

Appendix 1



Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
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)
01	0.006	4.00	94.004	600	0.604
02			93.390	600	0.390

Links (Input)

Name	US Node	DS Node	Length (m)	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	01	02	9.101	93.400	93.000	0.400	22.8	100

Simulation Settings

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

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



Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	01	10	93.418	0.018	0.9	0.0087	0.0000	OK
15 minute summer	02	10	93.018	0.018	0.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute summer	01	1.000	02	0.9	0.926	0.071



Hazelind Consultants Ltd
Grayshaws
London Road
Crowborough TN6 1TD

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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	300	0.795
S5-2	0.004	4.00	94.400	300	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	300	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	300	0.905
S4-4			94.400	450	1.360
S05			94.300	900	2.150
S3-1	0.009	4.00	94.100	300	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	300	0.648
S2-2	0.005	4.00	94.000	450	0.722
S2-3	0.004	4.00	94.000	300	1.066
S2-4	0.004	4.00	93.750	450	0.975
S08 Junction			93.600	150	1.343
S04			93.600	900	1.782
S1-1	0.004	4.00	94.150	300	0.713
S1-2	0.004	4.00	94.150	450	0.895
S1-3	0.004	4.00	94.100	300	1.084
S1-4	0.003	4.00	93.975	450	1.198
S03 Junction			93.500	150	1.717
S02			93.500	1200	1.750
C01			93.500	600	1.800



Links (Input)

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	92.150	0.750	41.1	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	92.150	0.890	5.2	150
1.004	S05	S04	28.262	92.150	91.818	0.332	85.1	225
6.000	S3-1	S3-2	13.682	93.321	93.183	0.138	99.1	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
6.005	S08 Junction	S04	5.030	92.257	91.818	0.439	11.5	150
1.005	S04	S03 Junction	3.537	91.818	91.783	0.035	101.1	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	91.783	0.994	2.1	150
1.006	S03 Junction	S02	3.389	91.783	91.750	0.033	102.7	225
1.007	S02	C01	4.492	91.750	91.700	0.050	89.8	100

Simulation Settings

Rainfall Methodology	FEH-22	Skip Steady State	x	2 year (l/s)	0.9
Rainfall Events	Singular	Drain Down Time (mins)	240	30 year (l/s)	0.9
Summer CV	0.750	Additional Storage (m³/ha)	20.0	100 year (l/s)	0.9
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	10
30	40	0	10
100	45	0	10
1000	0	0	10



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		

Node S02 Online Hydro -Brake® Control

Flap Valve	x
Replaces Downstream Link	x
Invert Level (m)	91.750
Design Depth (m)	1.450
Design Flow (l/s)	0.9
Objective	(HE) Minimise upstream storage
Sump Available	x
Product Number	CTL-CHE-0039-9000-1450-9000
Min Outlet Diameter (m)	0.075
Min Node Diameter (mm)	0

Node S05 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	92.150
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	1.050	138.2	0.0	1.051	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 +10% Q Critical Storm Duration. Lowest mass balance: 95.80%

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	93.630	0.025	1.1	0.0060	0.0000	OK
15 minute winter	S5-2	10	93.614	0.020	0.7	0.0034	0.0000	OK
15 minute winter	S5-3	10	93.430	0.041	2.4	0.0093	0.0000	OK
15 minute winter	S07	10	93.323	0.030	2.4	0.0086	0.0000	OK
15 minute summer	S06	10	92.984	0.084	11.0	0.0533	0.0000	OK
15 minute winter	S4-1	10	93.448	0.023	0.7	0.0035	0.0000	OK
15 minute summer	S4-2	10	93.331	0.034	1.4	0.0079	0.0000	OK
15 minute winter	S4-3	10	93.246	0.035	1.8	0.0069	0.0000	OK
15 minute winter	S4-5	10	93.511	0.016	0.8	0.0029	0.0000	OK
15 minute summer	S4-4	9	93.060	0.020	2.6	0.0032	0.0000	OK
480 minute winter	S05	376	92.332	0.182	3.1	24.0529	0.0000	OK
15 minute summer	S3-1	10	93.356	0.035	1.5	0.0103	0.0000	OK
15 minute winter	S3-2	10	93.217	0.034	2.1	0.0082	0.0000	OK
15 minute winter	S3-3	10	92.967	0.053	2.7	0.0119	0.0000	OK
15 minute winter	S3-4	10	92.787	0.021	3.6	0.0052	0.0000	OK
15 minute winter	S12	10	93.213	0.051	8.6	0.0658	0.0000	OK
15 minute winter	S10	10	92.715	0.036	2.3	0.0197	0.0000	OK
15 minute winter	S09	10	92.535	0.063	5.9	0.0179	0.0000	OK
15 minute summer	S2-1	10	93.463	0.036	1.7	0.0140	0.0000	OK
15 minute summer	S2-2	10	93.315	0.037	2.6	0.0113	0.0000	OK
15 minute summer	S2-3	10	92.954	0.020	0.6	0.0028	0.0000	OK
15 minute summer	S2-4	10	92.793	0.018	3.8	0.0043	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	1.1	0.488	0.140
15 minute winter	S5-2	2.000	S5-3	0.7	0.348	0.089
15 minute winter	S5-3	1.001	S07	2.4	0.959	0.304
15 minute winter	S07	1.002	S06	2.4	0.426	0.089
15 minute summer	S06	1.003	S05	11.2	2.157	0.403
15 minute winter	S4-1	4.000	S4-2	0.7	0.385	0.116
15 minute summer	S4-2	4.001	S4-3	1.4	0.590	0.231
15 minute winter	S4-3	4.002	S4-4	1.8	0.819	0.101
15 minute winter	S4-5	5.000	S4-4	0.8	0.842	0.058
15 minute summer	S4-4	4.003	S05	2.6	2.396	0.033
480 minute winter	S05	1.004	S04	-1.1	0.194	-0.020
15 minute summer	S3-1	6.000	S3-2	1.5	0.633	0.248
15 minute winter	S3-2	6.001	S3-3	2.1	0.646	0.248
15 minute winter	S3-3	6.002	S3-4	2.7	1.021	0.446
15 minute winter	S3-4	6.003	S09	3.6	0.884	0.043
15 minute winter	S12	3.000	S06	8.6	1.138	0.246
15 minute winter	S10	7.000	S09	2.3	0.461	0.130
15 minute winter	S09	6.004	S08 Junction	5.8	1.038	0.328
15 minute summer	S2-1	8.000	S2-2	1.7	0.660	0.271
15 minute summer	S2-2	8.001	S2-4	2.6	1.490	0.226
15 minute summer	S2-3	9.000	S2-4	0.6	0.565	0.086
15 minute summer	S2-4	8.002	S08 Junction	3.8	1.489	0.033

Results for 2 year +10% Q Critical Storm Duration. Lowest mass balance: 95.80%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S08 Junction	376	92.332	0.075	1.3	0.0014	0.0000	OK
480 minute winter	S04	376	92.332	0.514	1.7	0.3271	0.0000	SURCHARGED
15 minute winter	S1-1	10	93.456	0.019	0.6	0.0033	0.0000	OK
15 minute winter	S1-2	10	93.281	0.026	1.3	0.0066	0.0000	OK
15 minute summer	S1-3	10	93.036	0.020	0.6	0.0028	0.0000	OK
15 minute winter	S1-4	10	92.791	0.014	2.5	0.0031	0.0000	OK
480 minute winter	S03 Junction	376	92.332	0.549	1.3	0.0099	0.0000	SURCHARGED
480 minute winter	S02	376	92.332	0.582	1.3	0.6586	0.0000	SURCHARGED
480 minute winter	C01	376	91.720	0.020	0.6	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	1.3	0.490	0.025
480 minute winter	S04	1.005	S03 Junction	1.2	0.326	0.023
15 minute winter	S1-1	10.000	S1-2	0.6	0.453	0.078
15 minute winter	S1-2	10.001	S1-4	1.3	1.137	0.123
15 minute summer	S1-3	11.000	S1-4	0.6	0.666	0.078
15 minute winter	S1-4	10.002	S03 Junction	2.5	0.536	0.020
480 minute winter	S03 Junction	1.006	S02	1.3	0.136	0.025
480 minute winter	S02	1.007	C01	0.6	0.492	0.089

Results for 30 year +40% CC +10% Q Critical Storm Duration. Lowest mass balance: 96.23%

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	93.656	0.051	4.0	0.0120	0.0000	OK
15 minute winter	S5-2	10	93.632	0.038	2.4	0.0064	0.0000	OK
15 minute winter	S5-3	11	93.586	0.197	8.4	0.0446	0.0000	SURCHARGED
15 minute winter	S07	11	93.491	0.198	7.8	0.0561	0.0000	SURCHARGED
15 minute winter	S06	11	93.459	0.559	33.4	0.3556	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.469	0.044	2.4	0.0067	0.0000	OK
15 minute winter	S4-2	10	93.370	0.073	4.9	0.0172	0.0000	OK
15 minute winter	S4-3	10	93.279	0.068	6.3	0.0135	0.0000	OK
15 minute summer	S4-5	10	93.527	0.032	2.9	0.0056	0.0000	OK
15 minute winter	S4-4	10	93.075	0.035	9.2	0.0055	0.0000	OK
360 minute winter	S05	352	92.837	0.687	11.8	90.6231	0.0000	SURCHARGED
15 minute winter	S3-1	11	93.433	0.112	5.3	0.0333	0.0000	SURCHARGED
15 minute winter	S3-2	11	93.344	0.161	7.2	0.0390	0.0000	SURCHARGED
15 minute winter	S3-3	11	93.183	0.269	8.3	0.0606	0.0000	SURCHARGED
15 minute winter	S3-4	11	92.916	0.150	11.6	0.0372	0.0000	OK
15 minute winter	S12	11	93.683	0.521	30.6	0.6915	0.0000	SURCHARGED
15 minute winter	S10	11	92.940	0.261	8.3	0.1408	0.0000	SURCHARGED
15 minute winter	S09	11	92.903	0.431	16.7	0.1221	0.0000	SURCHARGED
15 minute summer	S2-1	10	93.513	0.086	6.1	0.0330	0.0000	OK
15 minute summer	S2-2	10	93.356	0.078	9.3	0.0240	0.0000	OK
15 minute summer	S2-3	9	92.972	0.038	2.1	0.0052	0.0000	OK
360 minute winter	S2-4	352	92.837	0.062	1.9	0.0144	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	4.0	0.650	0.509
15 minute winter	S5-2	2.000	S5-3	2.4	0.428	0.304
15 minute winter	S5-3	1.001	S07	7.8	1.237	0.987
15 minute winter	S07	1.002	S06	9.6	0.625	0.356
15 minute winter	S06	1.003	S05	33.2	2.195	1.194
15 minute winter	S4-1	4.000	S4-2	2.4	0.507	0.399
15 minute winter	S4-2	4.001	S4-3	4.9	0.829	0.810
15 minute winter	S4-3	4.002	S4-4	6.3	1.182	0.356
15 minute summer	S4-5	5.000	S4-4	2.9	1.288	0.211
15 minute winter	S4-4	4.003	S05	9.2	2.656	0.117
360 minute winter	S05	1.004	S04	-5.1	-0.127	-0.090
15 minute winter	S3-1	6.000	S3-2	5.2	0.825	0.853
15 minute winter	S3-2	6.001	S3-3	6.2	0.808	0.737
15 minute winter	S3-3	6.002	S3-4	8.3	1.134	1.385
15 minute winter	S3-4	6.003	S09	10.5	1.058	0.125
15 minute winter	S12	3.000	S06	28.4	1.613	0.813
15 minute winter	S10	7.000	S09	6.9	0.629	0.392
15 minute winter	S09	6.004	S08 Junction	17.2	1.062	0.971
15 minute summer	S2-1	8.000	S2-2	6.1	0.889	0.973
15 minute summer	S2-2	8.001	S2-4	9.3	1.852	0.813
15 minute summer	S2-3	9.000	S2-4	2.1	0.761	0.300
360 minute winter	S2-4	8.002	S08 Junction	1.9	1.015	0.016

Results for 30 year +40% CC +10% Q Critical Storm Duration. Lowest mass balance: 96.23%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S08 Junction	352	92.837	0.580	4.9	0.0104	0.0000	SURCHARGED
360 minute winter	S04	352	92.837	1.019	5.2	0.6481	0.0000	SURCHARGED
15 minute winter	S1-1	10	93.474	0.037	2.2	0.0063	0.0000	OK
15 minute winter	S1-2	10	93.308	0.053	4.6	0.0132	0.0000	OK
15 minute summer	S1-3	10	93.056	0.040	2.2	0.0055	0.0000	OK
360 minute winter	S1-4	352	92.837	0.060	1.2	0.0129	0.0000	OK
360 minute winter	S03 Junction	352	92.837	1.054	1.5	0.0190	0.0000	SURCHARGED
360 minute winter	S02	352	92.837	1.087	1.6	1.2296	0.0000	SURCHARGED
360 minute winter	C01	352	91.724	0.024	0.8	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	4.8	0.728	0.091
360 minute winter	S04	1.005	S03 Junction	1.4	0.303	0.026
15 minute winter	S1-1	10.000	S1-2	2.2	0.651	0.286
15 minute winter	S1-2	10.001	S1-4	4.6	1.596	0.438
15 minute summer	S1-3	11.000	S1-4	2.2	0.975	0.288
360 minute winter	S1-4	10.002	S03 Junction	1.2	0.112	0.010
360 minute winter	S03 Junction	1.006	S02	1.6	0.096	0.031
360 minute winter	S02	1.007	C01	0.8	0.536	0.121

Results for 100 year +45% CC +10% Q Critical Storm Duration. Lowest mass balance: 96.67%

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	93.779	0.174	5.2	0.0413	0.0000	SURCHARGED
15 minute winter	S5-2	12	93.733	0.139	3.1	0.0233	0.0000	SURCHARGED
15 minute winter	S5-3	12	93.714	0.325	10.3	0.0735	0.0000	SURCHARGED
15 minute winter	S07	12	93.590	0.297	8.1	0.0841	0.0000	SURCHARGED
15 minute winter	S06	12	93.551	0.651	34.7	0.4143	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.476	0.051	3.1	0.0078	0.0000	OK
15 minute winter	S4-2	10	93.402	0.105	6.4	0.0247	0.0000	SURCHARGED
15 minute winter	S4-3	10	93.289	0.078	8.1	0.0155	0.0000	OK
15 minute summer	S4-5	10	93.532	0.037	3.8	0.0065	0.0000	OK
480 minute winter	S4-4	472	93.098	0.058	1.3	0.0092	0.0000	OK
480 minute winter	S05	472	93.098	0.948	12.1	125.0849	0.0000	SURCHARGED
15 minute winter	S3-1	12	93.672	0.351	6.9	0.1044	0.0000	SURCHARGED
15 minute winter	S3-2	12	93.581	0.398	7.9	0.0962	0.0000	SURCHARGED
15 minute winter	S3-3	12	93.409	0.495	9.0	0.1113	0.0000	SURCHARGED
15 minute winter	S3-4	12	93.117	0.351	12.0	0.0871	0.0000	SURCHARGED
15 minute winter	S12	12	93.749	0.587	40.0	2.5941	0.0000	SURCHARGED
15 minute winter	S10	11	93.150	0.471	10.8	0.2648	0.0000	SURCHARGED
15 minute winter	S09	12	93.102	0.630	19.0	0.1784	0.0000	SURCHARGED
15 minute winter	S2-1	11	93.632	0.205	8.0	0.0789	0.0000	SURCHARGED
15 minute summer	S2-2	11	93.404	0.126	11.3	0.0389	0.0000	SURCHARGED
480 minute winter	S2-3	472	93.099	0.165	0.3	0.0228	0.0000	SURCHARGED
480 minute winter	S2-4	472	93.099	0.324	4.0	0.0758	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	4.7	0.656	0.596
15 minute winter	S5-2	2.000	S5-3	3.0	0.471	0.384
15 minute winter	S5-3	1.001	S07	8.1	1.209	1.028
15 minute winter	S07	1.002	S06	10.5	0.719	0.390
15 minute winter	S06	1.003	S05	32.8	2.207	1.181
15 minute winter	S4-1	4.000	S4-2	3.1	0.519	0.516
15 minute winter	S4-2	4.001	S4-3	6.3	0.866	1.036
15 minute winter	S4-3	4.002	S4-4	8.0	1.256	0.452
15 minute summer	S4-5	5.000	S4-4	3.8	1.393	0.277
480 minute winter	S4-4	4.003	S05	1.3	1.149	0.017
480 minute winter	S05	1.004	S04	-5.2	-0.131	-0.093
15 minute winter	S3-1	6.000	S3-2	5.6	0.814	0.922
15 minute winter	S3-2	6.001	S3-3	6.4	0.823	0.759
15 minute winter	S3-3	6.002	S3-4	8.8	1.166	1.461
15 minute winter	S3-4	6.003	S09	11.5	1.114	0.137
15 minute winter	S12	3.000	S06	28.9	1.639	0.826
15 minute winter	S10	7.000	S09	8.9	0.645	0.503
15 minute winter	S09	6.004	S08 Junction	18.7	1.062	1.054
15 minute winter	S2-1	8.000	S2-2	7.3	0.934	1.166
15 minute summer	S2-2	8.001	S2-4	10.8	1.853	0.939
480 minute winter	S2-3	9.000	S2-4	0.3	0.468	0.043
480 minute winter	S2-4	8.002	S08 Junction	-2.3	0.889	-0.020

Results for 100 year +45% CC +10% Q Critical Storm Duration. Lowest mass balance: 96.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S08 Junction	472	93.099	0.842	5.0	0.0152	0.0000	SURCHARGED
480 minute winter	S04	464	93.097	1.279	6.2	0.8137	0.0000	SURCHARGED
15 minute summer	S1-1	10	93.480	0.043	2.9	0.0074	0.0000	OK
15 minute summer	S1-2	10	93.316	0.061	6.1	0.0153	0.0000	OK
480 minute winter	S1-3	472	93.099	0.083	0.3	0.0115	0.0000	OK
480 minute winter	S1-4	464	93.098	0.321	1.3	0.0694	0.0000	SURCHARGED
480 minute winter	S03 Junction	464	93.098	1.315	2.1	0.0237	0.0000	SURCHARGED
480 minute winter	S02	464	93.097	1.347	1.6	1.5237	0.0000	SURCHARGED
480 minute winter	C01	472	91.725	0.025	0.9	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	5.3	0.728	0.100
480 minute winter	S04	1.005	S03 Junction	1.5	0.338	0.029
15 minute summer	S1-1	10.000	S1-2	2.9	0.706	0.377
15 minute summer	S1-2	10.001	S1-4	6.1	1.650	0.581
480 minute winter	S1-3	11.000	S1-4	0.3	0.551	0.039
480 minute winter	S1-4	10.002	S03 Junction	1.4	0.121	0.011
480 minute winter	S03 Junction	1.006	S02	1.6	0.100	0.031
480 minute winter	S02	1.007	C01	0.9	0.552	0.135

Results for 1000 year +10% Q Critical Storm Duration. Lowest mass balance: 96.67%

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	93.779	0.174	5.2	0.0413	0.0000	SURCHARGED
15 minute winter	S5-2	12	93.733	0.139	3.1	0.0233	0.0000	SURCHARGED
15 minute winter	S5-3	12	93.714	0.325	10.3	0.0735	0.0000	SURCHARGED
15 minute winter	S07	12	93.590	0.297	8.1	0.0840	0.0000	SURCHARGED
15 minute winter	S06	12	93.551	0.651	34.7	0.4141	0.0000	SURCHARGED
15 minute winter	S4-1	10	93.476	0.051	3.1	0.0078	0.0000	OK
15 minute winter	S4-2	10	93.402	0.105	6.4	0.0247	0.0000	SURCHARGED
15 minute winter	S4-3	10	93.289	0.078	8.1	0.0155	0.0000	OK
15 minute summer	S4-5	10	93.531	0.036	3.7	0.0064	0.0000	OK
960 minute winter	S4-4	900	93.195	0.155	0.8	0.0246	0.0000	SURCHARGED
960 minute winter	S05	900	93.194	1.044	7.5	137.7938	0.0000	SURCHARGED
15 minute winter	S3-1	12	93.667	0.346	6.9	0.1029	0.0000	SURCHARGED
15 minute winter	S3-2	12	93.575	0.392	7.9	0.0948	0.0000	SURCHARGED
15 minute winter	S3-3	12	93.405	0.491	9.0	0.1104	0.0000	SURCHARGED
960 minute winter	S3-4	900	93.195	0.429	3.3	0.1064	0.0000	SURCHARGED
15 minute winter	S12	12	93.748	0.586	39.9	2.5794	0.0000	SURCHARGED
960 minute winter	S10	900	93.194	0.515	0.8	0.3404	0.0000	SURCHARGED
960 minute winter	S09	900	93.195	0.723	2.1	0.2047	0.0000	SURCHARGED
15 minute winter	S2-1	11	93.632	0.205	8.0	0.0790	0.0000	SURCHARGED
15 minute summer	S2-2	11	93.405	0.127	11.3	0.0390	0.0000	SURCHARGED
960 minute winter	S2-3	900	93.195	0.261	0.2	0.0360	0.0000	SURCHARGED
960 minute winter	S2-4	915	93.195	0.420	1.3	0.0982	0.0000	SURCHARGED

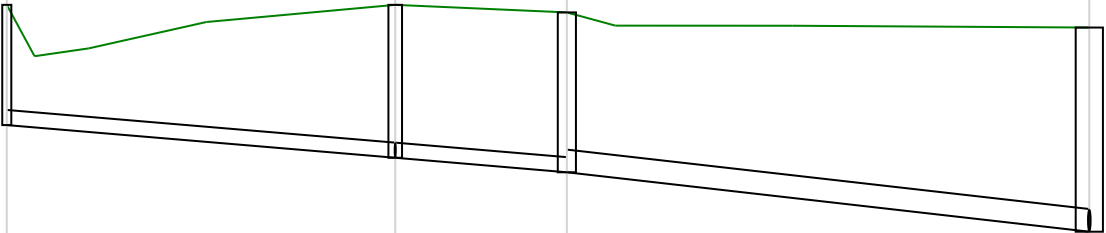
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S5-1	1.000	S5-3	4.7	0.657	0.596
15 minute winter	S5-2	2.000	S5-3	3.0	0.471	0.384
15 minute winter	S5-3	1.001	S07	8.1	1.209	1.028
15 minute winter	S07	1.002	S06	9.9	0.694	0.369
15 minute winter	S06	1.003	S05	32.9	2.205	1.182
15 minute winter	S4-1	4.000	S4-2	3.1	0.518	0.516
15 minute winter	S4-2	4.001	S4-3	6.3	0.866	1.036
15 minute winter	S4-3	4.002	S4-4	8.0	1.257	0.452
15 minute summer	S4-5	5.000	S4-4	3.7	1.378	0.269
960 minute winter	S4-4	4.003	S05	0.8	0.134	0.010
960 minute winter	S05	1.004	S04	-3.1	0.165	-0.055
15 minute winter	S3-1	6.000	S3-2	5.6	0.818	0.920
15 minute winter	S3-2	6.001	S3-3	6.5	0.830	0.764
15 minute winter	S3-3	6.002	S3-4	8.8	1.156	1.469
960 minute winter	S3-4	6.003	S09	-2.1	0.700	-0.026
15 minute winter	S12	3.000	S06	28.9	1.639	0.826
960 minute winter	S10	7.000	S09	0.8	0.338	0.045
960 minute winter	S09	6.004	S08 Junction	2.1	0.591	0.116
15 minute winter	S2-1	8.000	S2-2	7.3	0.932	1.164
15 minute summer	S2-2	8.001	S2-4	10.8	1.853	0.939
960 minute winter	S2-3	9.000	S2-4	0.2	0.426	0.029
960 minute winter	S2-4	8.002	S08 Junction	4.2	0.857	0.037

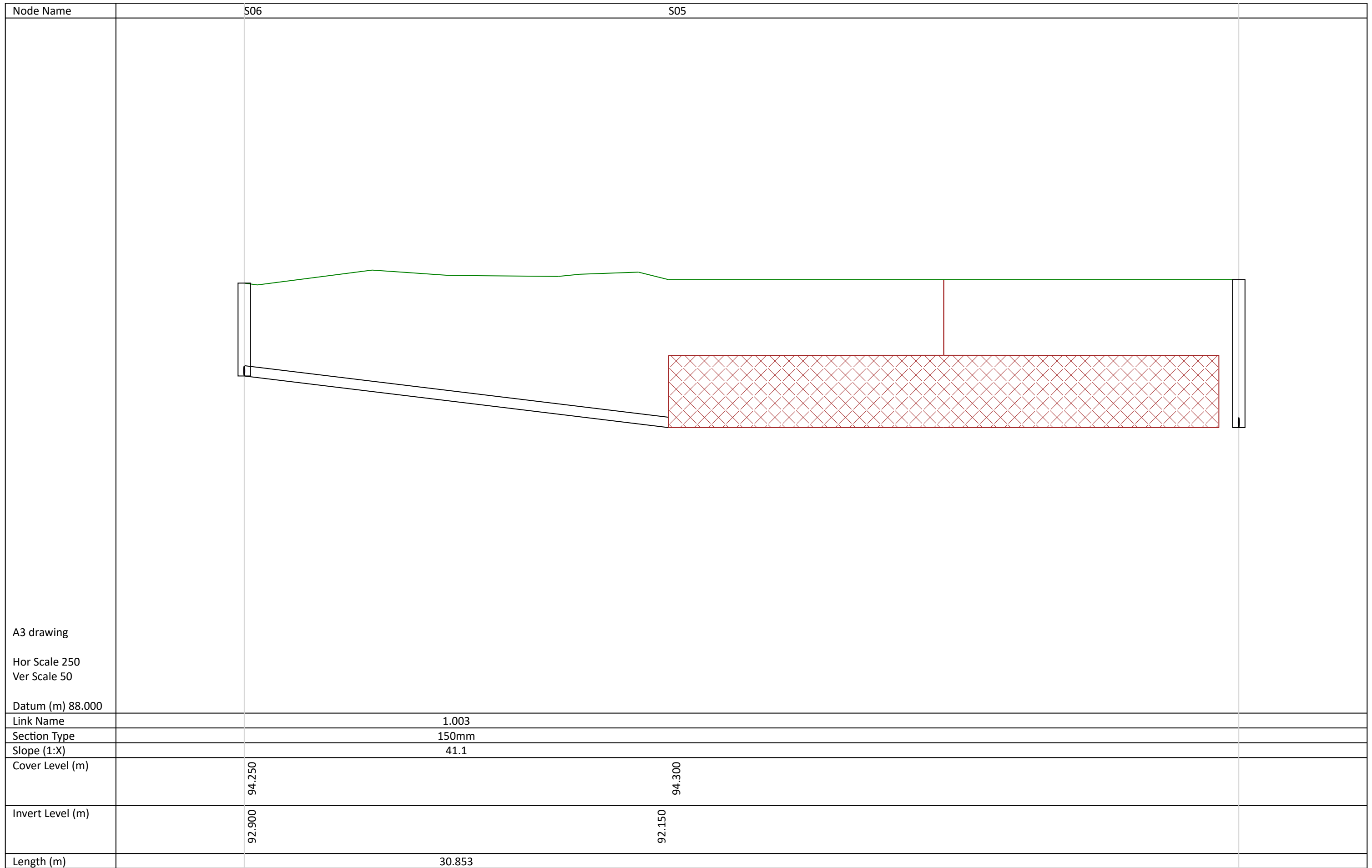
Results for 1000 year +10% Q Critical Storm Duration. Lowest mass balance: 96.67%

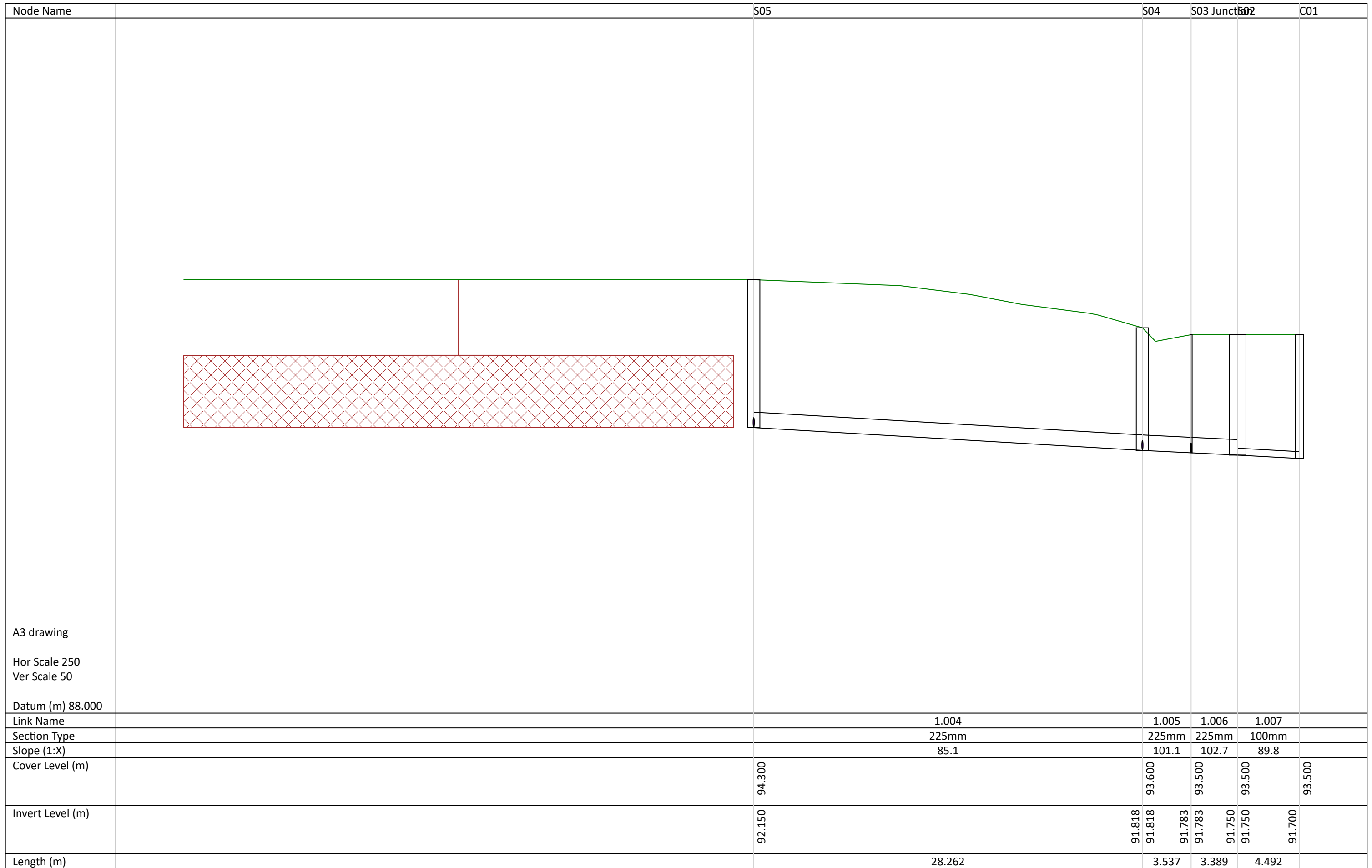
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S08 Junction	915	93.194	0.937	6.3	0.0169	0.0000	SURCHARGED
960 minute winter	S04	915	93.195	1.377	3.2	0.8761	0.0000	SURCHARGED
15 minute summer	S1-1	10	93.479	0.042	2.8	0.0072	0.0000	OK
15 minute summer	S1-2	9	93.316	0.061	6.0	0.0152	0.0000	OK
960 minute winter	S1-3	900	93.195	0.179	0.2	0.0247	0.0000	SURCHARGED
960 minute winter	S1-4	900	93.195	0.418	0.8	0.0903	0.0000	SURCHARGED
960 minute winter	S03 Junction	900	93.195	1.412	1.6	0.0254	0.0000	SURCHARGED
960 minute winter	S02	900	93.195	1.445	2.0	1.6343	0.0000	SURCHARGED
960 minute winter	C01	900	91.725	0.025	0.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
960 minute winter	S08 Junction	6.005	S04	3.2	0.551	0.060
960 minute winter	S04	1.005	S03 Junction	1.5	0.333	0.028
15 minute summer	S1-1	10.000	S1-2	2.8	0.694	0.364
15 minute summer	S1-2	10.001	S1-4	6.0	1.651	0.571
960 minute winter	S1-3	11.000	S1-4	0.2	0.493	0.026
960 minute winter	S1-4	10.002	S03 Junction	0.9	0.076	0.007
960 minute winter	S03 Junction	1.006	S02	2.0	0.293	0.038
960 minute winter	S02	1.007	C01	0.9	0.558	0.140



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	93.293	92.900
Length (m)	12.846	5.676	17.278	

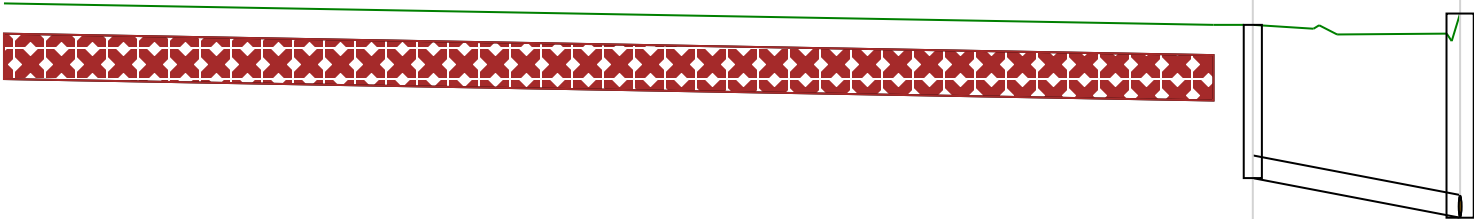


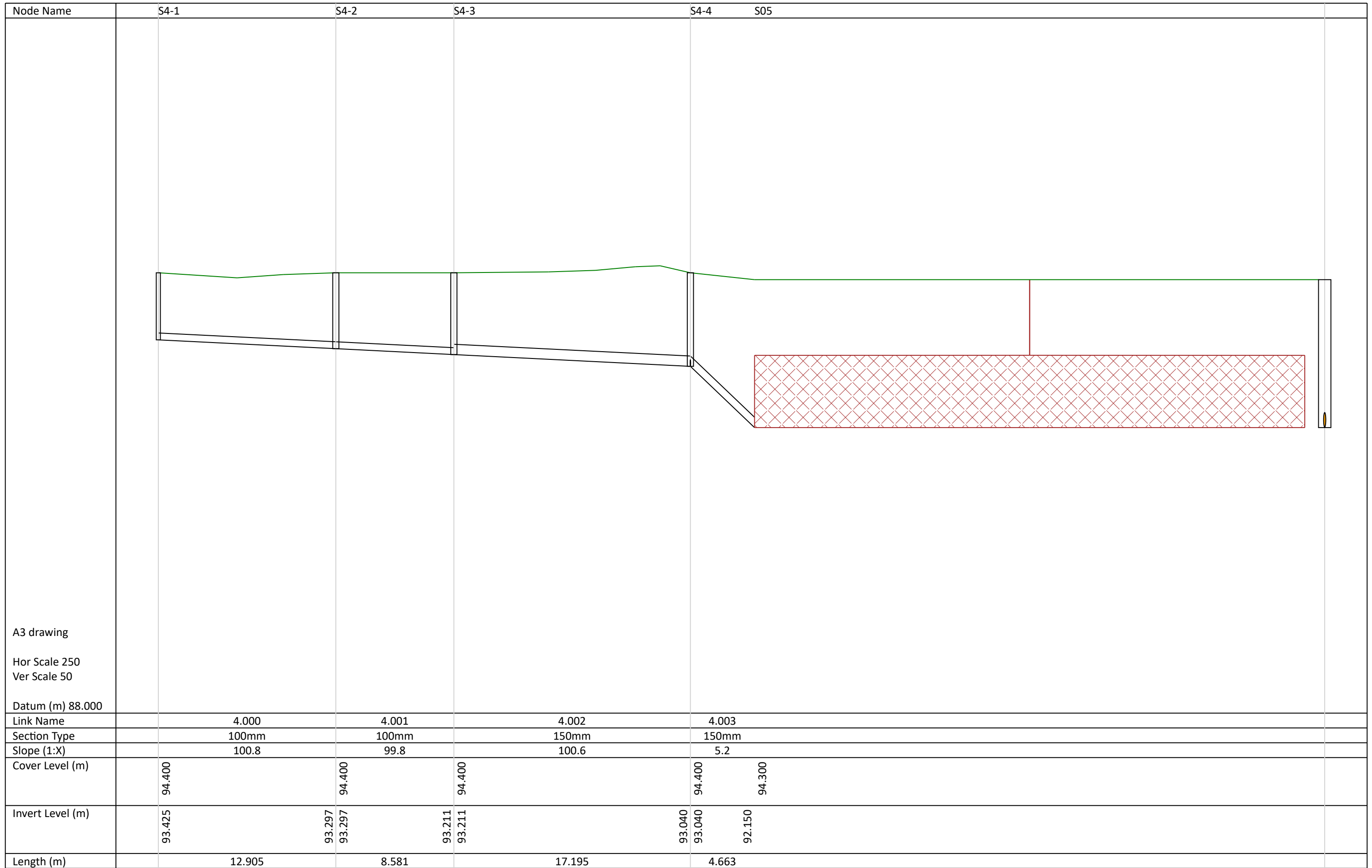




Node Name	S5-2	S5-3
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 89.000		
Link Name	2.000	
Section Type	100mm	
Slope (1:X)	59.1	
Cover Level (m)	94.400	94.400
Invert Level (m)	93.594	93.389
Length (m)	12.113	

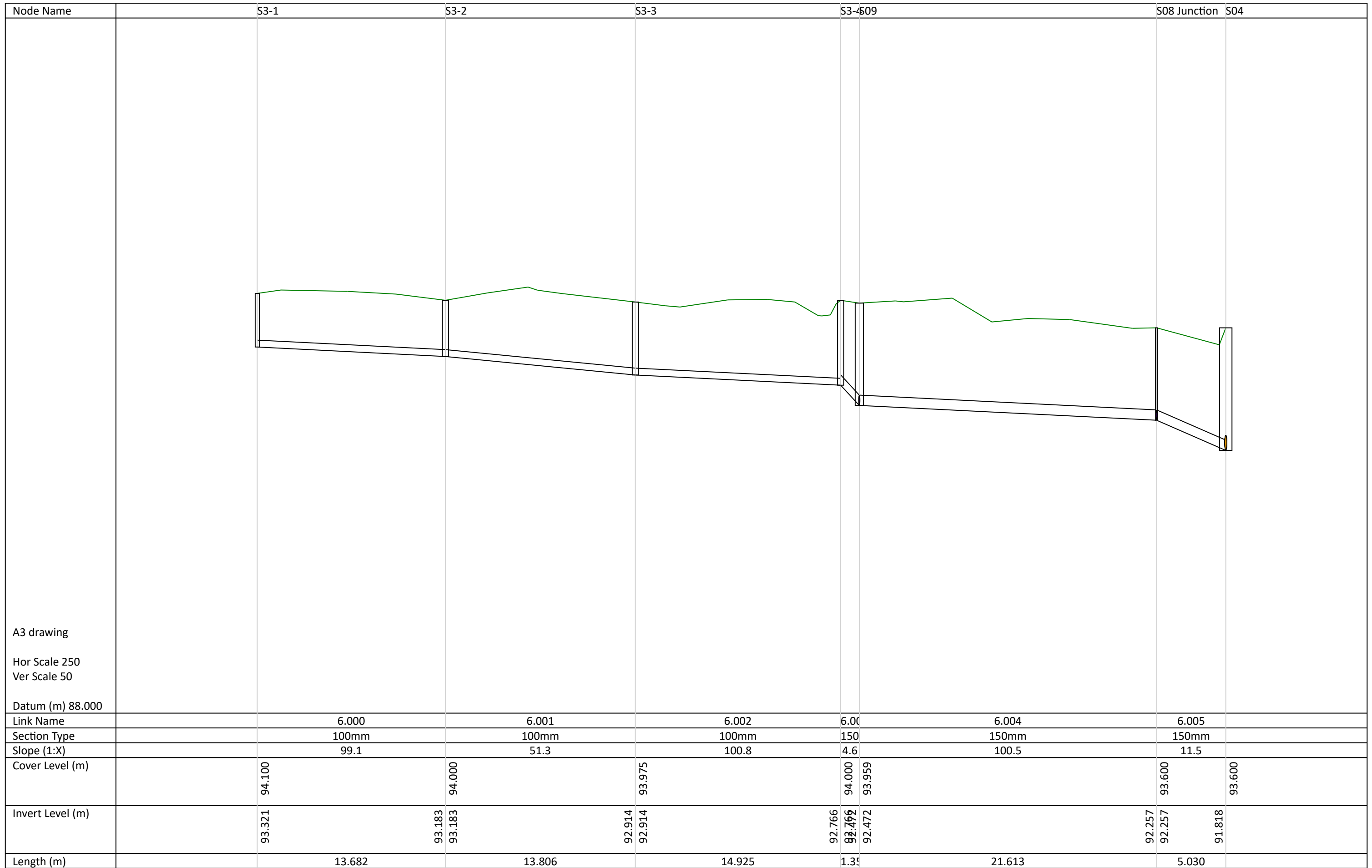


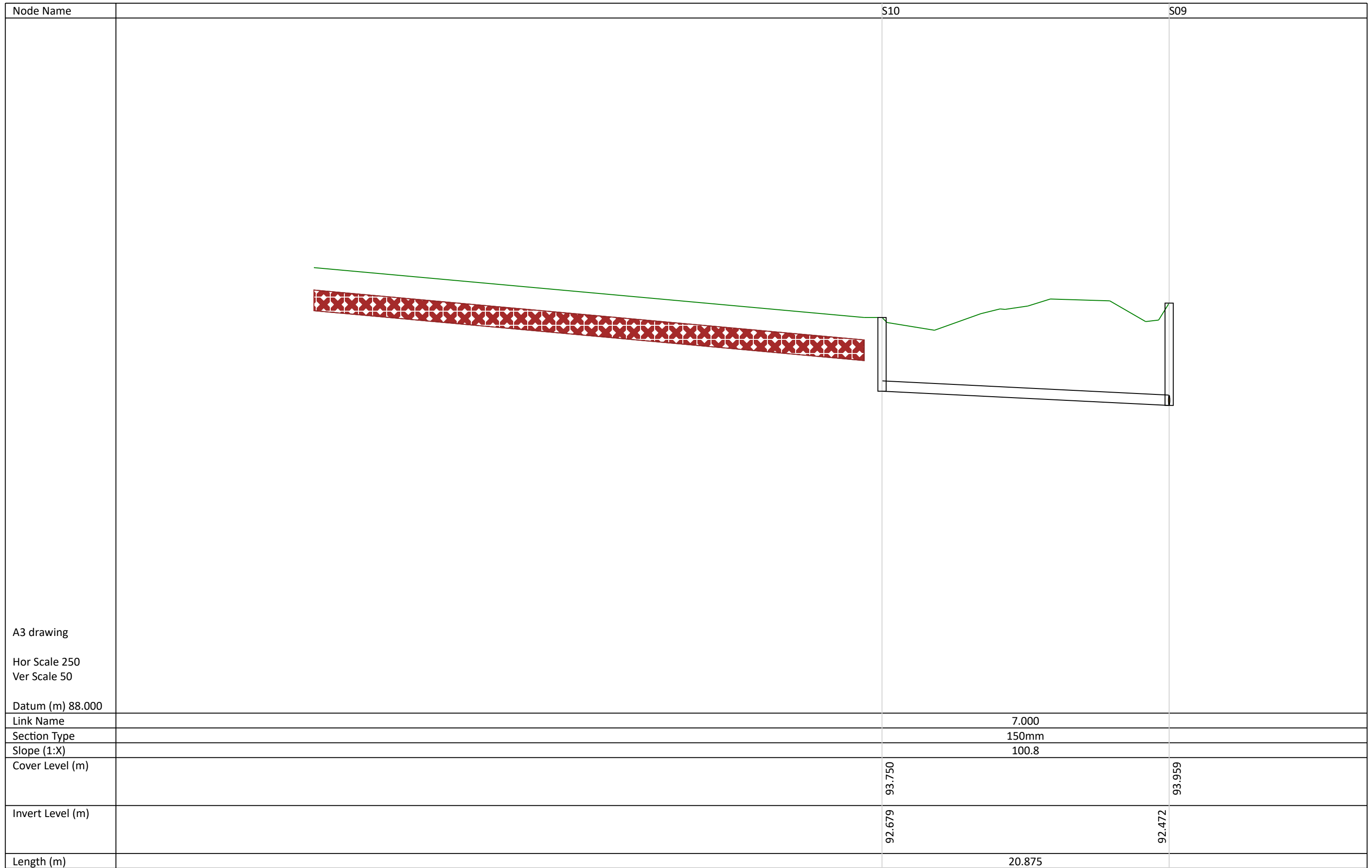
Node Name	S12	S06
A3 drawing Hor Scale 250 Ver Scale 50 Datum (m) 89.000		
Link Name	3.000	
Section Type	150mm	
Slope (1:X)	26.2	
Cover Level (m)	94.175	94.250
Invert Level (m)	93.162	92.900
Length (m)	6.856	





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		

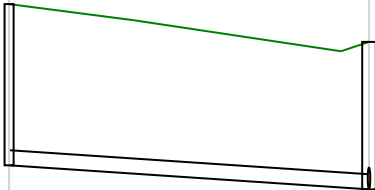






Node Name	S2-1	S2-2	S2-3	S2-4	S2-5	S2-6	S2-7	S2-8	S2-9	S2-10	S2-11	S2-12	S2-13	S2-14	S2-15	S2-16	S2-17	S2-18	S2-19	S2-20	S2-21	S2-22	S2-23	S2-24	S2-25	S2-26	S2-27	S2-28	S2-29	S2-30	S2-31	S2-32	S2-33	S2-34	S2-35	S2-36	S2-37	S2-38	S2-39	S2-40	S2-41	S2-42	S2-43	S2-44	S2-45	S2-46	S2-47	S2-48	S2-49	S2-50	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	S2-892	S2-893	S2-894	S2-895	S2-896	S2-897	S2-898	S2-899	S2-900	S2-901	S2-902	S2-903	S2-904	S2-905	S2-906	S2-907	S2-908	S2-909	S2-910	S2-911	S2-912	S2-913	S2-914	S2-915	S2-916	S2-917	S2-918	S2-919	S2-920	S2-921	S2-922	S2-923	S2-924	S2-925	S2-926	S2-927	S2-928	S2-929	S2-930	S2-931	S2-932	S2-933	S2-934	S2-935	S2-936	S2-937	S2-938	S2-939	S2-940	S2-941	S2-942	S2-943	S2-944	S2-945	S2-946	S2-947	S2-948	S2-949	S2-950	S2-951	S2-952	S2-953	S2-954	S2-955	S2-956	S2-957	S2-958	S2-959	S2-960	S2-961	S2-962	S2-963	S2-964	S2-965	S2-966	S2-967	S2-968	S2-969	S2-970	S2-971	S2-972	S2-973	S2-974	S2-975	S2-976	S2-977	S2-978	S2-979	S2-980	S2-981	S2-982	S2-983	S2-984	S2-985	S2-986	S2-987	S2-988	S2-989	S2-990	S2-991	S2-992	S2-993	S2-994	S2-995	S2-996	S2-997	S2-998	S2-999	S2-1000	S2-1001	S2-1002	S2-1003	S2-1004	S2-1005	S2-1006	S2-1007	S2-1008	S2-1009	S2-1010	S2-1011	S2-1012	S2-1013	S2-1014	S2-1015	S2-1016	S2-1017	S2-1018	S2-1019	S2-1020	S2-1021	S2-1022	S2-1023	S2-1024	S2-1025	S2-1026	S2-1027	S2-1028	S2-1029	S2-1030	S2-1031	S2-1032	S2-1033	S2-1034	S2-1035	S2-1036	S2-1037	S2-1038	S2-1039	S2-1040	S2-1041	S2-1042	S2-1043	S2-1044	S2-1045	S2-1046	S2-1047	S2-1048	S2-1049	S2-1050	S2-1051	S2-1052	S2-1053	S2-1054	S2-1055	S2-1056	S2-1057	S2-1058	S2-1059	S2-1060	S2-1061	S2-1062	S2-1063	S2-1064	S2-1065	S2-1066	S2-1067	S2-1068	S2-1069	S2-1070	S2-1071	S2-1072	S2-1073	S2-1074	S2-1075	S2-1076	S2-1077	S2-1078	S2-1079	S2-1080	S2-1081	S2-1082	S2-1083	S2-1084	S2-1085	S2-1086	S2-1087	S2-1088	S2-1089	S2-1090	S2-1091	S2-1092	S2-1093	S2-1094	S2-1095	S2-1096	S2-1097	S2-1098	S2-1099	S2-1100	S2-1101	S2-1102	S2-1103	S2-1104	S2-1105	S2-1106	S2-1107	S2-1108	S2-1109	S2-1110	S2-1111	S2-1112	S2-1113	S2-1114	S2-1115	S2-1116	S2-1117	S2-1118	S2-1119	S2-1120	S2-1121	S2-1122	S2-1123	S2-1124	S2-1125	S2-1126	S2-1127	S2-1128	S2-1129	S2-1130	S2-1131	S2-1132	S2-1133	S2-1134	S2-1135	S2-1136	S2-1137	S2-1138	S2-1139	S2-1140	S2-1141	S2-1142	S2-1143	S2-1144	S2-1145	S2-1146	S2-1147	S2-1148	S2-1149	S2-1150	S2-1151	S2-1152	S2-1153	S2-1154	S2-1155	S2-1156	S2-1157	S2-1158	S2-1159	S2-1160	S2-1161	S2-1162	S2-1163	S2-1164	S2-1165	S2-1166	S2-1167	S2-1168	S2-1169	S2-1170	S2-1171	S2-1172	S2-1173	S2-1174	S2-1175	S2-1176	S2-1177	S2-1178	S2-1179	S2-1180	S2-1181	S2-1182	S2-1183	S2-1184	S2-1185	S2-1186	S2-1187	S2-1188	S2-1189	S2-1190	S2-1191	S2-1192	S2-1193	S2-1194	S2-1195	S2-1196	S2-1197	S2-1198	S2-1199	S2-1200	S2-1201	S2-1202	S2-1203	S2-1204	S2-1205	S2-1206	S2-1
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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	2.1	
Cover Level (m)	94.150	94.150	93.975	93.500
Invert Level (m)	93.437	93.255	92.777	
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 Consultants' 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
- New private combined drainage run
- 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

P3 16/06/25 Mode of surface water disposal revised.
P2 25/03/25 Issued for planning submission.
P1 20/03/25 Issued for review.

Hazelind Consultants Limited
Consulting Structural & Civil Engineers

Graythwaite
London Road
Crawthorpe
East Sussex TN3 1TD
Office 07815 297135
Email projects@hazelind.com



Hatchgate Cottage
Architect
MJB

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

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

Proposed Site & Drainage Plan (1:200)

A1

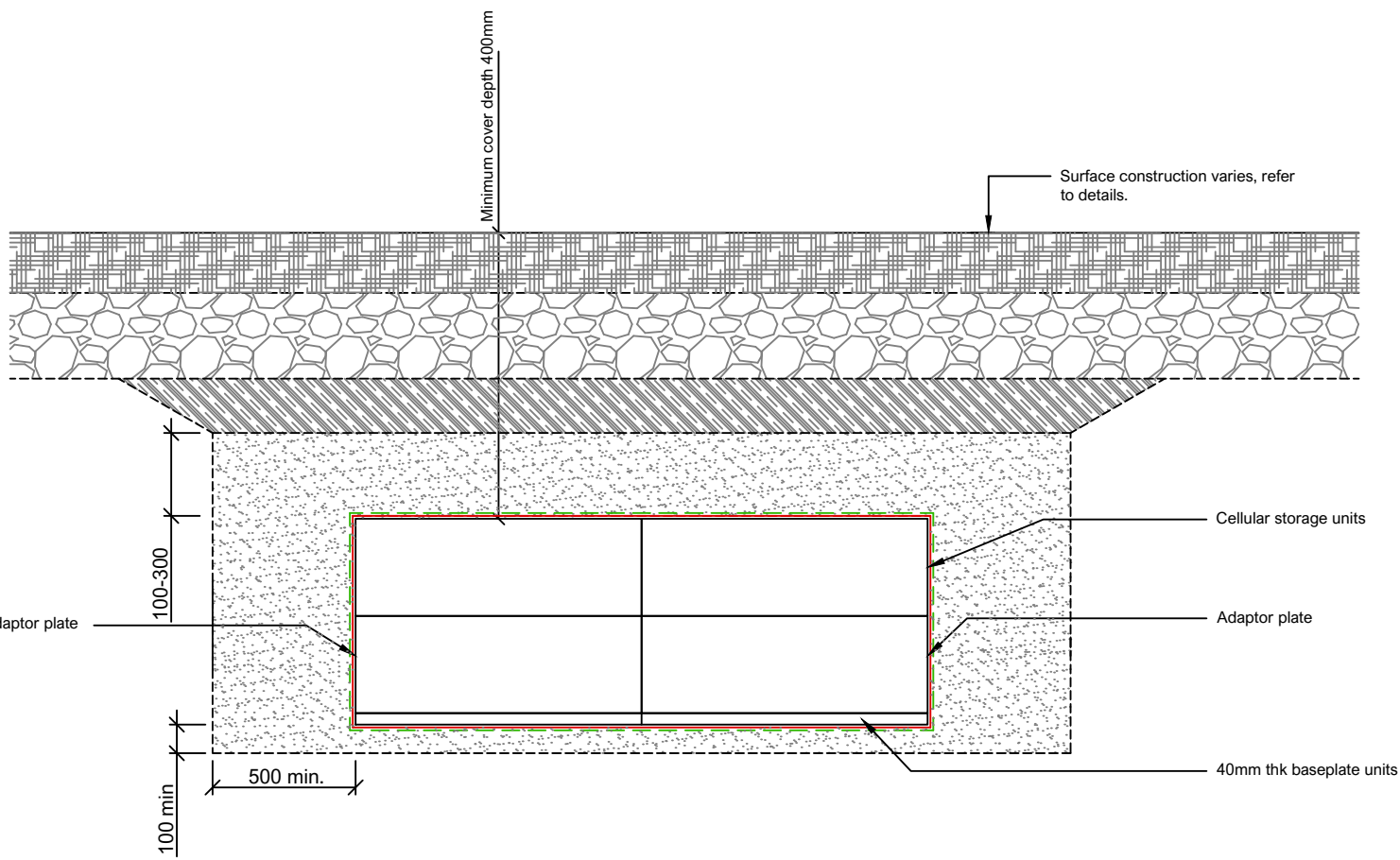
1:20 @ A3
1:10 @ A1 0.2m 0.4m 0.6m 0.8m 1.0m

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



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:-

- 200 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 Excalibur 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.

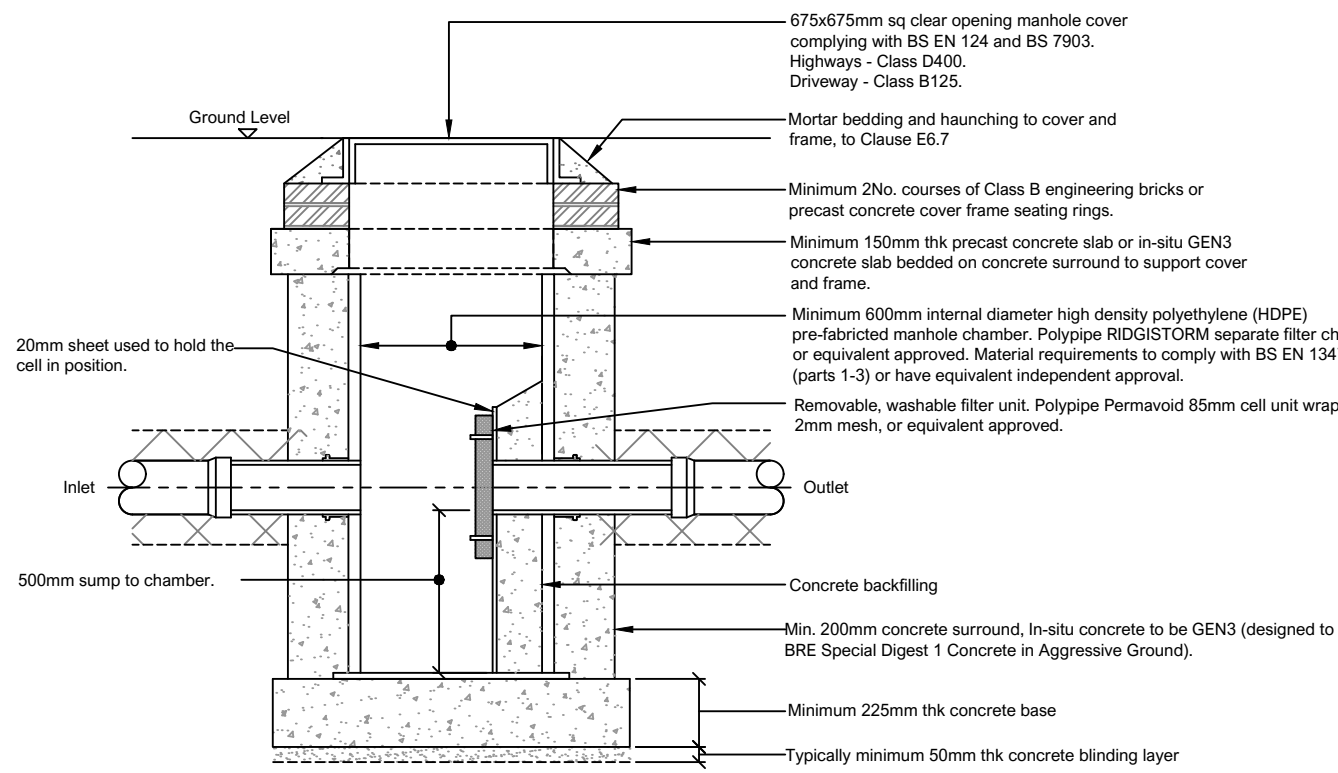
Formation material to base of excavation to be undisturbed and to be smooth, firm and level, free from projections and debris and suitable to carry anticipated loads.

Backfilling layers to be 300mm thick (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.

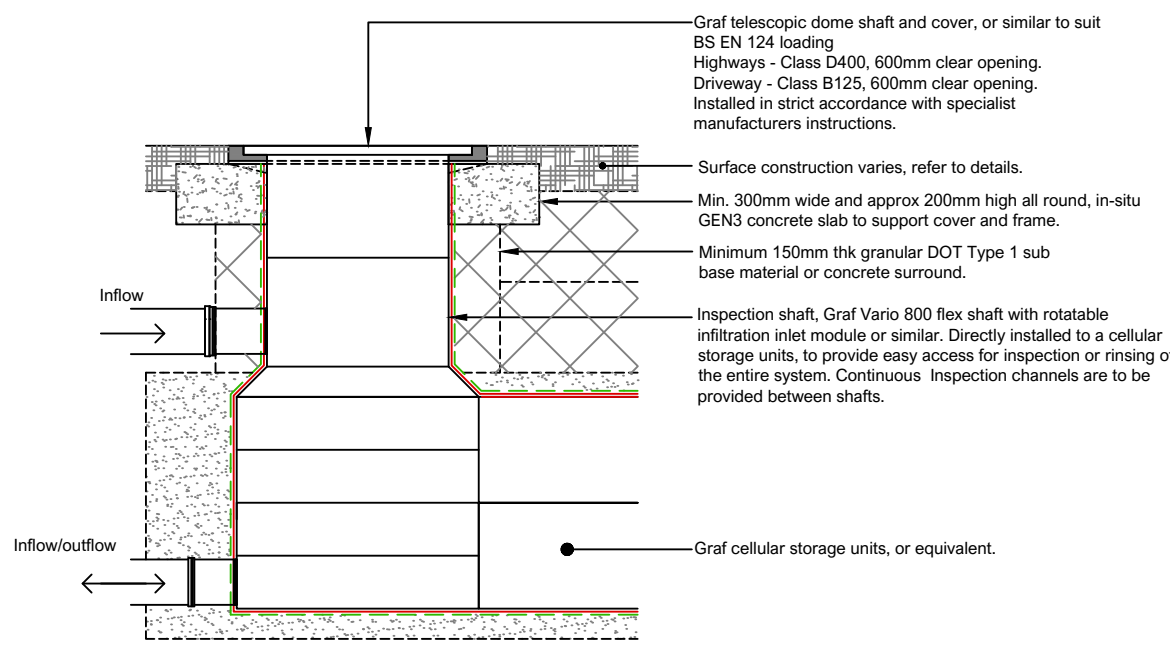
Cellular storage units to be as designed by Graf.

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



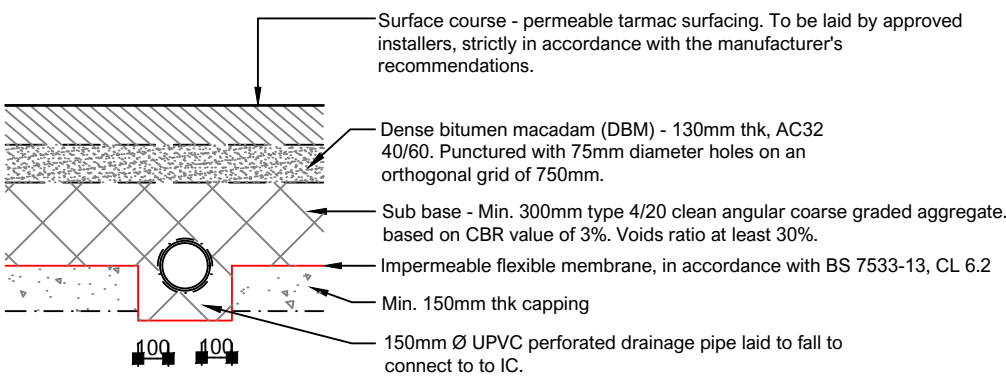
'SFC' Sump Filter Chamber Detail (nts)

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)

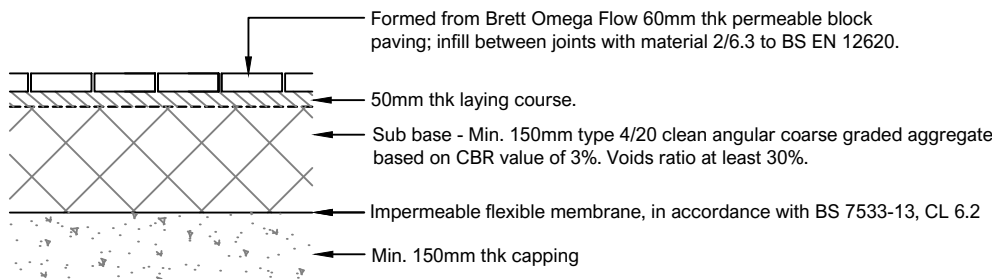
All to be installed in strict accordance with specialist manufacturers instructions.



Typical Permeable Tarmac Construction (1:25)

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

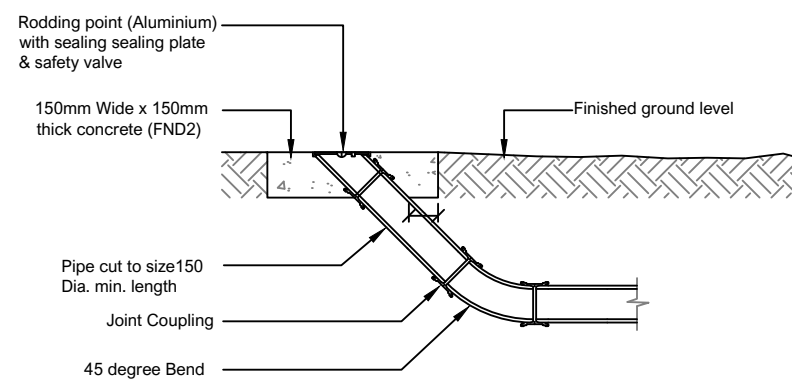
Main components to be in accordance with British 'Permeable Pavement Materials and Construction Specification', BS EN 7533 and all generally in accordance with Interpave Guidance 2010.



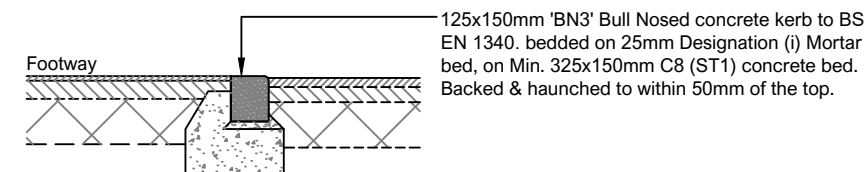
Private Parking Bay Permeable Block Paving Construction (1:25)

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

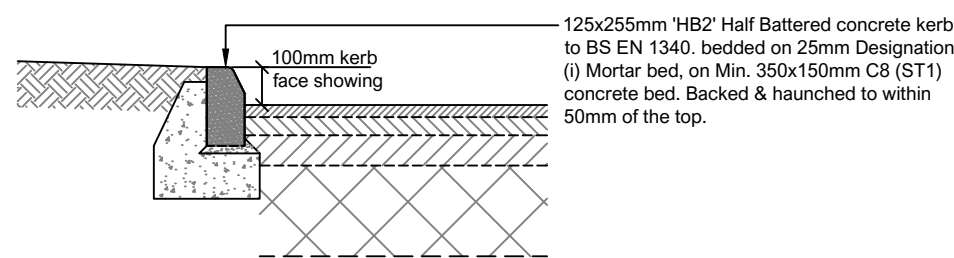
Main components to be in accordance with British 'Permeable Pavement Materials and Construction Specification', BS EN 7533 and all generally in accordance with Interpave Guidance 2010.



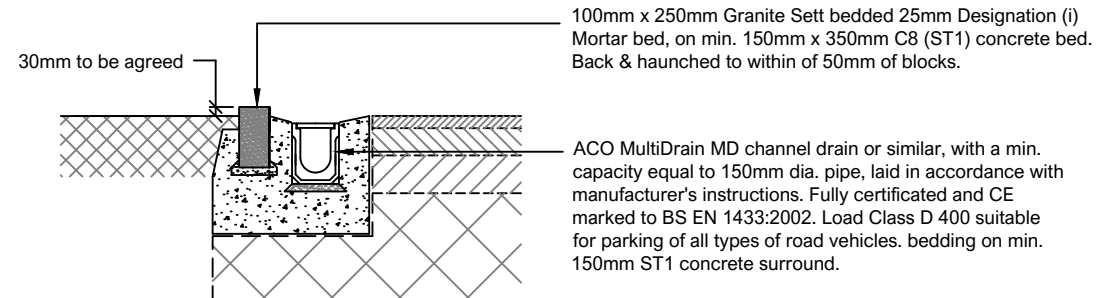
Rodding Eye Detail (1:25)



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: 000 Approved

Hazeld Consultants Limited
Consulting Structural & Civil Engineers

Grayhews
London Road
Crowborough
East Sussex TN6 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