[redacted]

From: Amanda Scholes on behalf of Planning.Responses
Sent: 24 November 2020 10:20
To: Planning Scanning
Subject: FW: FP/184/20/PL
Attachments: Drawing 2.pdf; ATT00001.txt; Construction details - Drainage 7MR.pdf; ATT00002.txt; Drawing 1-4.pdf; ATT00003.txt; 80msq 10year.pdf; ATT00004.txt; 120sqm 100year .pdf; ATT00005.txt; 120msq 10 year.pdf; ATT00006.txt; 100 year 80sqm.pdf; ATT00007.txt

Amanda Scholes | Receptionist, Department, Arun District Council | Location: Ground Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
Internal: 37736 | External: +44 (0) 1903 737500 ext 37736| E-mail: amanda.scholes@arun.gov.uk

Visit Arun's web site at Error! Hyperlink reference not valid. ···Save the environment - think before you print.

-----Original Message-----
From: Maria Tomalova <Maria.Tomalova@arun.gov.uk>
Sent: 24 November 2020 10:19
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Cc: ed <edmccarthy@hotmail.co.uk>
Subject: FW: FP/184/20/PL

Please upload the below and attached to the above application; Further Information

Thank you

Maria Tomalova|Senior Planning Officer, Directorate of Place, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
Internal: 37510 | External: +44 (0) 1903 737510 | E-mail: maria.tomalova@arun.gov.uk

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-----Original Message-----
From: [redacted]
Sent: 24 November 2020 10:02
To: Maria Tomalova <Maria.Tomalova@arun.gov.uk>
Cc: Sarah Burrow <Sarah.Burrow@arun.gov.uk>; Natalie McKellar [redacted]
Subject: FP/184/20/PL

Dear Ms Tomalova,

I am attaching updated drainage files for the application at 7 Middleton Road, PO22 6BL.

I have copied in the Council's Engineer Ms Burrow to this submission who has helped me amend the previous submissions and has said that her consultation will need to be amended.

I am looking forward to the application progressing. Please let me know if I can provide anything further. I believe the planning agents are in contact with you already as well. (Copied in.)

Kind Regards,

Edward McCarthy

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 525 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	98.737	0.137	0.1	1.8	O K
30 min Summer	98.782	0.182	0.1	2.4	O K
60 min Summer	98.828	0.228	0.1	3.0	O K
120 min Summer	98.870	0.270	0.1	3.6	O K
180 min Summer	98.890	0.290	0.1	3.9	O K
240 min Summer	98.899	0.299	0.1	4.0	O K
360 min Summer	98.904	0.304	0.1	4.0	O K
480 min Summer	98.903	0.303	0.1	4.0	O K
600 min Summer	98.901	0.301	0.1	4.0	O K
720 min Summer	98.897	0.297	0.1	4.0	O K
960 min Summer	98.889	0.289	0.1	3.8	O K
1440 min Summer	98.870	0.270	0.1	3.6	O K
2160 min Summer	98.840	0.240	0.1	3.2	O K
2880 min Summer	98.812	0.212	0.1	2.8	O K
4320 min Summer	98.763	0.163	0.1	2.2	O K
5760 min Summer	98.724	0.124	0.1	1.6	O K
7200 min Summer	98.693	0.093	0.1	1.2	O K
8640 min Summer	98.672	0.072	0.1	1.0	O K
10080 min Summer	98.657	0.057	0.1	0.8	O K
15 min Winter	98.754	0.154	0.1	2.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	33
60 min Summer	53.779	0.0	62
120 min Summer	33.337	0.0	122
180 min Summer	24.832	0.0	182
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	360
480 min Summer	11.818	0.0	414
600 min Summer	9.966	0.0	476
720 min Summer	8.665	0.0	540
960 min Summer	6.943	0.0	674
1440 min Summer	5.071	0.0	950
2160 min Summer	3.696	0.0	1360
2880 min Summer	2.949	0.0	1756
4320 min Summer	2.142	0.0	2508
5760 min Summer	1.705	0.0	3232
7200 min Summer	1.427	0.0	3960
8640 min Summer	1.235	0.0	4584
10080 min Summer	1.093	0.0	5248
15 min Winter	124.633	0.0	19

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	98.804	0.204	0.1	2.7	O K
60 min Winter	98.857	0.257	0.1	3.4	O K
120 min Winter	98.906	0.306	0.1	4.1	O K
180 min Winter	98.929	0.329	0.1	4.4	O K
240 min Winter	98.941	0.341	0.1	4.5	O K
360 min Winter	98.950	0.350	0.1	4.7	O K
480 min Winter	98.950	0.350	0.1	4.7	O K
600 min Winter	98.946	0.346	0.1	4.6	O K
720 min Winter	98.941	0.341	0.1	4.5	O K
960 min Winter	98.930	0.330	0.1	4.4	O K
1440 min Winter	98.902	0.302	0.1	4.0	O K
2160 min Winter	98.857	0.257	0.1	3.4	O K
2880 min Winter	98.815	0.215	0.1	2.9	O K
4320 min Winter	98.744	0.144	0.1	1.9	O K
5760 min Winter	98.690	0.090	0.1	1.2	O K
7200 min Winter	98.656	0.056	0.1	0.7	O K
8640 min Winter	98.646	0.046	0.1	0.6	O K
10080 min Winter	98.641	0.041	0.1	0.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	120
180 min Winter	24.832	0.0	178
240 min Winter	20.006	0.0	236
360 min Winter	14.706	0.0	348
480 min Winter	11.518	0.0	454
600 min Winter	9.966	0.0	548
720 min Winter	8.665	0.0	570
960 min Winter	6.943	0.0	722
1440 min Winter	5.071	0.0	1026
2160 min Winter	3.696	0.0	1468
2880 min Winter	2.949	0.0	1876
4320 min Winter	2.142	0.0	2640
5760 min Winter	1.705	0.0	3344
7200 min Winter	1.427	0.0	3896
8640 min Winter	1.235	0.0	4488
10080 min Winter	1.093	0.0	5240

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.008

Time (mins) From:	To:	Area (ha)
0	4	0.008

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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.600 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.04561 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04561

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	14.0	14.0	0.500	0.0	20.0
0.400	14.0	20.0			

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 525 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	98.737	0.137	0.1	1.8	O K
30 min Summer	98.782	0.182	0.1	2.4	O K
60 min Summer	98.828	0.228	0.1	3.0	O K
120 min Summer	98.870	0.270	0.1	3.6	O K
180 min Summer	98.890	0.290	0.1	3.9	O K
240 min Summer	98.899	0.299	0.1	4.0	O K
360 min Summer	98.904	0.304	0.1	4.0	O K
480 min Summer	98.903	0.303	0.1	4.0	O K
600 min Summer	98.901	0.301	0.1	4.0	O K
720 min Summer	98.897	0.297	0.1	4.0	O K
960 min Summer	98.889	0.289	0.1	3.8	O K
1440 min Summer	98.870	0.270	0.1	3.6	O K
2160 min Summer	98.840	0.240	0.1	3.2	O K
2880 min Summer	98.812	0.212	0.1	2.8	O K
4320 min Summer	98.763	0.163	0.1	2.2	O K
5760 min Summer	98.724	0.124	0.1	1.6	O K
7200 min Summer	98.693	0.093	0.1	1.2	O K
8640 min Summer	98.672	0.072	0.1	1.0	O K
10080 min Summer	98.657	0.057	0.1	0.8	O K
15 min Winter	98.754	0.154	0.1	2.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	33
60 min Summer	53.779	0.0	62
120 min Summer	33.337	0.0	122
180 min Summer	24.832	0.0	182
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	360
480 min Summer	11.818	0.0	414
600 min Summer	9.966	0.0	476
720 min Summer	8.665	0.0	540
960 min Summer	6.943	0.0	674
1440 min Summer	5.071	0.0	950
2160 min Summer	3.696	0.0	1360
2880 min Summer	2.949	0.0	1756
4320 min Summer	2.142	0.0	2508
5760 min Summer	1.705	0.0	3232
7200 min Summer	1.427	0.0	3960
8640 min Summer	1.235	0.0	4584
10080 min Summer	1.093	0.0	5248
15 min Winter	124.633	0.0	19

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	98.804	0.204	0.1	2.7	O K
60 min Winter	98.857	0.257	0.1	3.4	O K
120 min Winter	98.906	0.306	0.1	4.1	O K
180 min Winter	98.929	0.329	0.1	4.4	O K
240 min Winter	98.941	0.341	0.1	4.5	O K
360 min Winter	98.950	0.350	0.1	4.7	O K
480 min Winter	98.950	0.350	0.1	4.7	O K
600 min Winter	98.946	0.346	0.1	4.6	O K
720 min Winter	98.941	0.341	0.1	4.5	O K
960 min Winter	98.930	0.330	0.1	4.4	O K
1440 min Winter	98.902	0.302	0.1	4.0	O K
2160 min Winter	98.857	0.257	0.1	3.4	O K
2880 min Winter	98.815	0.215	0.1	2.9	O K
4320 min Winter	98.744	0.144	0.1	1.9	O K
5760 min Winter	98.690	0.090	0.1	1.2	O K
7200 min Winter	98.656	0.056	0.1	0.7	O K
8640 min Winter	98.646	0.046	0.1	0.6	O K
10080 min Winter	98.641	0.041	0.1	0.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	120
180 min Winter	24.832	0.0	178
240 min Winter	20.006	0.0	236
360 min Winter	14.706	0.0	348
480 min Winter	11.518	0.0	454
600 min Winter	9.966	0.0	548
720 min Winter	8.665	0.0	570
960 min Winter	6.943	0.0	722
1440 min Winter	5.071	0.0	1026
2160 min Winter	3.696	0.0	1468
2880 min Winter	2.949	0.0	1876
4320 min Winter	2.142	0.0	2640
5760 min Winter	1.705	0.0	3344
7200 min Winter	1.427	0.0	3896
8640 min Winter	1.235	0.0	4488
10080 min Winter	1.093	0.0	5240

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.008

Time (mins) From:	To:	Area (ha)
0	4	0.008

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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.600 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.04561 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04561

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	14.0	14.0	0.500	0.0	20.0
0.400	14.0	20.0			

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Summary of Results for 10 year Return Period (+40%)

Half Drain Time : 535 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	98.747	0.147	0.1	1.7	O K
30 min Summer	98.791	0.191	0.1	2.2	O K
60 min Summer	98.837	0.237	0.1	2.7	O K
120 min Summer	98.881	0.281	0.1	3.2	O K
180 min Summer	98.903	0.303	0.1	3.5	O K
240 min Summer	98.915	0.315	0.1	3.6	O K
360 min Summer	98.926	0.326	0.1	3.7	O K
480 min Summer	98.929	0.329	0.1	3.8	O K
600 min Summer	98.930	0.330	0.1	3.8	O K
720 min Summer	98.929	0.329	0.1	3.8	O K
960 min Summer	98.925	0.325	0.1	3.7	O K
1440 min Summer	98.911	0.311	0.1	3.5	O K
2160 min Summer	98.887	0.287	0.1	3.3	O K
2880 min Summer	98.862	0.262	0.1	3.0	O K
4320 min Summer	98.817	0.217	0.1	2.5	O K
5760 min Summer	98.777	0.177	0.1	2.0	O K
7200 min Summer	98.743	0.143	0.1	1.6	O K
8640 min Summer	98.716	0.116	0.1	1.3	O K
10080 min Summer	98.693	0.093	0.1	1.1	O K
15 min Winter	98.764	0.164	0.1	1.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	76.214	0.0	19
30 min Summer	50.290	0.0	33
60 min Summer	31.908	0.0	64
120 min Summer	19.755	0.0	122
180 min Summer	14.804	0.0	182
240 min Summer	12.028	0.0	242
360 min Summer	8.957	0.0	360
480 min Summer	7.262	0.0	420
600 min Summer	6.168	0.0	482
720 min Summer	5.396	0.0	546
960 min Summer	4.369	0.0	680
1440 min Summer	3.241	0.0	954
2160 min Summer	2.402	0.0	1364
2880 min Summer	1.942	0.0	1764
4320 min Summer	1.437	0.0	2552
5760 min Summer	1.161	0.0	3296
7200 min Summer	0.983	0.0	4032
8640 min Summer	0.859	0.0	4752
10080 min Summer	0.766	0.0	5440
15 min Winter	76.214	0.0	19

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Summary of Results for 10 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	98.815	0.215	0.1	2.4	O K
60 min Winter	98.867	0.267	0.1	3.0	O K
120 min Winter	98.917	0.317	0.1	3.6	O K
180 min Winter	98.944	0.344	0.1	3.9	O K
240 min Winter	98.960	0.360	0.1	4.1	O K
360 min Winter	98.975	0.375	0.1	4.3	O K
480 min Winter	98.980	0.380	0.1	4.3	O K
600 min Winter	98.980	0.380	0.1	4.3	O K
720 min Winter	98.978	0.378	0.1	4.3	O K
960 min Winter	98.972	0.372	0.1	4.2	O K
1440 min Winter	98.951	0.351	0.1	4.0	O K
2160 min Winter	98.912	0.312	0.1	3.6	O K
2880 min Winter	98.874	0.274	0.1	3.1	O K
4320 min Winter	98.804	0.204	0.1	2.3	O K
5760 min Winter	98.747	0.147	0.1	1.7	O K
7200 min Winter	98.702	0.102	0.1	1.2	O K
8640 min Winter	98.668	0.068	0.1	0.8	O K
10080 min Winter	98.650	0.050	0.1	0.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	50.290	0.0	33
60 min Winter	31.908	0.0	62
120 min Winter	19.755	0.0	120
180 min Winter	14.804	0.0	178
240 min Winter	12.028	0.0	236
360 min Winter	8.957	0.0	348
480 min Winter	7.262	0.0	456
600 min Winter	6.168	0.0	554
720 min Winter	5.396	0.0	578
960 min Winter	4.369	0.0	730
1440 min Winter	3.241	0.0	1038
2160 min Winter	2.402	0.0	1488
2880 min Winter	1.942	0.0	1904
4320 min Winter	1.437	0.0	2720
5760 min Winter	1.161	0.0	3464
7200 min Winter	0.983	0.0	4176
8640 min Winter	0.859	0.0	4760
10080 min Winter	0.766	0.0	5240

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	10	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

Time (mins) From:	To:	Area (ha)
0	4	0.012

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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.600 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.04561 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04561

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	12.0	12.0	0.500	0.0	17.6
0.400	12.0	17.6			

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Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 567 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	98.744	0.144	0.1	2.7	O K
30 min Summer	98.791	0.191	0.1	3.6	O K
60 min Summer	98.840	0.240	0.1	4.6	O K
120 min Summer	98.886	0.286	0.1	5.4	O K
180 min Summer	98.907	0.307	0.1	5.8	O K
240 min Summer	98.917	0.317	0.1	6.0	O K
360 min Summer	98.925	0.325	0.1	6.2	O K
480 min Summer	98.924	0.324	0.1	6.2	O K
600 min Summer	98.922	0.322	0.1	6.1	O K
720 min Summer	98.919	0.319	0.1	6.1	O K
960 min Summer	98.911	0.311	0.1	5.9	O K
1440 min Summer	98.892	0.292	0.1	5.5	O K
2160 min Summer	98.861	0.261	0.1	5.0	O K
2880 min Summer	98.833	0.233	0.1	4.4	O K
4320 min Summer	98.782	0.182	0.1	3.5	O K
5760 min Summer	98.740	0.140	0.1	2.7	O K
7200 min Summer	98.708	0.108	0.1	2.0	O K
8640 min Summer	98.683	0.083	0.1	1.6	O K
10080 min Summer	98.664	0.064	0.1	1.2	O K
15 min Winter	98.761	0.161	0.1	3.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	19
30 min Summer	83.789	0.0	33
60 min Summer	53.779	0.0	64
120 min Summer	33.337	0.0	122
180 min Summer	24.832	0.0	182
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	360
480 min Summer	11.818	0.0	436
600 min Summer	9.966	0.0	494
720 min Summer	8.665	0.0	556
960 min Summer	6.943	0.0	684
1440 min Summer	5.071	0.0	956
2160 min Summer	3.696	0.0	1364
2880 min Summer	2.949	0.0	1760
4320 min Summer	2.142	0.0	2548
5760 min Summer	1.705	0.0	3280
7200 min Summer	1.427	0.0	3968
8640 min Summer	1.235	0.0	4664
10080 min Summer	1.093	0.0	5336
15 min Winter	124.633	0.0	19

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	98.815	0.215	0.1	4.1	O K
60 min Winter	98.870	0.270	0.1	5.1	O K
120 min Winter	98.923	0.323	0.1	6.1	O K
180 min Winter	98.949	0.349	0.1	6.6	O K
240 min Winter	98.962	0.362	0.1	6.9	O K
360 min Winter	98.973	0.373	0.1	7.1	O K
480 min Winter	98.975	0.375	0.1	7.1	O K
600 min Winter	98.972	0.372	0.1	7.1	O K
720 min Winter	98.967	0.367	0.1	7.0	O K
960 min Winter	98.957	0.357	0.1	6.8	O K
1440 min Winter	98.929	0.329	0.1	6.3	O K
2160 min Winter	98.884	0.284	0.1	5.4	O K
2880 min Winter	98.841	0.241	0.1	4.6	O K
4320 min Winter	98.766	0.166	0.1	3.2	O K
5760 min Winter	98.708	0.108	0.1	2.1	O K
7200 min Winter	98.667	0.067	0.1	1.3	O K
8640 min Winter	98.649	0.049	0.1	0.9	O K
10080 min Winter	98.643	0.043	0.1	0.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	120
180 min Winter	24.832	0.0	178
240 min Winter	20.006	0.0	236
360 min Winter	14.706	0.0	350
480 min Winter	11.518	0.0	458
600 min Winter	9.966	0.0	560
720 min Winter	8.665	0.0	586
960 min Winter	6.943	0.0	734
1440 min Winter	5.071	0.0	1040
2160 min Winter	3.696	0.0	1488
2880 min Winter	2.949	0.0	1904
4320 min Winter	2.142	0.0	2680
5760 min Winter	1.705	0.0	3400
7200 min Winter	1.427	0.0	4032
8640 min Winter	1.235	0.0	4488
10080 min Winter	1.093	0.0	5240

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

Time (mins) From:	To:	Area (ha)
0	4	0.012

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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.600 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.04561 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04561

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	20.0	20.0	0.500	0.0	27.2
0.400	20.0	27.2			

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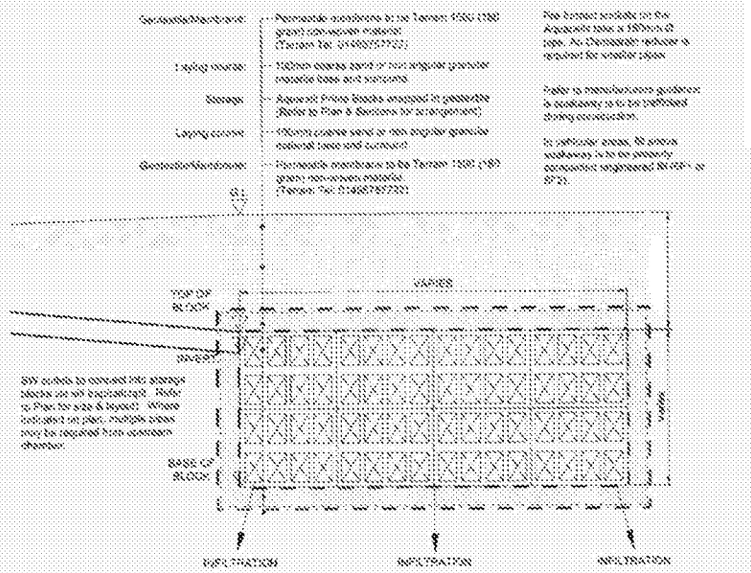
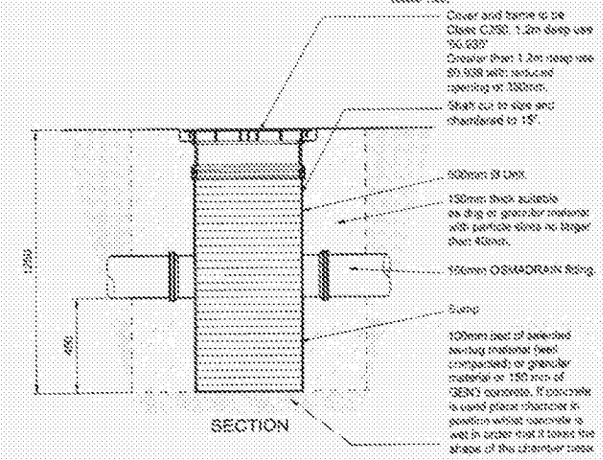


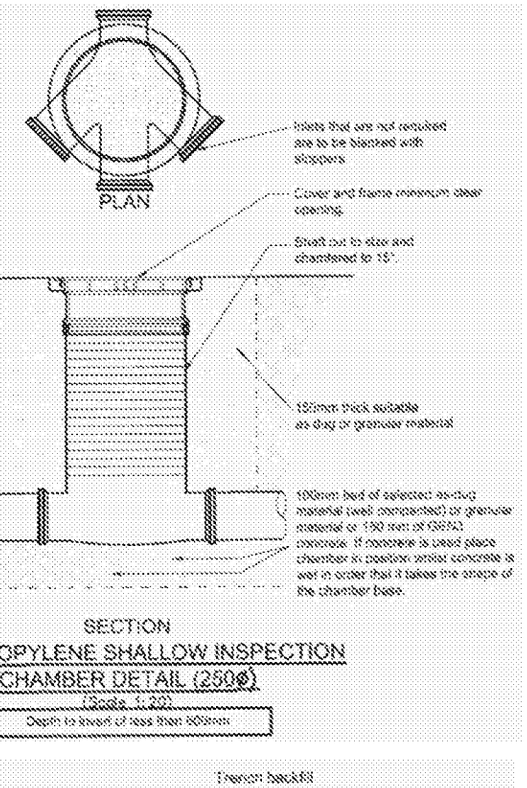
TYPICAL AQUACELL SOAKAWAY



POLYPROPYLENE SHALLOW SILT TRAP DETAIL (500Ø)

(Scale 1:20)

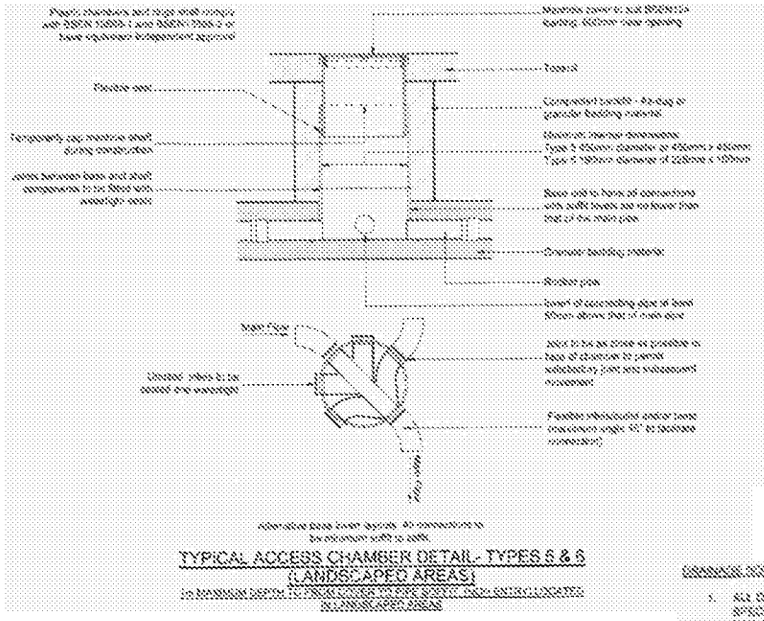
Depth to invert 1.05m (chamfered unit)
Silt Traps supplied greater than single unit depth to be extended using Wavin inspection chamber shaft units.



POLYPROPYLENE SHALLOW INSPECTION CHAMBER DETAIL (250Ø)

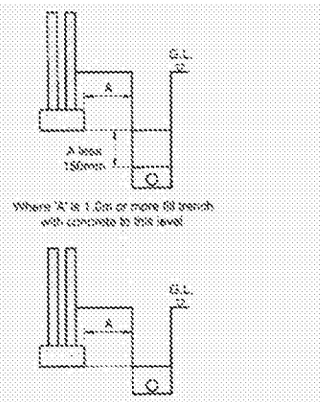
(Scale 1:20)

Depth to invert of less than 600mm



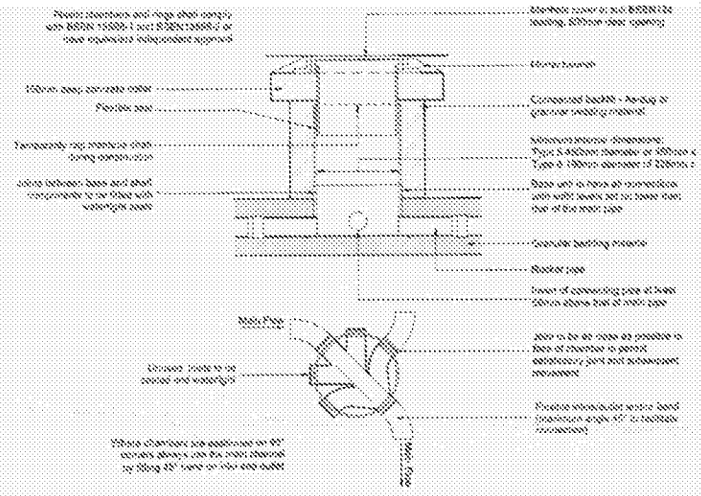
TYPICAL ACCESS CHAMBER DETAIL- TYPES 5 & 6

(LANDSCAPED AREAS)



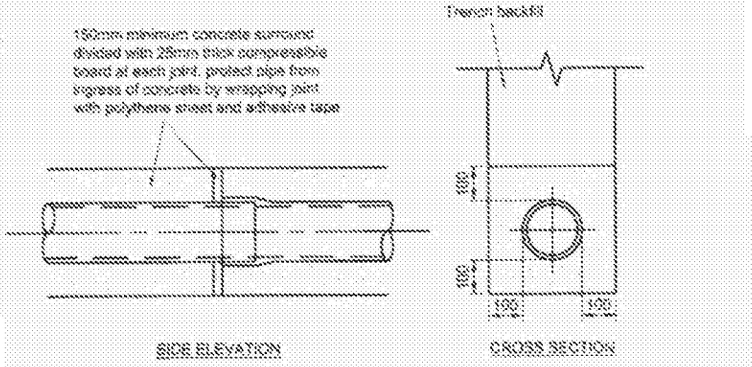
DETAIL OF PIPE RUNS NEAR BUILDINGS

(Not to Scale)



TYPICAL ACCESS CHAMBER DETAIL - TYPE 5 & 6

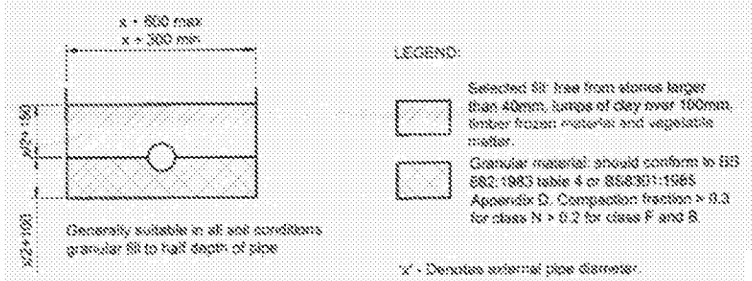
(FOOTPATHS AND PRIVATE DRIVES)



CONCRETE BED AND SURROUND TO PIPES UNDER DRIVES AND GARDENS

Depth of cover less than 0.35m under private gardens and 0.6m under private drives

(Scale 1:20)



PIPE BEDDING DETAIL UNDER DRIVES AND GARDENS

Min depth of cover 0.35m under private gardens and 0.6m under private drives

(Scale 1:20)

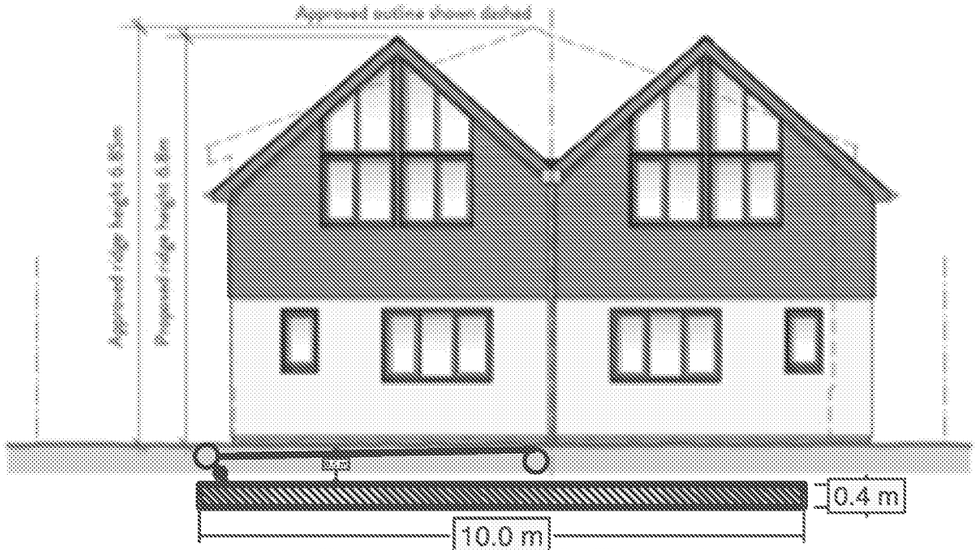
DETAIL OF RAINWATER PIPE

(Scale 1:20)

ARUN DISTRICT COUNCIL FP/184/20/PL

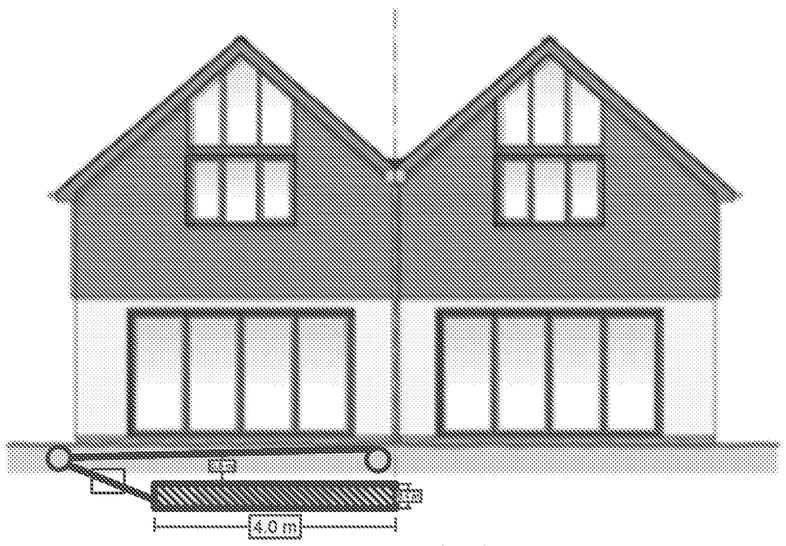
DRAINAGE NOTES:

1. ALL DRAINAGE WORKS TO BE CONSTRUCTED IN STRICT ACCORDANCE WITH SPECIFICATION OF THE LOCAL AUTHORITY, BUILDING REGULATIONS, SEWERS FOR ADOPTION 6TH EDITION & BRBN 1991.
2. FOR LOCATION AND SETTING OUT OF SOIL AND DRAINAGE POINTS REFER TO ARCHITECT'S DRAWINGS.
3. ALL PIPE RUNS NEAR BUILDINGS TO COMPLY WITH THE BUILDING REGULATIONS AND PART H1. WHERE A PIPE IS WITHIN 1.0m OF A FOUNDATION THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE UP TO THE LOWEST LEVEL OF THE FOUNDATION. WHERE THE TRENCH IS FURTHER THAN 1.0m FROM THE FOUNDATION THE TRENCH SHALL BE FILLED WITH CLASS GEN3 CONCRETE TO A LEVEL BELOW THE LOWEST LEVEL FROM THE FOUNDATION EQUAL TO THE DISTANCE FROM THE FOUNDATION LESS 150mm. WHERE PIPES PASS THROUGH WALLS THE PIPE SHALL BE REBATED AND SURROUNDED IN 150mm THICK CLASS GEN3 CONCRETE.
4. WHERE PIPES CROSS, OR RUN UNDERNEATH, ONE ANOTHER AT A DEPTH OF LESS THAN 1.0m THE PIPE SHALL BE LAID IN A CONCRETE BED AND SURROUND.
5. IN ANY CIRCUMSTANCES WHERE PIPES ARE BEDDED AND SURROUNDED IN CONCRETE FLEXIBLE JOINTS SHALL BE PROVIDED. COMPRESSIBLE BOARDS OR MATERIAL OF NOT LESS THAN 12mm THICKNESS SHALL BE PROVIDED AT A MAXIMUM OF 6m CENTRES COINCIDING WITH PIPE JOINTS. THE BOARDS SHALL BE PIPE CUT TO PIPE DIAMETER AND TO A HEIGHT AND WIDTH EQUAL TO THE CONCRETE CONCRETE SECTION. A MINIMUM THICKNESS OF 150mm FOR PIPES UP TO 450mm NOMINAL DIAMETER AND 300mm FOR PIPES OVER 450mm NOMINAL DIAMETER.
6. ALL PIPELINES IN BUILDING DRAINAGE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH BSEN 752:1, UNLESS OTHERWISE SPECIFIED BUILDING DRAINAGE SHALL BE 100mm DIAMETER AND SHALL BE LAID AT A MINIMUM GRADIENT OF 1:40 (2.5%) FOR FOUL DRAINAGE AND 1:80 (1.25%) FOR SURFACE WATER DRAINS. ALL BUILDING DRAINS SHALL BE LAID IN CONJUNCTION WITH THOSE ADOPTING BEDDING DETAILS 'S' OR 'B' (N) BY UNLESS OTHERWISE SPECIFIED.
8. ALL PIPES, BENDS AND JUNCTIONS FOR PRIVATE BUILDING DRAINAGE SHALL BE OF UPVC CONFORMING TO BSEN752 AND SHALL BE APPROPRIATE AND SHALL BE LAID IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION. ALL PIPES, BENDS AND JUNCTION MATERIALS FOR ADOPTABLE DRAINAGE SHALL BE VITRIFIED CLAY, EXCEPT A PREMIUM OR SUPER STRENGTH IS REQUIRED WITH FLEXIBLE JOINTS AND EXTENSION FITTINGS.
9. ALL BACK INLET GULLIES TO BE PROVIDED OR CONNECTED TO INSPECTION CHAMBERS.
10. ALL GULLY BOSSES OTHER THAN AT MANHOLES TO BE 'Y' JUNCTIONS.
11. ALL BOSS GULLY CONNECTIONS TO BE 150mm DIAMETER.
12. ALL PIPE RUNS TO BE FITTED WITH AIR ADMITTANCE VALVES UNLESS BRANCH DRAIN EXTENDS FAR ENOUGH AT THE HEAD OF THE RUN FOR VENT PIPES LOCATED AT THE HEAD OF A RUN TO TERMINATE 150 ABOVE EAVES.
13. ALL CONNECTIONS TO BE SOCKET TO SOCKET UNLESS OTHERWISE NOTED.
14. ALL CONCRETE AND CONCRETE PRODUCTS TO BE IN ACCORDANCE WITH BRE 1991 FOR SULPHATES.
15. THE LOCATIONS OF ALL SUDS AND PIPING SHALL BE CROSS REFERENCED AGAINST THE ARCHITECTS DRAWINGS DURING SETTING OUT.
16. ANY NEW CONNECTIONS ARE MADE TO EXISTING PUBLIC SEWERS AN APPLICATION UNDER S106 MUST BE MADE TO SOUTHERN WATER.
17. THE PRECISE DEPTH AND LOCATION AND SIZE OF EXISTING PIPES OR MANHOLES WHERE CONNECTIONS OR DIVERSION ARE PROPOSED MUST BE ESTABLISHED AND REPORTED TO THE ENGINEER AT THE EARLIEST OPPORTUNITY.
18. WHERE INSPECTION COVERS ARE LOCATED IN AREAS OF BLOCK PAVING OR PAVING SLABS THEY SHALL BE FITTED WITH RECESSED COVERS AND INFILLED WITH THE ADJACENT MATERIAL.
19. TRANSITION COVERS IN VEHICULAR AREAS TO BE CLASS D400, IN ALL OTHER AREAS COVERS TO BE CLASS B125 EXCEPT STEEL COVERS ARE NOT PERMITTED.



Proposed South Elevation

Scale 1:100



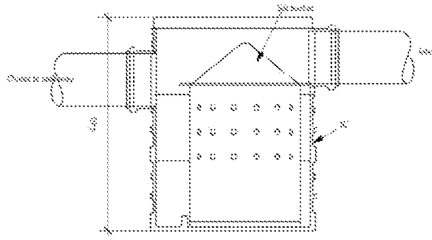
Proposed North Elevation

Scale 1:100

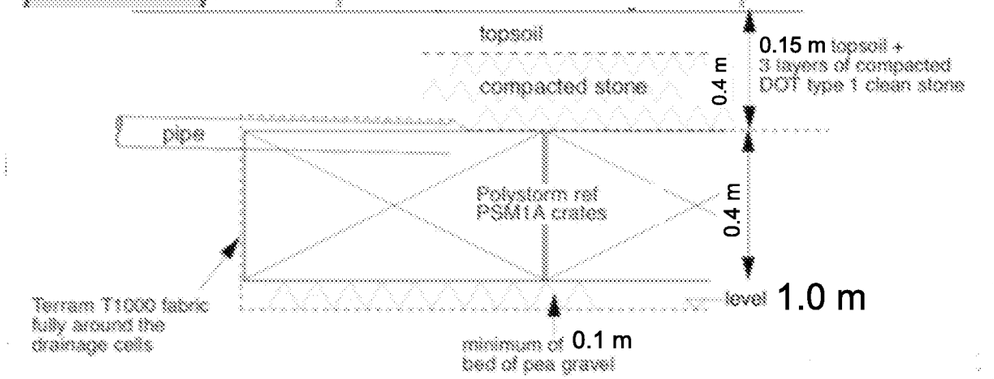
Planning Issue

0 2 4 6 8 10

See silt trap detail

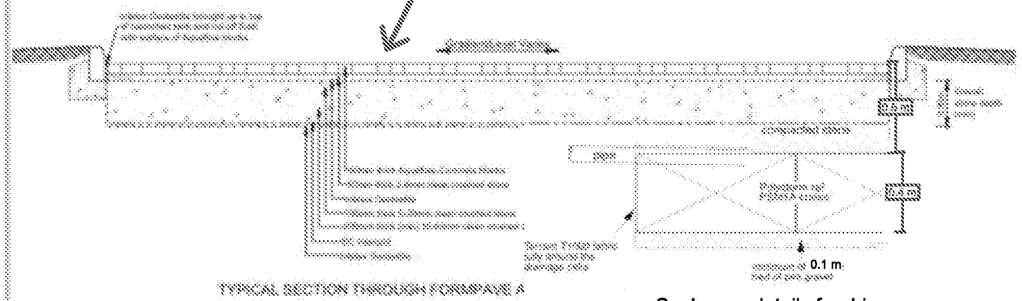


In driveway sump depth of 0.87 m

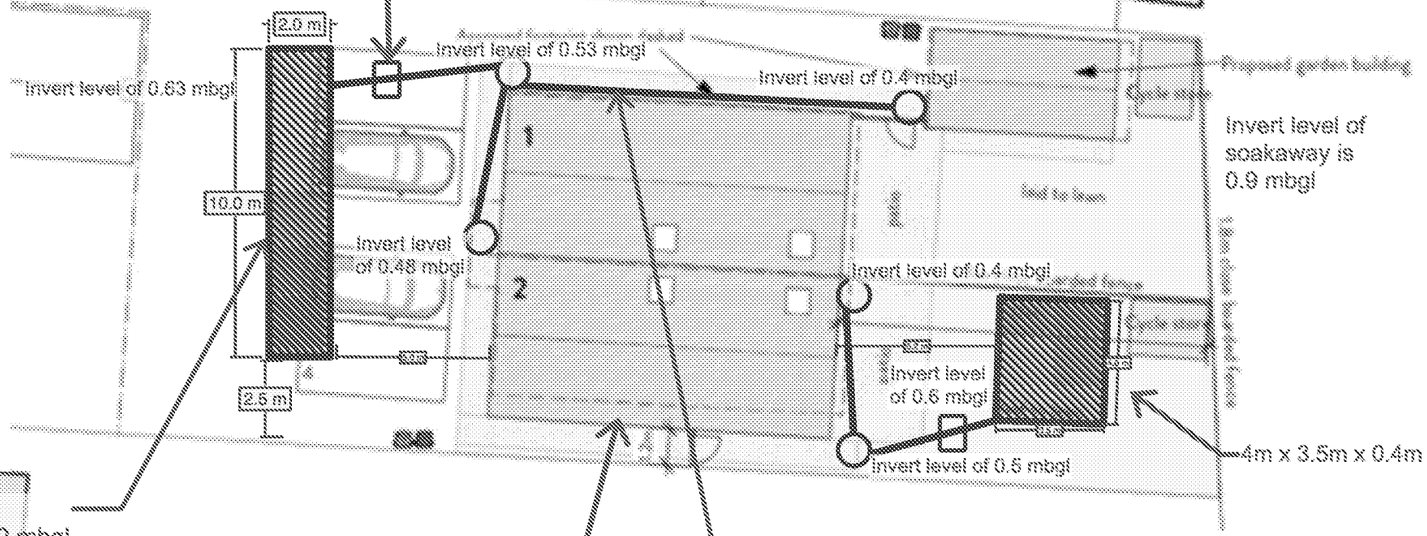


Soakaway details for rear garden

Clean crushed stone will be type 3 reduced fines to allow water to free drain as a permeable sub base



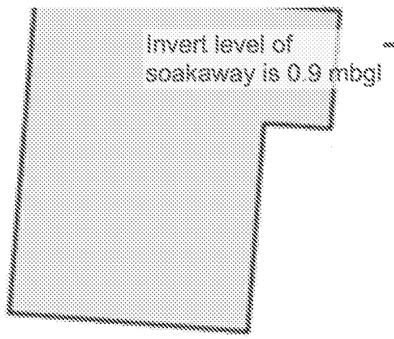
Soakaway details for driveway



Invert level of soakaway is 0.9 mbgl

Silt trap in rear garden sump depth of 0.85 m

Cover level of whole site is 0.00 as site is flat.



Block Plan

Scale 1:200

Planning Issue

0 4 8 12 16 20

physical scale in metres

Roof area to be drained (impermeable area):
Roof 1: 10.8 x 5 = 54m^2 x factor of 1.5 = 81m^2 for 45 deg pitch
Garden room: 6 x 3 = 18m^2 X factor of 1.5 for 45 deg pitch = 27m^2
81m^2 + 27m^2 = 108m^2
Roof 2: 10.8 x 5 = 54m^2 X factor of 1.5 for 45 deg pitch = 81m^2

Pipes to be reinforced with 150mm C35 concrete with 2 layers A393 mesh where under driveway
110mm diameter UPVC drainage laid to a minimum fall of 1:100

Note:
Access cover to inspection chambers is to be "driveway 35 kN"

Key:
- Inspection chamber
- Silt trap
- Soakaway
- UPVC pipe

PL03 - Block Plan

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