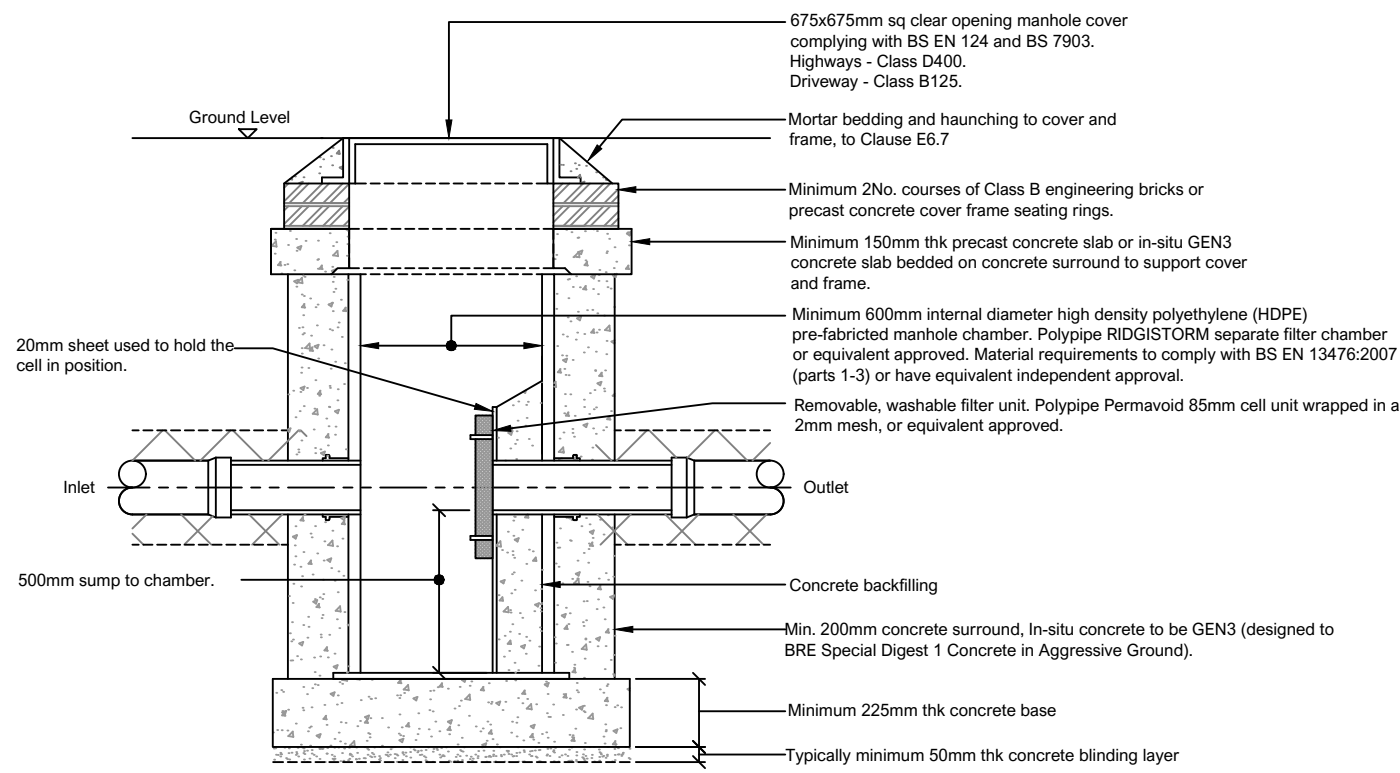
Formation material to base of excavation to be undisturbed and to be smooth, firm and level, free from projections and debris and suitable to carry anticipated loads.

Backfilling layers to be 300mm thk (before any compaction) comprising good quality returned, excavated material where appropriate and available, and/or Type 2 sub-base.

No vibratory mechanism should be used compacting the first layer.

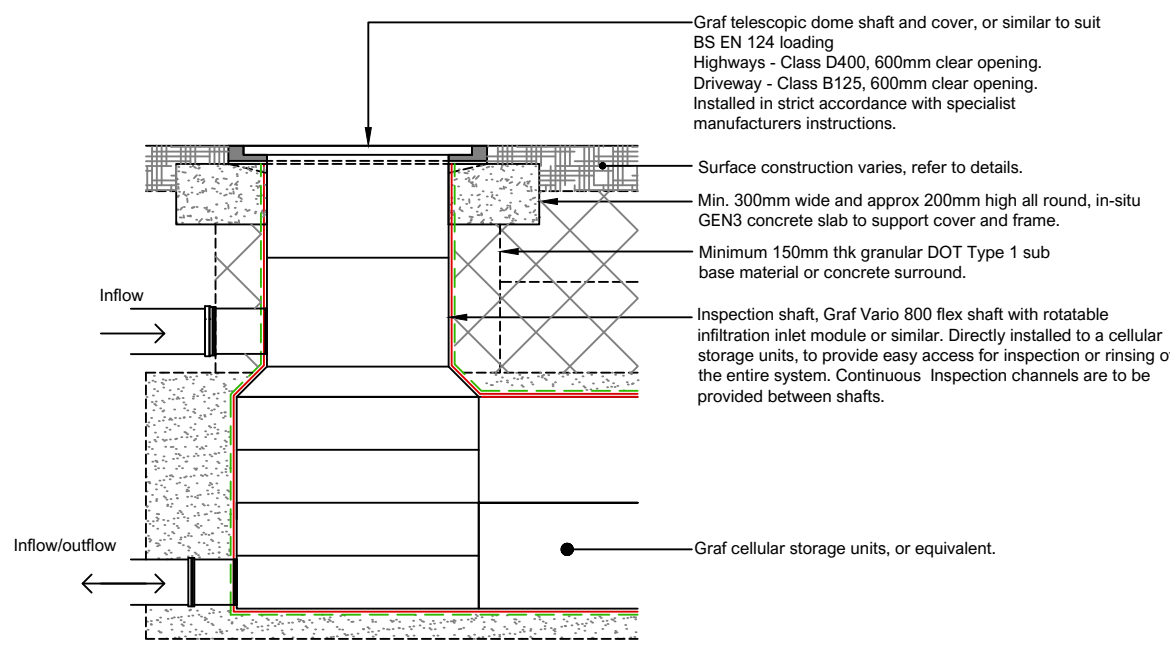
Cellular storage units to be as designed by Graf.

- Internal friction angle to be taken as 25 degrees.
- Lorry 30 Loading.
- Short-term localised groundwater water should be considered at the top of the tank levels.



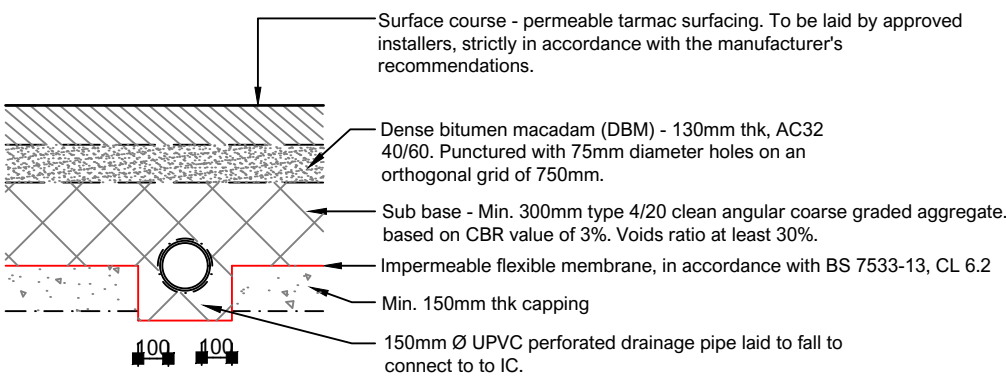
'SFC' Sump Filter Chamber Detail (nts)

Located upstream of attenuation, retention and infiltration systems. Silt Traps isolate silt and other particles, preventing ingress into sustainable drainage systems (SuDS).
General arrangement drawing only. Contact Polypipe for site specific fabrication drawings, subject to Structural Engineers approval.



'ISC' Indicative Cellular Inspection Shaft (nts)

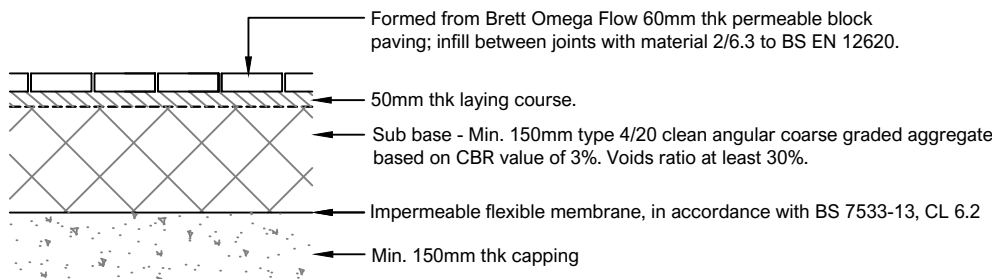
All to be installed in strict accordance with specialist manufacturers instructions.



Typical Permeable Tarmac Construction (1:25)

System 'C' No Infiltration / Load Category '3'

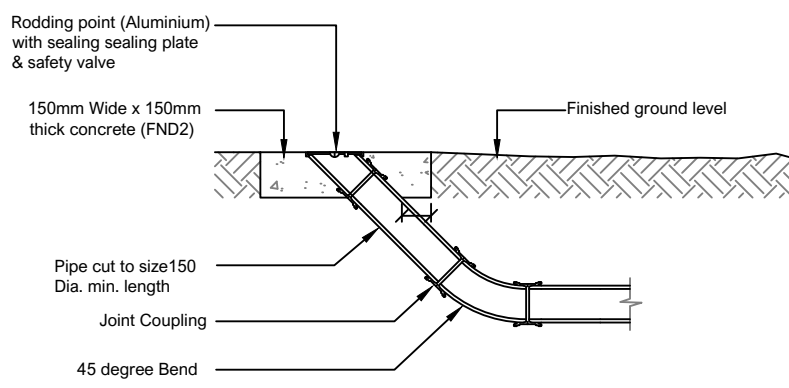
Main components to be in accordance with Brett's "Permeable Pavement Materials and Construction Specification", BS EN 7533 and all generally in accordance with Interpave Guidance 2010.



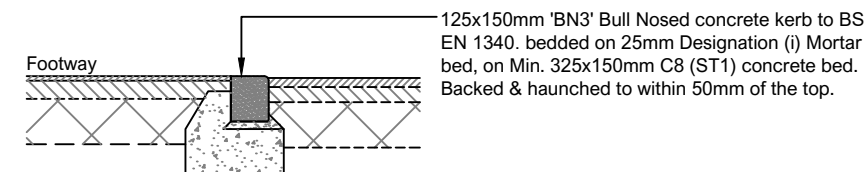
Private Parking Bay Permeable Block Paving Construction (1:25)

System 'C' No Infiltration / Loading Category 'B'

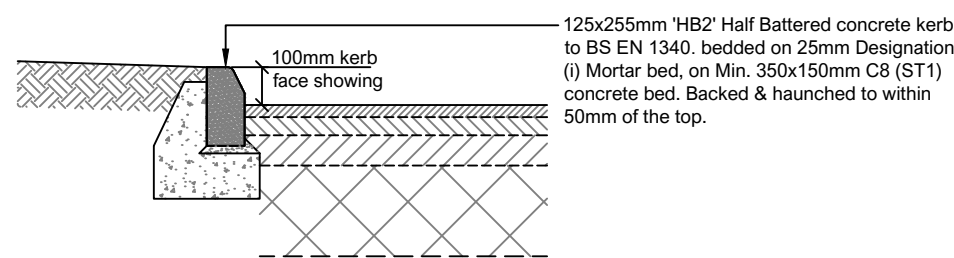
Main components to be in accordance with Brett's "Permeable Pavement Materials and Construction Specification", BS EN 7533 and all generally in accordance with Interpave Guidance 2010.



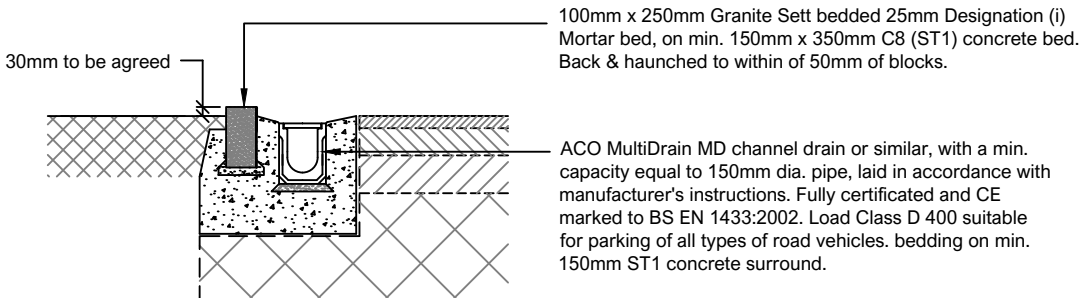
Rodding Eye Detail (1:25)



Typical Footway Drop Kerb Detail (1:25)



Typical Kerb Detail (1:25)



Channel Drain Demarcation Detail (1:25)

New / Existing access road

Drainage Notes

All dimensions shown are in millimetres unless otherwise stated.

These notes shall be read directly in conjunction with the design team's other relevant drawings, details and specification, together with any subsequent revisions and amendments.

The Contractor shall be responsible for all temporary and permanent support works necessary.

For Approval

P1 25/03/25 Issued for approval.

Rev Date Approved

Hazeld Consultants Limited
Consulting Structural & Civil Engineers

Grayhews
London Road
Crowborough
East Sussex TN16 1TD office 07815 207135
email projects@hazeld.com

Client

Silver Homes (Cuckfield) Limited

Architect

MJB

Project

Hatchgate Cottage

Hatchgate Lane, Cuckfield

Drawn

Proposed Development

Drainage & External Works Details 2

Scale

As shown @ A1

Date

march 2025

By

jml

Drawing No

P21126-HZL- ZZ-DR-D- [2222]

Sheet

S4

Appendix 3