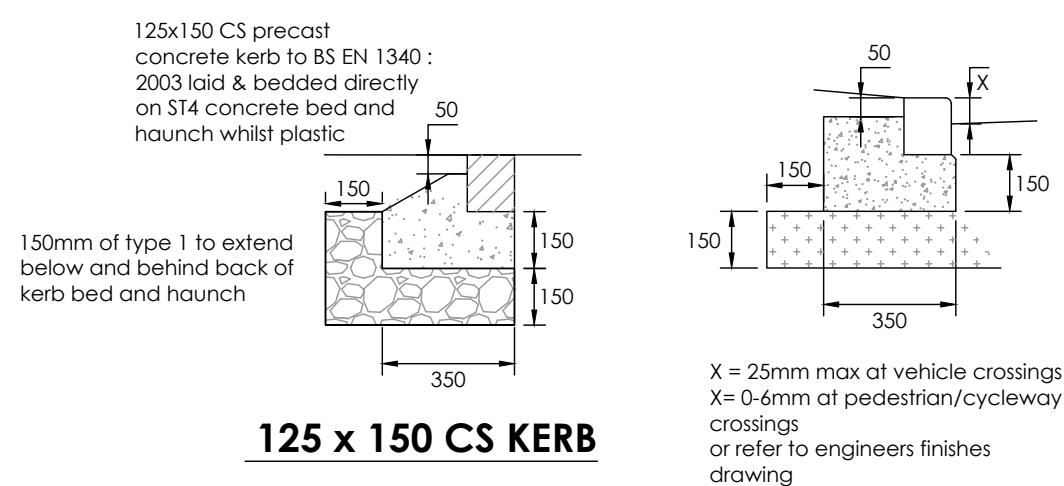
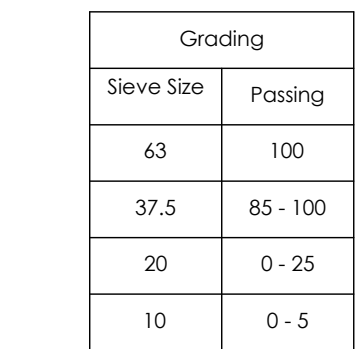
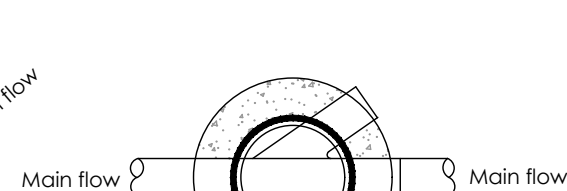
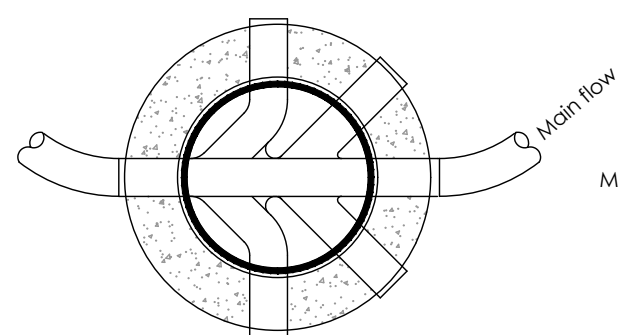
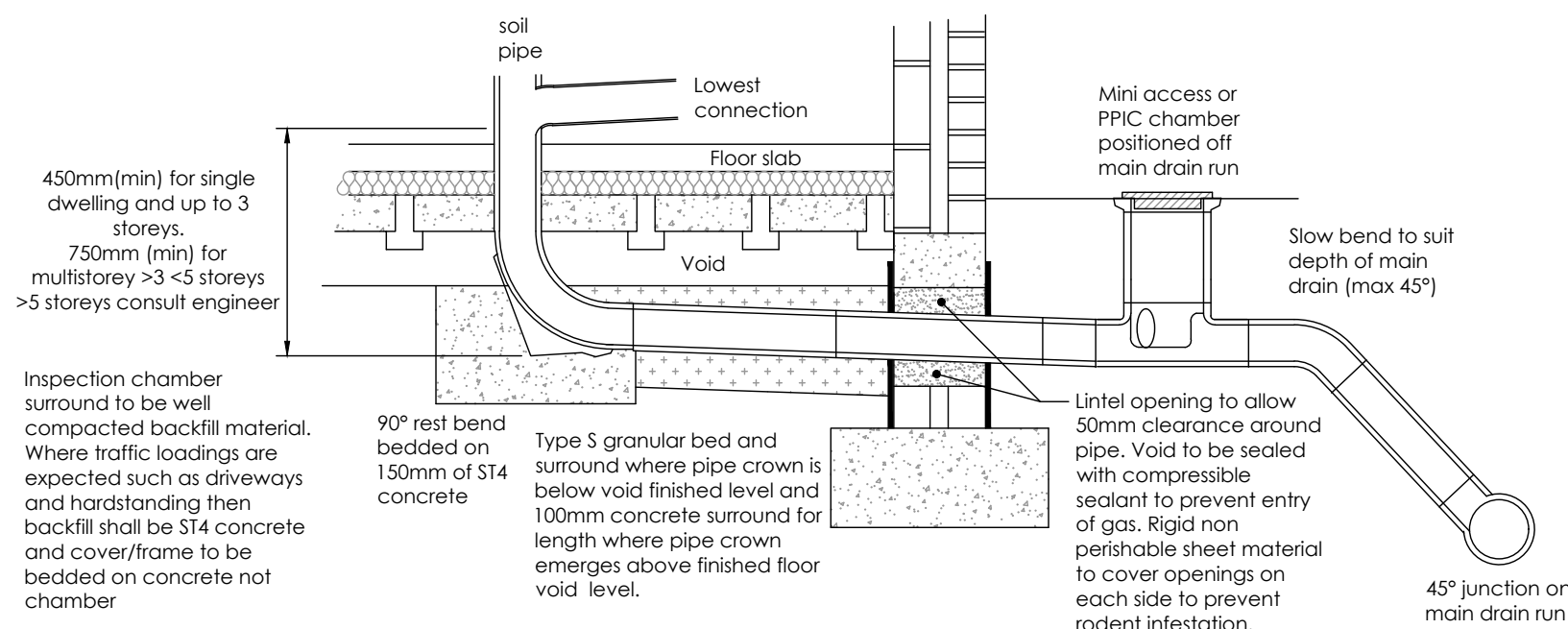
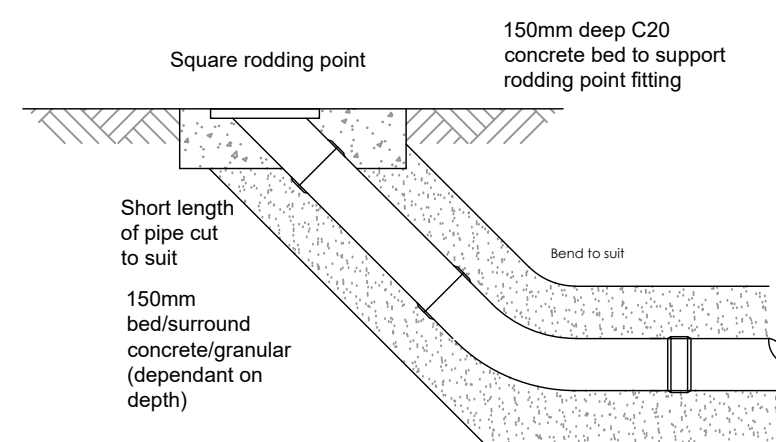


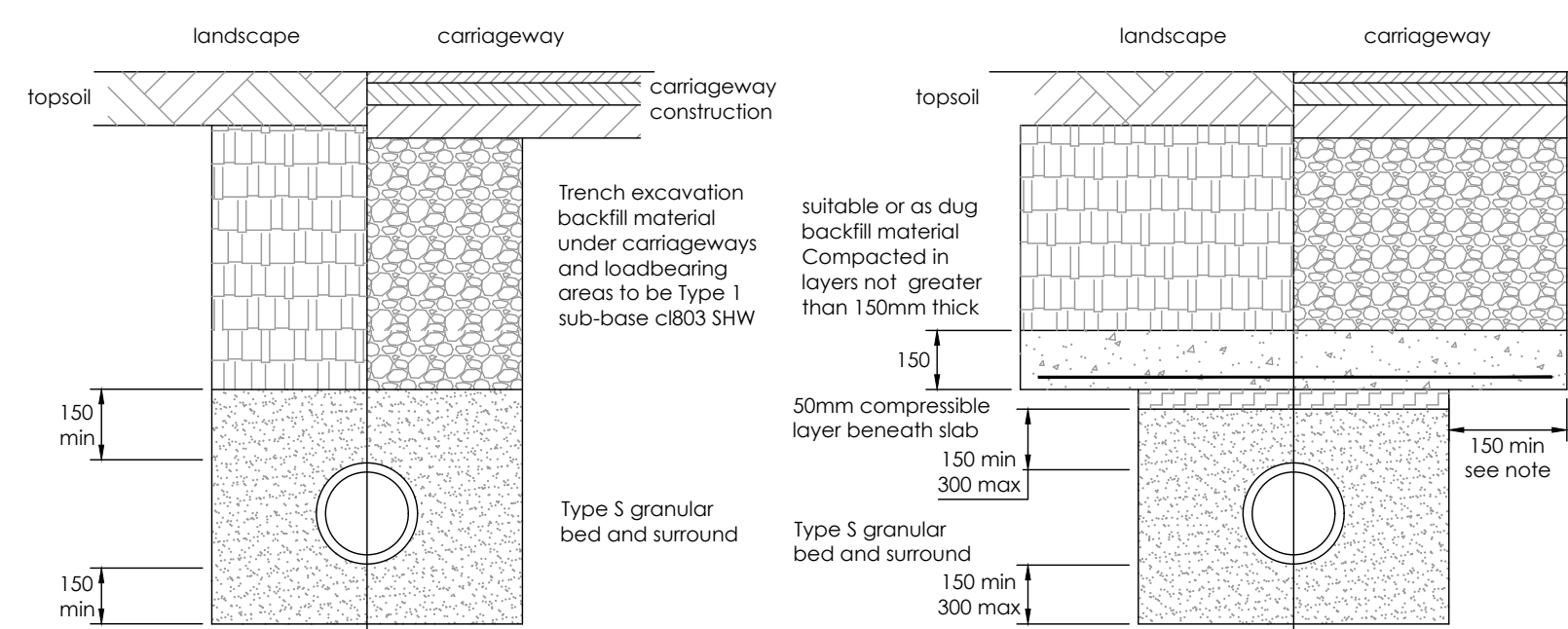
Appendix A - Drainage Details and Sections



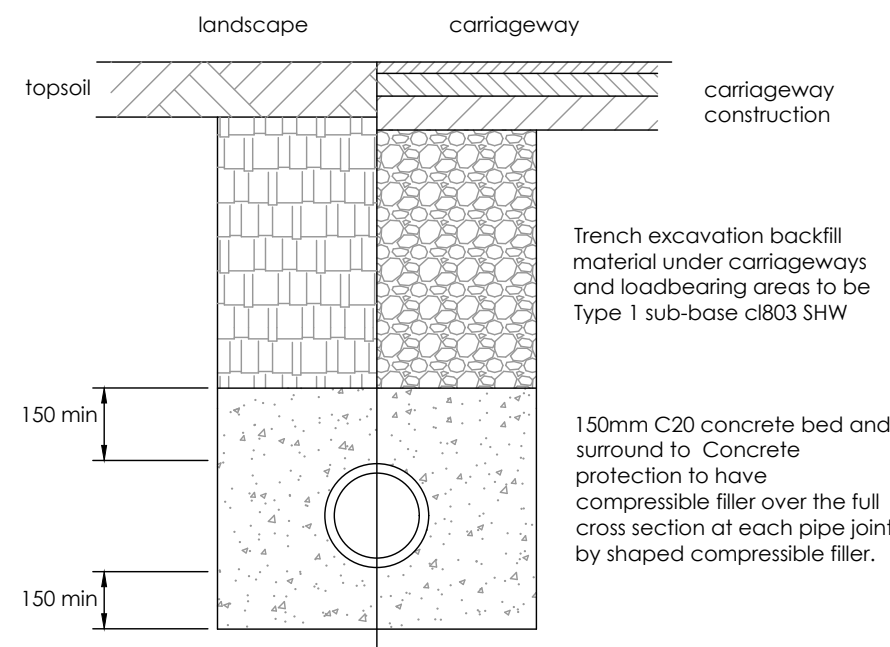
If kerb and backing is laid as two separate operations then ST2 concrete bedding and backing 150mm high 8mm Ø. steel reinforcing hoops set 100mm into base at 900mm centres if kerb and backing laid in two stages



Chamber Type	Internal Diameter (mm)	Max. No. Inlets	Max. Depth (mm)
Polypropylene Mini Access Chamber (mac)	300	3	600
Polypropylene Inspection Chamber (PIC)	475	5	1200



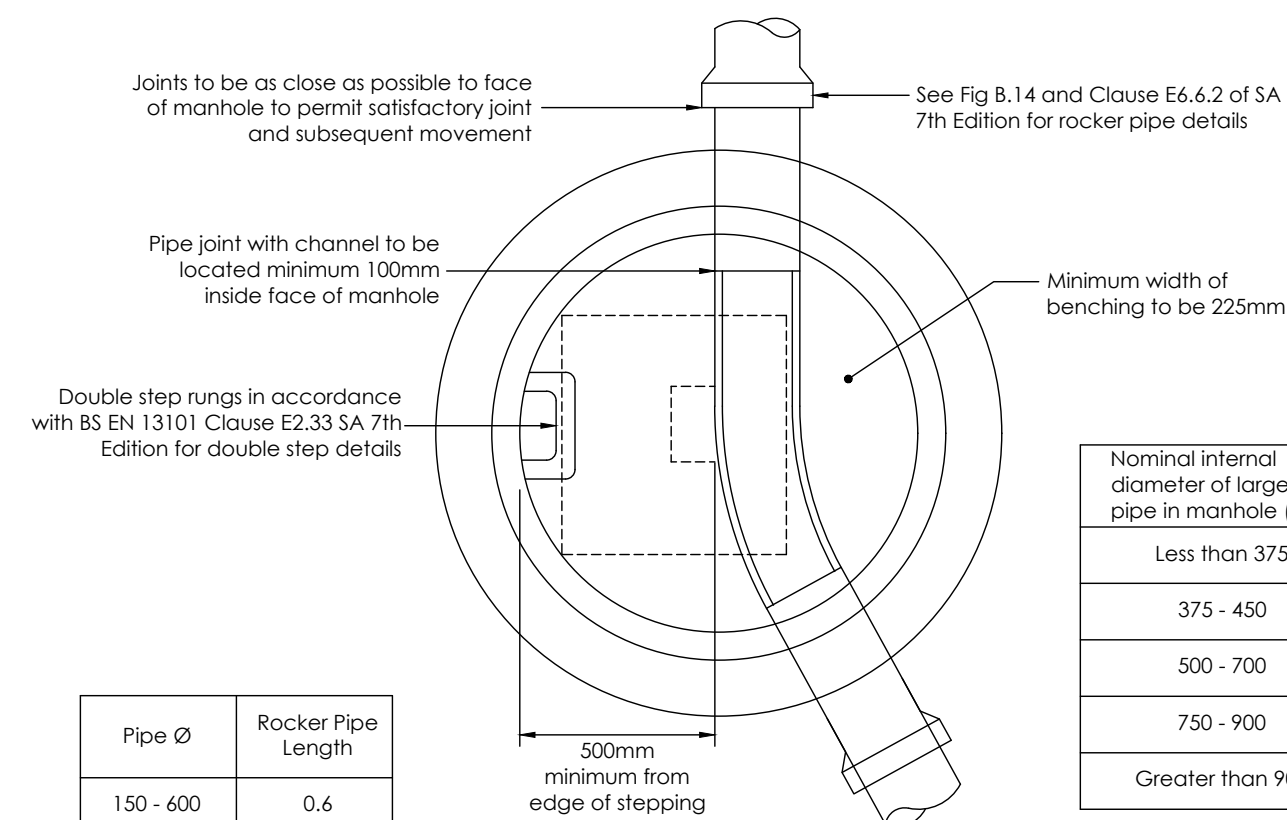
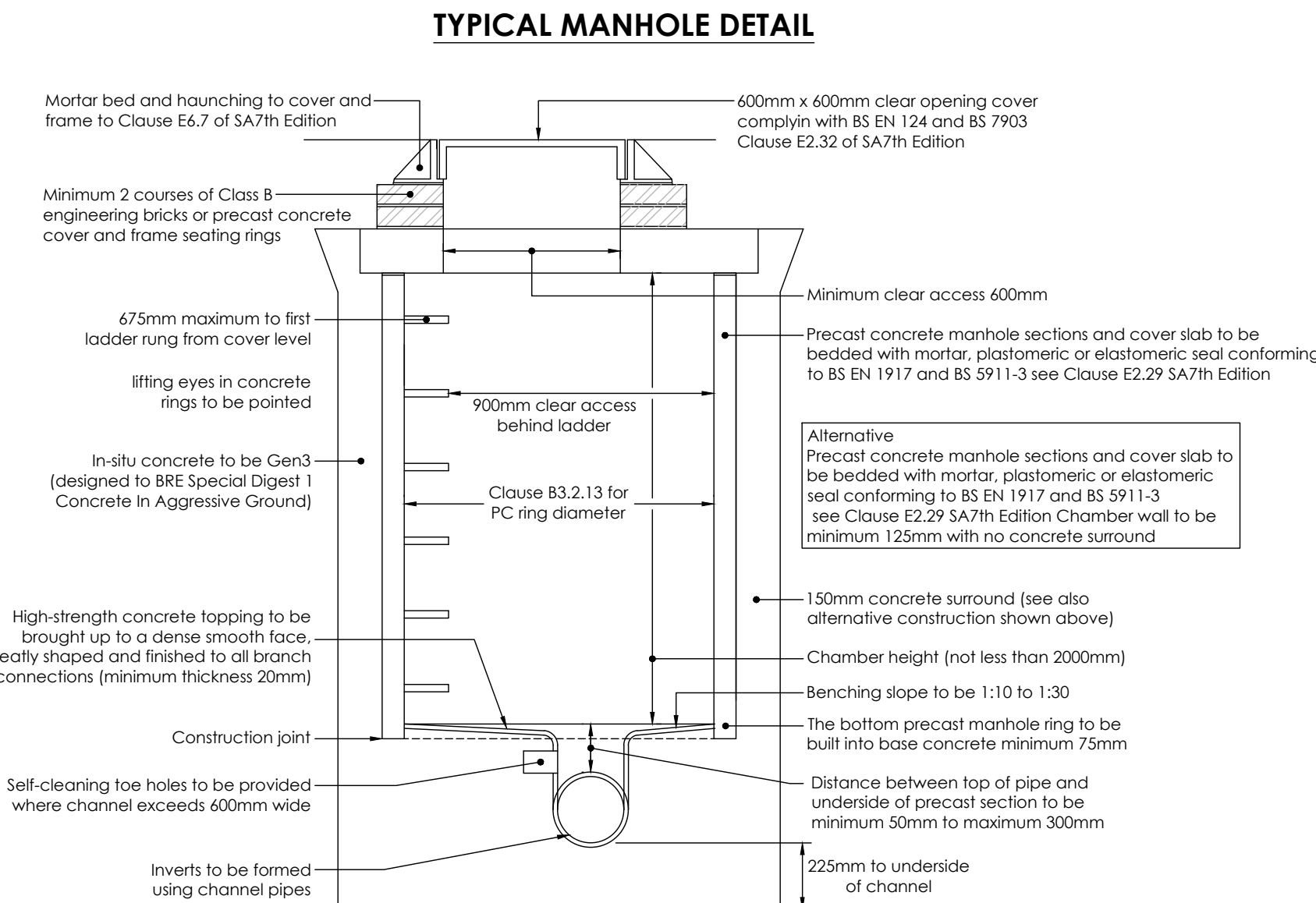
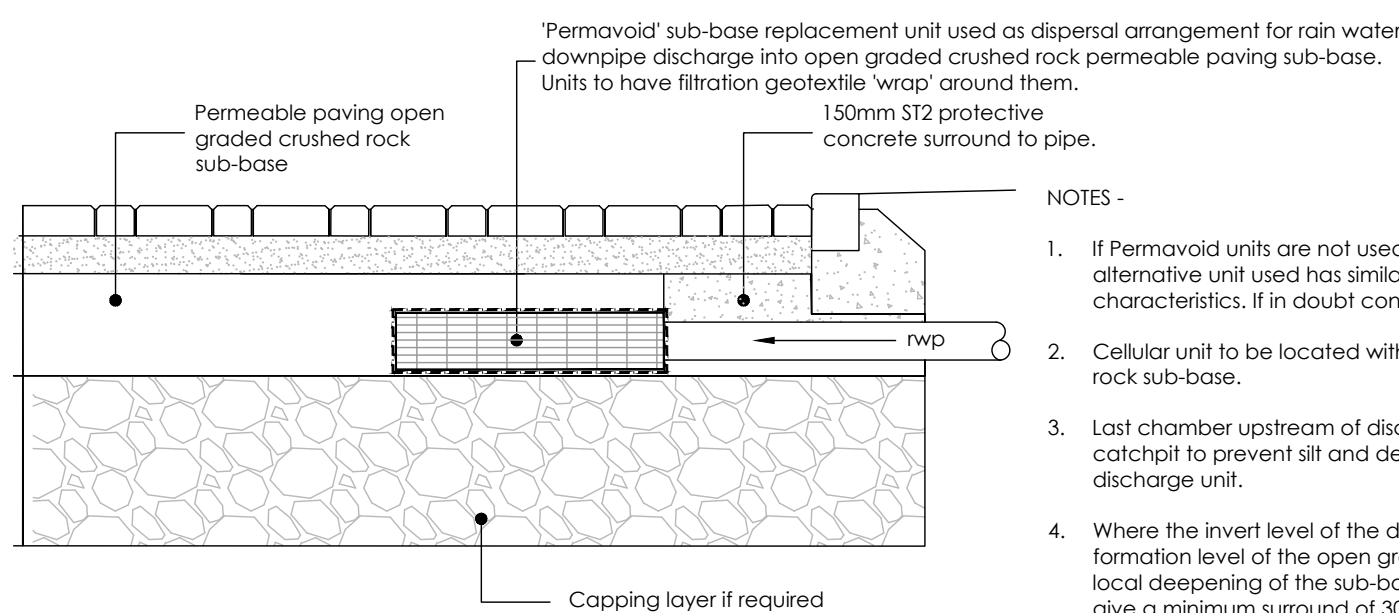
To be used where cover to pipe soffit is greater than 900mm in vehicular areas and greater than 600mm in non-trafficked areas (ie footpaths, verges, etc)



To be used where cover to pipe soffit is less than 900mm in vehicular areas and 1200mm in non-trafficked areas (ie footpaths, verges, etc)

To be used where cover to pipe soffit is less than 900mm in vehicular areas and 600mm in non-trafficked areas (ie footpaths, verges, etc)

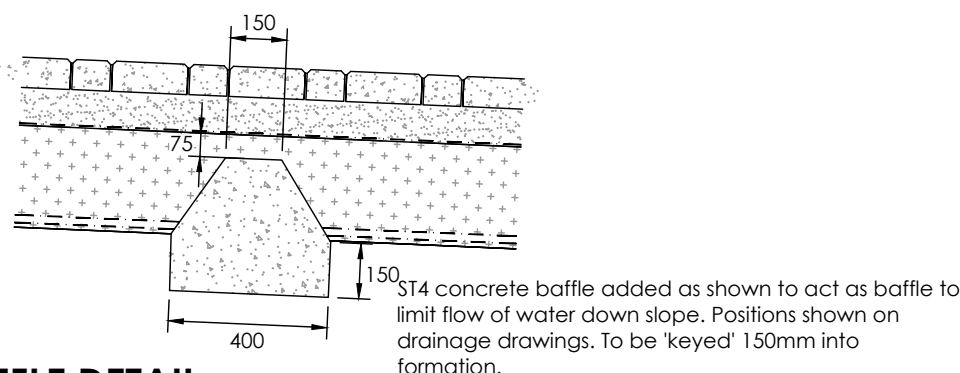
Pipe nominal size (DN)	Pipe Bedding Requirement (mm)
100	10 nominal single size
over 100 to 150	10 or 14mm nominal single size or 14mm to 5mm graded
over 150-300	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded or 20mm to 5mm graded
over 300 to 350	14, 20 or 40mm nominal single-size crushed rock or 14mm to 5mm graded or 20mm to 5mm graded
over 550	14, 20 or 40mm nominal single-size crushed rock or 14mm to 5mm graded or 20mm to 5mm graded or 40mm to 5mm graded



Nominal internal diameter of largest pipe in manhole (mm)	Minimum nominal internal dimension of manhole (mm)
Less than 375	1200
375 - 450	1350
500 - 700	1500
750 - 900	1800
Greater than 900	Pipe diameter + 900

Pipe Ø	Rocker Pipe Length
150 - 600	0.6
601 - 750	1.0
over 750	1.25

Recommended rocker pipe length
away from structure Table E.12
from Clause E6.6 of SA 7th edition



NOTES

1. All dimensions and levels are in metres unless otherwise noted
2. This drawing is to read in conjunction with the relevant Architect/Engineer's drawings, specifications and CDM documentation
3. This drawing has been produced electronically and may have been photo reduced or enlarged when copied. Work to figured dimensions only (DO NOT SCALE - EXCEPT FOR PLANNING PURPOSES). All dimensions to be checked on site. Any errors or omissions to be reported to the engineer immediately.
4. This drawing contains coloured lines / information that may not be clear if reproduced in black and white.
5. Digital copies of this plan can only be considered accurate if supplied directly by Infrastructure CS Ltd.

P02	APL	MBD	Notes amended	27/02/21
P01	SNN	APL	Initial issue	24/02/21
REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
DRAWING TITLE				SHEET NO.
Typical Details				1

PROJECT
Waters Edge,
Howle Hill,
Ross On Wye

CLIENT

JCPC Ltd



Infrastruct CS Ltd

SCALE @ A

Not To Scale

PROJECT NUMBER	STATUS	ISSUE PURPOSE
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PROJECT NUMBER	STATUS	ISSUE PURPOSE
5003	54	TECHNICAL APPROVAL

5093	S4	TECHNICAL APPROVAL	APPROV AIG
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PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	NO.	REVISION
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 S Ltd	SHEET NO.	1
	ENGINEER APL	
	DRAFT SNN	
	APPROVED AIG	
	SNN	



-
- 150mm min topsoil or as indicated on surface finishes drawing.
- Suitable backfill (as dug) or hard-surfacing make up as required.
- Infiltration geotextile wrap around 'crate' system e.g. Polypipe Permfiltex PV23002 or similar
- NOTE - THE DETAIL SHOWN ABOVE IS A TYPICAL. NOT THE ACTUAL ARRANGEMENT. REFERENCE MUST BE MADE TO THE DRAINAGE LAYOUT DRAWING**
- Inlet pipe from upstream silt trap/catchpit
- Cellular storage system e.g. Polypipe Polystorm PSM1 or similar unit
Size 1000mm L x 500mm W x 400mm D (refer to drainage layout drawing for overall dimensions)
Alternatively Polypipe Polystorm Lite PSM2 for use in landscaped and other traffic free areas
- TYPICAL CELLULAR SOAKAWAY DETAIL**
(refer to drainage layout drawing for actual arrangement)
- Coarse sand or non-angular granular material bed and surround
- Infiltration geotextile wrap around 'crate' system e.g. Polypipe Permfiltex PV23002 or similar
- For maximum depth consult engineer

Rock outcrop

5093-HOWLE-ICS-01-XX-M2-C-0200_Drainage Strategy

Appendix B - MicroDrainage Calculations

Infrastruct CS Ltd				Page 1																																																																																																																																																																																																																			
The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 8 Cellular soakaway																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 29 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.182</td><td>0.282</td><td>1.2</td><td>3.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.194</td><td>0.294</td><td>1.2</td><td>3.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.188</td><td>0.288</td><td>1.2</td><td>3.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.157</td><td>0.257</td><td>1.2</td><td>2.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.124</td><td>0.224</td><td>1.2</td><td>2.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.094</td><td>0.194</td><td>1.1</td><td>2.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.042</td><td>0.142</td><td>1.1</td><td>1.6</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.002</td><td>0.102</td><td>1.0</td><td>1.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.975</td><td>0.075</td><td>1.0</td><td>0.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.956</td><td>0.056</td><td>1.0</td><td>0.6</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.944</td><td>0.044</td><td>0.8</td><td>0.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.933</td><td>0.033</td><td>0.6</td><td>0.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.925</td><td>0.025</td><td>0.5</td><td>0.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.920</td><td>0.020</td><td>0.4</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.914</td><td>0.014</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.911</td><td>0.011</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.909</td><td>0.009</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>11.625</td><td>0.0</td><td>320</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>374</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2888</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3640</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4312</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5136</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.182	0.282	1.2	3.2	O K	30 min Summer	167.194	0.294	1.2	3.4	O K	60 min Summer	167.188	0.288	1.2	3.3	O K	120 min Summer	167.157	0.257	1.2	2.9	O K	180 min Summer	167.124	0.224	1.2	2.6	O K	240 min Summer	167.094	0.194	1.1	2.2	O K	360 min Summer	167.042	0.142	1.1	1.6	O K	480 min Summer	167.002	0.102	1.0	1.2	O K	600 min Summer	166.975	0.075	1.0	0.8	O K	720 min Summer	166.956	0.056	1.0	0.6	O K	960 min Summer	166.944	0.044	0.8	0.5	O K	1440 min Summer	166.933	0.033	0.6	0.4	O K	2160 min Summer	166.925	0.025	0.5	0.3	O K	2880 min Summer	166.920	0.020	0.4	0.2	O K	4320 min Summer	166.914	0.014	0.3	0.2	O K	5760 min Summer	166.911	0.011	0.2	0.1	O K	7200 min Summer	166.909	0.009	0.2	0.1	O K	8640 min Summer	166.908	0.008	0.2	0.1	O K	10080 min Summer	166.907	0.007	0.1	0.1	O K	15 min Winter	167.222	0.322	1.3	3.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	16	30 min Summer	101.161	0.0	26	60 min Summer	61.321	0.0	44	120 min Summer	37.171	0.0	78	180 min Summer	27.735	0.0	110	240 min Summer	22.532	0.0	144	360 min Summer	16.812	0.0	204	480 min Summer	13.658	0.0	264	600 min Summer	11.625	0.0	320	720 min Summer	10.191	0.0	374	960 min Summer	8.220	0.0	490	1440 min Summer	6.071	0.0	734	2160 min Summer	4.484	0.0	1100	2880 min Summer	3.617	0.0	1468	4320 min Summer	2.580	0.0	2192	5760 min Summer	2.030	0.0	2888	7200 min Summer	1.686	0.0	3640	8640 min Summer	1.448	0.0	4312	10080 min Summer	1.274	0.0	5136	15 min Winter	166.885	0.0	16
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Infrastruct CS Ltd				Page 2	
The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 8 Cellular soakaway			
Date 10/02/2023 10:35 File PLOT 8 REAR CELLULAR.SRCX		Designed by DJ Checked by			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.239	0.339	1.3	3.9	O K
60 min Winter	167.228	0.328	1.3	3.7	O K
120 min Winter	167.177	0.277	1.2	3.2	O K
180 min Winter	167.125	0.225	1.2	2.6	O K
240 min Winter	167.078	0.178	1.1	2.0	O K
360 min Winter	167.004	0.104	1.0	1.2	O K
480 min Winter	166.958	0.058	1.0	0.7	O K
600 min Winter	166.945	0.045	0.9	0.5	O K
720 min Winter	166.940	0.040	0.8	0.5	O K
960 min Winter	166.932	0.032	0.6	0.4	O K
1440 min Winter	166.924	0.024	0.5	0.3	O K
2160 min Winter	166.918	0.018	0.3	0.2	O K
2880 min Winter	166.914	0.014	0.3	0.2	O K
4320 min Winter	166.910	0.010	0.2	0.1	O K
5760 min Winter	166.908	0.008	0.2	0.1	O K
7200 min Winter	166.907	0.007	0.1	0.1	O K
8640 min Winter	166.906	0.006	0.1	0.1	O K
10080 min Winter	166.905	0.005	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	29		
60 min Winter	61.321	0.0	46		
120 min Winter	37.171	0.0	84		
180 min Winter	27.735	0.0	118		
240 min Winter	22.532	0.0	152		
360 min Winter	16.812	0.0	212		
480 min Winter	13.658	0.0	260		
600 min Winter	11.625	0.0	312		
720 min Winter	10.191	0.0	370		
960 min Winter	8.220	0.0	492		
1440 min Winter	6.071	0.0	728		
2160 min Winter	4.484	0.0	1064		
2880 min Winter	3.617	0.0	1468		
4320 min Winter	2.580	0.0	2140		
5760 min Winter	2.030	0.0	2896		
7200 min Winter	1.686	0.0	3640		
8640 min Winter	1.448	0.0	4344		
10080 min Winter	1.274	0.0	5144		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
Date 10/02/2023 10:35 File PLOT 8 REAR CELLULAR.SRCX	Designed by DJ Checked by	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area
From:	To: (ha)
0	4 0.013

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Model Details

Storage is Online Cover Level (m) 167.900

Cellular Storage Structure

Invert Level (m) 166.900 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.55000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.55000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	17.5
0.400	12.0	17.5			

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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 20 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.090</td><td>0.190</td><td>1.1</td><td>2.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.094</td><td>0.194</td><td>1.1</td><td>2.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.084</td><td>0.184</td><td>1.1</td><td>2.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.053</td><td>0.153</td><td>1.1</td><td>1.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.025</td><td>0.125</td><td>1.0</td><td>1.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.001</td><td>0.101</td><td>1.0</td><td>1.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.966</td><td>0.066</td><td>1.0</td><td>0.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>166.949</td><td>0.049</td><td>1.0</td><td>0.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.943</td><td>0.043</td><td>0.8</td><td>0.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.938</td><td>0.038</td><td>0.7</td><td>0.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.931</td><td>0.031</td><td>0.6</td><td>0.4</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.924</td><td>0.024</td><td>0.5</td><td>0.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.918</td><td>0.018</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.914</td><td>0.014</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.910</td><td>0.010</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.908</td><td>0.008</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.907</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.906</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.905</td><td>0.005</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.117</td><td>0.217</td><td>1.1</td><td>2.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>15</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>24</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>42</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>74</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>106</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>136</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>194</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>248</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>308</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>730</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1460</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2896</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3584</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4288</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.090	0.190	1.1	2.2	O K	30 min Summer	167.094	0.194	1.1	2.2	O K	60 min Summer	167.084	0.184	1.1	2.1	O K	120 min Summer	167.053	0.153	1.1	1.7	O K	180 min Summer	167.025	0.125	1.0	1.4	O K	240 min Summer	167.001	0.101	1.0	1.1	O K	360 min Summer	166.966	0.066	1.0	0.8	O K	480 min Summer	166.949	0.049	1.0	0.6	O K	600 min Summer	166.943	0.043	0.8	0.5	O K	720 min Summer	166.938	0.038	0.7	0.4	O K	960 min Summer	166.931	0.031	0.6	0.4	O K	1440 min Summer	166.924	0.024	0.5	0.3	O K	2160 min Summer	166.918	0.018	0.3	0.2	O K	2880 min Summer	166.914	0.014	0.3	0.2	O K	4320 min Summer	166.910	0.010	0.2	0.1	O K	5760 min Summer	166.908	0.008	0.2	0.1	O K	7200 min Summer	166.907	0.007	0.1	0.1	O K	8640 min Summer	166.906	0.006	0.1	0.1	O K	10080 min Summer	166.905	0.005	0.1	0.1	O K	15 min Winter	167.117	0.217	1.1	2.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	15	30 min Summer	72.258	0.0	24	60 min Summer	43.800	0.0	42	120 min Summer	26.551	0.0	74	180 min Summer	19.811	0.0	106	240 min Summer	16.094	0.0	136	360 min Summer	12.009	0.0	194	480 min Summer	9.756	0.0	248	600 min Summer	8.304	0.0	308	720 min Summer	7.279	0.0	370	960 min Summer	5.871	0.0	490	1440 min Summer	4.337	0.0	730	2160 min Summer	3.203	0.0	1100	2880 min Summer	2.584	0.0	1460	4320 min Summer	1.843	0.0	2192	5760 min Summer	1.450	0.0	2896	7200 min Summer	1.204	0.0	3584	8640 min Summer	1.034	0.0	4288	10080 min Summer	0.910	0.0	5144	15 min Winter	119.204	0.0	16
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<u>Summary of Results for 100 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>167.122</td><td>0.222</td><td>1.2</td><td>2.5</td><td>O K</td></tr><tr><td>60 min Winter</td><td>167.104</td><td>0.204</td><td>1.1</td><td>2.3</td><td>O K</td></tr><tr><td>120 min Winter</td><td>167.055</td><td>0.155</td><td>1.1</td><td>1.8</td><td>O K</td></tr><tr><td>180 min Winter</td><td>167.011</td><td>0.111</td><td>1.0</td><td>1.3</td><td>O K</td></tr><tr><td>240 min Winter</td><td>166.976</td><td>0.076</td><td>1.0</td><td>0.9</td><td>O K</td></tr><tr><td>360 min Winter</td><td>166.946</td><td>0.046</td><td>0.9</td><td>0.5</td><td>O K</td></tr><tr><td>480 min Winter</td><td>166.938</td><td>0.038</td><td>0.7</td><td>0.4</td><td>O K</td></tr><tr><td>600 min Winter</td><td>166.933</td><td>0.033</td><td>0.6</td><td>0.4</td><td>O K</td></tr><tr><td>720 min Winter</td><td>166.929</td><td>0.029</td><td>0.6</td><td>0.3</td><td>O K</td></tr><tr><td>960 min Winter</td><td>166.923</td><td>0.023</td><td>0.5</td><td>0.3</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>166.917</td><td>0.017</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>166.913</td><td>0.013</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>166.910</td><td>0.010</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>166.907</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>166.906</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>166.905</td><td>0.005</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>166.904</td><td>0.004</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>166.904</td><td>0.004</td><td>0.1</td><td>0.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>72.258</td><td>0.0</td><td>26</td></tr><tr><td>60 min Winter</td><td>43.800</td><td>0.0</td><td>44</td></tr><tr><td>120 min Winter</td><td>26.551</td><td>0.0</td><td>80</td></tr><tr><td>180 min Winter</td><td>19.811</td><td>0.0</td><td>112</td></tr><tr><td>240 min Winter</td><td>16.094</td><td>0.0</td><td>140</td></tr><tr><td>360 min Winter</td><td>12.009</td><td>0.0</td><td>190</td></tr><tr><td>480 min Winter</td><td>9.756</td><td>0.0</td><td>252</td></tr><tr><td>600 min Winter</td><td>8.304</td><td>0.0</td><td>310</td></tr><tr><td>720 min Winter</td><td>7.279</td><td>0.0</td><td>368</td></tr><tr><td>960 min Winter</td><td>5.871</td><td>0.0</td><td>498</td></tr><tr><td>1440 min Winter</td><td>4.337</td><td>0.0</td><td>716</td></tr><tr><td>2160 min Winter</td><td>3.203</td><td>0.0</td><td>1076</td></tr><tr><td>2880 min Winter</td><td>2.584</td><td>0.0</td><td>1428</td></tr><tr><td>4320 min Winter</td><td>1.843</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Winter</td><td>1.450</td><td>0.0</td><td>2824</td></tr><tr><td>7200 min Winter</td><td>1.204</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Winter</td><td>1.034</td><td>0.0</td><td>4360</td></tr><tr><td>10080 min Winter</td><td>0.910</td><td>0.0</td><td>5144</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	167.122	0.222	1.2	2.5	O K	60 min Winter	167.104	0.204	1.1	2.3	O K	120 min Winter	167.055	0.155	1.1	1.8	O K	180 min Winter	167.011	0.111	1.0	1.3	O K	240 min Winter	166.976	0.076	1.0	0.9	O K	360 min Winter	166.946	0.046	0.9	0.5	O K	480 min Winter	166.938	0.038	0.7	0.4	O K	600 min Winter	166.933	0.033	0.6	0.4	O K	720 min Winter	166.929	0.029	0.6	0.3	O K	960 min Winter	166.923	0.023	0.5	0.3	O K	1440 min Winter	166.917	0.017	0.3	0.2	O K	2160 min Winter	166.913	0.013	0.2	0.1	O K	2880 min Winter	166.910	0.010	0.2	0.1	O K	4320 min Winter	166.907	0.007	0.1	0.1	O K	5760 min Winter	166.906	0.006	0.1	0.1	O K	7200 min Winter	166.905	0.005	0.1	0.1	O K	8640 min Winter	166.904	0.004	0.1	0.0	O K	10080 min Winter	166.904	0.004	0.1	0.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	72.258	0.0	26	60 min Winter	43.800	0.0	44	120 min Winter	26.551	0.0	80	180 min Winter	19.811	0.0	112	240 min Winter	16.094	0.0	140	360 min Winter	12.009	0.0	190	480 min Winter	9.756	0.0	252	600 min Winter	8.304	0.0	310	720 min Winter	7.279	0.0	368	960 min Winter	5.871	0.0	498	1440 min Winter	4.337	0.0	716	2160 min Winter	3.203	0.0	1076	2880 min Winter	2.584	0.0	1428	4320 min Winter	1.843	0.0	2204	5760 min Winter	1.450	0.0	2824	7200 min Winter	1.204	0.0	3672	8640 min Winter	1.034	0.0	4360	10080 min Winter	0.910	0.0	5144
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Infrastruct CS Ltd		Page 3
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
Date 23/02/2023 11:59 File PLOT 8 REAR CELLULAR.SRCX	Designed by DJ Checked by	
Innovyze Source Control 2020.1.3		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area
From:	To: (ha)
0	4 0.013

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
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Model Details

Storage is Online Cover Level (m) 167.900

Cellular Storage Structure

Invert Level (m) 166.900 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.55000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.55000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	17.5
0.400	12.0	17.5			

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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 14 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.015</td><td>0.115</td><td>1.0</td><td>1.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.019</td><td>0.119</td><td>1.0</td><td>1.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.010</td><td>0.110</td><td>1.0</td><td>1.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>166.987</td><td>0.087</td><td>1.0</td><td>1.0</td><td>O K</td></tr><tr><td>180 min Summer</td><td>166.968</td><td>0.068</td><td>1.0</td><td>0.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>166.955</td><td>0.055</td><td>1.0</td><td>0.6</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.943</td><td>0.043</td><td>0.8</td><td>0.5</td><td>O K</td></tr><tr><td>480 min 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Summer	167.019	0.119	1.0	1.4	O K	60 min Summer	167.010	0.110	1.0	1.3	O K	120 min Summer	166.987	0.087	1.0	1.0	O K	180 min Summer	166.968	0.068	1.0	0.8	O K	240 min Summer	166.955	0.055	1.0	0.6	O K	360 min Summer	166.943	0.043	0.8	0.5	O K	480 min Summer	166.937	0.037	0.7	0.4	O K	600 min Summer	166.932	0.032	0.6	0.4	O K	720 min Summer	166.929	0.029	0.6	0.3	O K	960 min Summer	166.924	0.024	0.5	0.3	O K	1440 min Summer	166.918	0.018	0.4	0.2	O K	2160 min Summer	166.914	0.014	0.3	0.2	O K	2880 min Summer	166.911	0.011	0.2	0.1	O K	4320 min Summer	166.908	0.008	0.2	0.1	O K	5760 min Summer	166.907	0.007	0.1	0.1	O K	7200 min Summer	166.906	0.006	0.1	0.1	O K	8640 min Summer	166.905	0.005	0.1	0.1	O K	10080 min Summer	166.904	0.004	0.1	0.0	O K	15 min Winter	167.032	0.132	1.1	1.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	14	30 min Summer	48.985	0.0	23	60 min Summer	30.377	0.0	40	120 min Summer	18.837	0.0	72	180 min Summer	14.244	0.0	102	240 min Summer	11.681	0.0	130	360 min Summer	8.833	0.0	188	480 min Summer	7.244	0.0	248	600 min Summer	6.211	0.0	308	720 min Summer	5.477	0.0	370	960 min Summer	4.460	0.0	490	1440 min Summer	3.338	0.0	734	2160 min Summer	2.499	0.0	1084	2880 min Summer	2.035	0.0	1452	4320 min Summer	1.471	0.0	2192	5760 min Summer	1.168	0.0	2920	7200 min Summer	0.977	0.0	3576	8640 min Summer	0.845	0.0	4272	10080 min Summer	0.746	0.0	5128	15 min Winter	78.992	0.0	15
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120 min Summer	166.987	0.087	1.0	1.0	O K																																																																																																																																																																																																																		
180 min Summer	166.968	0.068	1.0	0.8	O K																																																																																																																																																																																																																		
240 min Summer	166.955	0.055	1.0	0.6	O K																																																																																																																																																																																																																		
360 min Summer	166.943	0.043	0.8	0.5	O K																																																																																																																																																																																																																		
480 min Summer	166.937	0.037	0.7	0.4	O K																																																																																																																																																																																																																		
600 min Summer	166.932	0.032	0.6	0.4	O K																																																																																																																																																																																																																		
720 min Summer	166.929	0.029	0.6	0.3	O K																																																																																																																																																																																																																		
960 min Summer	166.924	0.024	0.5	0.3	O K																																																																																																																																																																																																																		
1440 min Summer	166.918	0.018	0.4	0.2	O K																																																																																																																																																																																																																		
2160 min Summer	166.914	0.014	0.3	0.2	O K																																																																																																																																																																																																																		
2880 min Summer	166.911	0.011	0.2	0.1	O K																																																																																																																																																																																																																		
4320 min Summer	166.908	0.008	0.2	0.1	O K																																																																																																																																																																																																																		
5760 min Summer	166.907	0.007	0.1	0.1	O K																																																																																																																																																																																																																		
7200 min Summer	166.906	0.006	0.1	0.1	O K																																																																																																																																																																																																																		
8640 min Summer	166.905	0.005	0.1	0.1	O K																																																																																																																																																																																																																		
10080 min Summer	166.904	0.004	0.1	0.0	O K																																																																																																																																																																																																																		
15 min Winter	167.032	0.132	1.1	1.5	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	78.992	0.0	14																																																																																																																																																																																																																				
30 min Summer	48.985	0.0	23																																																																																																																																																																																																																				
60 min Summer	30.377	0.0	40																																																																																																																																																																																																																				
120 min Summer	18.837	0.0	72																																																																																																																																																																																																																				
180 min Summer	14.244	0.0	102																																																																																																																																																																																																																				
240 min Summer	11.681	0.0	130																																																																																																																																																																																																																				
360 min Summer	8.833	0.0	188																																																																																																																																																																																																																				
480 min Summer	7.244	0.0	248																																																																																																																																																																																																																				
600 min Summer	6.211	0.0	308																																																																																																																																																																																																																				
720 min Summer	5.477	0.0	370																																																																																																																																																																																																																				
960 min Summer	4.460	0.0	490																																																																																																																																																																																																																				
1440 min Summer	3.338	0.0	734																																																																																																																																																																																																																				
2160 min Summer	2.499	0.0	1084																																																																																																																																																																																																																				
2880 min Summer	2.035	0.0	1452																																																																																																																																																																																																																				
4320 min Summer	1.471	0.0	2192																																																																																																																																																																																																																				
5760 min Summer	1.168	0.0	2920																																																																																																																																																																																																																				
7200 min Summer	0.977	0.0	3576																																																																																																																																																																																																																				
8640 min Summer	0.845	0.0	4272																																																																																																																																																																																																																				
10080 min Summer	0.746	0.0	5128																																																																																																																																																																																																																				
15 min Winter	78.992	0.0	15																																																																																																																																																																																																																				
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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																	
<u>Summary of Results for 30 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>167.033</td><td>0.133</td><td></td><td>1.1 1.5</td><td>O K</td></tr><tr><td>60 min Winter</td><td>167.017</td><td>0.117</td><td></td><td>1.0 1.3</td><td>O K</td></tr><tr><td>120 min Winter</td><td>166.979</td><td>0.079</td><td></td><td>1.0 0.9</td><td>O K</td></tr><tr><td>180 min Winter</td><td>166.953</td><td>0.053</td><td></td><td>1.0 0.6</td><td>O K</td></tr><tr><td>240 min Winter</td><td>166.944</td><td>0.044</td><td></td><td>0.8 0.5</td><td>O K</td></tr><tr><td>360 min Winter</td><td>166.934</td><td>0.034</td><td></td><td>0.7 0.4</td><td>O K</td></tr><tr><td>480 min Winter</td><td>166.928</td><td>0.028</td><td></td><td>0.5 0.3</td><td>O K</td></tr><tr><td>600 min Winter</td><td>166.924</td><td>0.024</td><td></td><td>0.5 0.3</td><td>O K</td></tr><tr><td>720 min Winter</td><td>166.922</td><td>0.022</td><td></td><td>0.4 0.2</td><td>O K</td></tr><tr><td>960 min Winter</td><td>166.918</td><td>0.018</td><td></td><td>0.3 0.2</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>166.913</td><td>0.013</td><td></td><td>0.3 0.1</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>166.910</td><td>0.010</td><td></td><td>0.2 0.1</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>166.908</td><td>0.008</td><td></td><td>0.2 0.1</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>166.906</td><td>0.006</td><td></td><td>0.1 0.1</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>166.905</td><td>0.005</td><td></td><td>0.1 0.1</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>166.904</td><td>0.004</td><td></td><td>0.1 0.0</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>166.904</td><td>0.004</td><td></td><td>0.1 0.0</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>166.903</td><td>0.003</td><td></td><td>0.1 0.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>48.985</td><td>0.0</td><td>24</td></tr><tr><td>60 min Winter</td><td>30.377</td><td>0.0</td><td>42</td></tr><tr><td>120 min Winter</td><td>18.837</td><td>0.0</td><td>74</td></tr><tr><td>180 min Winter</td><td>14.244</td><td>0.0</td><td>102</td></tr><tr><td>240 min Winter</td><td>11.681</td><td>0.0</td><td>130</td></tr><tr><td>360 min Winter</td><td>8.833</td><td>0.0</td><td>192</td></tr><tr><td>480 min Winter</td><td>7.244</td><td>0.0</td><td>250</td></tr><tr><td>600 min Winter</td><td>6.211</td><td>0.0</td><td>310</td></tr><tr><td>720 min Winter</td><td>5.477</td><td>0.0</td><td>372</td></tr><tr><td>960 min Winter</td><td>4.460</td><td>0.0</td><td>486</td></tr><tr><td>1440 min Winter</td><td>3.338</td><td>0.0</td><td>718</td></tr><tr><td>2160 min Winter</td><td>2.499</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Winter</td><td>2.035</td><td>0.0</td><td>1432</td></tr><tr><td>4320 min Winter</td><td>1.471</td><td>0.0</td><td>2196</td></tr><tr><td>5760 min Winter</td><td>1.168</td><td>0.0</td><td>2832</td></tr><tr><td>7200 min Winter</td><td>0.977</td><td>0.0</td><td>3720</td></tr><tr><td>8640 min Winter</td><td>0.845</td><td>0.0</td><td>4504</td></tr><tr><td>10080 min Winter</td><td>0.746</td><td>0.0</td><td>4824</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	167.033	0.133		1.1 1.5	O K	60 min Winter	167.017	0.117		1.0 1.3	O K	120 min Winter	166.979	0.079		1.0 0.9	O K	180 min Winter	166.953	0.053		1.0 0.6	O K	240 min Winter	166.944	0.044		0.8 0.5	O K	360 min Winter	166.934	0.034		0.7 0.4	O K	480 min Winter	166.928	0.028		0.5 0.3	O K	600 min Winter	166.924	0.024		0.5 0.3	O K	720 min Winter	166.922	0.022		0.4 0.2	O K	960 min Winter	166.918	0.018		0.3 0.2	O K	1440 min Winter	166.913	0.013		0.3 0.1	O K	2160 min Winter	166.910	0.010		0.2 0.1	O K	2880 min Winter	166.908	0.008		0.2 0.1	O K	4320 min Winter	166.906	0.006		0.1 0.1	O K	5760 min Winter	166.905	0.005		0.1 0.1	O K	7200 min Winter	166.904	0.004		0.1 0.0	O K	8640 min Winter	166.904	0.004		0.1 0.0	O K	10080 min Winter	166.903	0.003		0.1 0.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	48.985	0.0	24	60 min Winter	30.377	0.0	42	120 min Winter	18.837	0.0	74	180 min Winter	14.244	0.0	102	240 min Winter	11.681	0.0	130	360 min Winter	8.833	0.0	192	480 min Winter	7.244	0.0	250	600 min Winter	6.211	0.0	310	720 min Winter	5.477	0.0	372	960 min Winter	4.460	0.0	486	1440 min Winter	3.338	0.0	718	2160 min Winter	2.499	0.0	1100	2880 min Winter	2.035	0.0	1432	4320 min Winter	1.471	0.0	2196	5760 min Winter	1.168	0.0	2832	7200 min Winter	0.977	0.0	3720	8640 min Winter	0.845	0.0	4504	10080 min Winter	0.746	0.0	4824
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																														
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2160 min Winter	166.910	0.010		0.2 0.1	O K																																																																																																																																																																																														
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.013 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.013</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	30	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.013
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Model Details Storage is Online Cover Level (m) 167.900 Cellular Storage Structure Invert Level (m) 166.900 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.55000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.55000 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>12.0</td><td>12.0</td><td>0.401</td><td>0.0</td><td>17.5</td></tr><tr><td>0.400</td><td>12.0</td><td>17.5</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	12.0	12.0	0.401	0.0	17.5	0.400	12.0	17.5			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	12.0	12.0	0.401	0.0	17.5															
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Summer</td><td>2.919</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1448</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2164</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2864</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3640</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4368</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>4968</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>13</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.940	0.040	0.8	0.5	O K	30 min Summer	166.942	0.042	0.8	0.5	O K	60 min Summer	166.939	0.039	0.8	0.4	O K	120 min 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Summer	3.266	0.0	308	720 min Summer	2.919	0.0	370	960 min Summer	2.427	0.0	490	1440 min Summer	1.871	0.0	736	2160 min Summer	1.442	0.0	1100	2880 min Summer	1.199	0.0	1448	4320 min Summer	0.893	0.0	2164	5760 min Summer	0.724	0.0	2864	7200 min Summer	0.616	0.0	3640	8640 min Summer	0.539	0.0	4368	10080 min Summer	0.482	0.0	4968	15 min Winter	31.772	0.0	13
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 8 Cellular soakaway			
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Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.944	0.044	0.8	0.5	O K
60 min Winter	166.939	0.039	0.8	0.4	O K
120 min Winter	166.930	0.030	0.6	0.3	O K
180 min Winter	166.925	0.025	0.5	0.3	O K
240 min Winter	166.922	0.022	0.4	0.2	O K
360 min Winter	166.917	0.017	0.3	0.2	O K
480 min Winter	166.915	0.015	0.3	0.2	O K
600 min Winter	166.913	0.013	0.2	0.1	O K
720 min Winter	166.912	0.012	0.2	0.1	O K
960 min Winter	166.910	0.010	0.2	0.1	O K
1440 min Winter	166.908	0.008	0.2	0.1	O K
2160 min Winter	166.906	0.006	0.1	0.1	O K
2880 min Winter	166.905	0.005	0.1	0.1	O K
4320 min Winter	166.904	0.004	0.1	0.0	O K
5760 min Winter	166.903	0.003	0.1	0.0	O K
7200 min Winter	166.903	0.003	0.1	0.0	O K
8640 min Winter	166.902	0.002	0.0	0.0	O K
10080 min Winter	166.902	0.002	0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	22		
60 min Winter	13.513	0.0	38		
120 min Winter	8.812	0.0	70		
180 min Winter	6.863	0.0	100		
240 min Winter	5.747	0.0	130		
360 min Winter	4.476	0.0	190		
480 min Winter	3.748	0.0	252		
600 min Winter	3.266	0.0	310		
720 min Winter	2.919	0.0	368		
960 min Winter	2.427	0.0	490		
1440 min Winter	1.871	0.0	746		
2160 min Winter	1.442	0.0	1104		
2880 min Winter	1.199	0.0	1488		
4320 min Winter	0.893	0.0	2204		
5760 min Winter	0.724	0.0	2824		
7200 min Winter	0.616	0.0	3640		
8640 min Winter	0.539	0.0	4400		
10080 min Winter	0.482	0.0	4856		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
Date 23/02/2023 12:01 File PLOT 8 REAR CELLULAR.SRCX	Designed by DJ Checked by	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FEH
Return Period (years)	2
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area
From:	To: (ha)
0	4 0.013

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
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Model Details

Storage is Online Cover Level (m) 167.900

Cellular Storage Structure

Invert Level (m) 166.900 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.55000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.55000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	17.5
0.400	12.0	17.5			

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K</td></tr><tr><td>600 min Summer</td><td>166.914</td><td>0.014</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.913</td><td>0.013</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.911</td><td>0.011</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.909</td><td>0.009</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.907</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.906</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.904</td><td>0.004</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.904</td><td>0.004</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.903</td><td>0.003</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.903</td><td>0.003</td><td>0.1</td><td>0.0</td><td>O 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Summer</td><td>2.482</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1428</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3544</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4384</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>13</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.932	0.032	0.6	0.4	O K	30 min Summer	166.934	0.034	0.7	0.4	O K	60 min Summer	166.932	0.032	0.6	0.4	O K	120 min Summer	166.928	0.028	0.5	0.3	O K	180 min Summer	166.924	0.024	0.5	0.3	O K	240 min Summer	166.922	0.022	0.4	0.2	O K	360 min Summer	166.918	0.018	0.4	0.2	O K	480 min Summer	166.916	0.016	0.3	0.2	O K	600 min Summer	166.914	0.014	0.3	0.2	O K	720 min Summer	166.913	0.013	0.3	0.1	O K	960 min Summer	166.911	0.011	0.2	0.1	O K	1440 min Summer	166.909	0.009	0.2	0.1	O K	2160 min Summer	166.907	0.007	0.1	0.1	O K	2880 min Summer	166.906	0.006	0.1	0.1	O K	4320 min Summer	166.904	0.004	0.1	0.1	O K	5760 min Summer	166.904	0.004	0.1	0.0	O K	7200 min Summer	166.903	0.003	0.1	0.0	O K	8640 min Summer	166.903	0.003	0.1	0.0	O K	10080 min Summer	166.903	0.003	0.1	0.0	O K	15 min Winter	166.935	0.035	0.7	0.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	13	30 min Summer	16.602	0.0	21	60 min Summer	10.968	0.0	36	120 min Summer	7.246	0.0	68	180 min Summer	5.686	0.0	98	240 min Summer	4.787	0.0	128	360 min Summer	3.757	0.0	188	480 min Summer	3.163	0.0	248	600 min Summer	2.768	0.0	308	720 min Summer	2.482	0.0	370	960 min Summer	2.075	0.0	490	1440 min Summer	1.612	0.0	734	2160 min Summer	1.252	0.0	1100	2880 min Summer	1.046	0.0	1428	4320 min Summer	0.785	0.0	2204	5760 min Summer	0.640	0.0	2936	7200 min Summer	0.546	0.0	3544	8640 min Summer	0.480	0.0	4384	10080 min Summer	0.430	0.0	5144	15 min Winter	25.129	0.0	13
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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240 min Summer	166.922	0.022	0.4	0.2	O K																																																																																																																																																																																																																		
360 min Summer	166.918	0.018	0.4	0.2	O K																																																																																																																																																																																																																		
480 min Summer	166.916	0.016	0.3	0.2	O K																																																																																																																																																																																																																		
600 min Summer	166.914	0.014	0.3	0.2	O K																																																																																																																																																																																																																		
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60 min Summer	10.968	0.0	36																																																																																																																																																																																																																				
120 min Summer	7.246	0.0	68																																																																																																																																																																																																																				
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Infrastruct CS Ltd				Page 2	
The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 8 Cellular soakaway			
Date 23/02/2023 12:01 File PLOT 8 REAR CELLULAR.SRCX		Designed by DJ Checked by			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.935	0.035		0.7 0.4	O K
60 min Winter	166.931	0.031		0.6 0.4	O K
120 min Winter	166.925	0.025		0.5 0.3	O K
180 min Winter	166.921	0.021		0.4 0.2	O K
240 min Winter	166.918	0.018		0.3 0.2	O K
360 min Winter	166.914	0.014		0.3 0.2	O K
480 min Winter	166.912	0.012		0.2 0.1	O K
600 min Winter	166.911	0.011		0.2 0.1	O K
720 min Winter	166.910	0.010		0.2 0.1	O K
960 min Winter	166.908	0.008		0.2 0.1	O K
1440 min Winter	166.906	0.006		0.1 0.1	O K
2160 min Winter	166.905	0.005		0.1 0.1	O K
2880 min Winter	166.904	0.004		0.1 0.0	O K
4320 min Winter	166.903	0.003		0.1 0.0	O K
5760 min Winter	166.903	0.003		0.1 0.0	O K
7200 min Winter	166.902	0.002		0.0 0.0	O K
8640 min Winter	166.902	0.002		0.0 0.0	O K
10080 min Winter	166.902	0.002		0.0 0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	22		
60 min Winter	10.968	0.0	38		
120 min Winter	7.246	0.0	70		
180 min Winter	5.686	0.0	100		
240 min Winter	4.787	0.0	132		
360 min Winter	3.757	0.0	192		
480 min Winter	3.163	0.0	252		
600 min Winter	2.768	0.0	312		
720 min Winter	2.482	0.0	370		
960 min Winter	2.075	0.0	480		
1440 min Winter	1.612	0.0	750		
2160 min Winter	1.252	0.0	1120		
2880 min Winter	1.046	0.0	1456		
4320 min Winter	0.785	0.0	2128		
5760 min Winter	0.640	0.0	2848		
7200 min Winter	0.546	0.0	3560		
8640 min Winter	0.480	0.0	4080		
10080 min Winter	0.430	0.0	5000		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
Date 23/02/2023 12:01 File PLOT 8 REAR CELLULAR.SRCX	Designed by DJ Checked by	
Innovyze Source Control 2020.1.3		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	1
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area (ha)
From: 0	To: 4 0.013

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Cellular soakaway	
Date 23/02/2023 12:01 File PLOT 8 REAR CELLULAR.SRCX	Designed by DJ Checked by	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 167.900

Cellular Storage Structure

Invert Level (m) 166.900 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.55000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.55000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	17.5
0.400	12.0	17.5			

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN			Howle Hill Plot 8 Front Permeable paving																																																																																																																																																																																																																					
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Innovyze			Source Control 2019.1																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 99 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>168.433</td><td>0.233</td><td>0.4</td><td>3.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.471</td><td>0.271</td><td>0.4</td><td>3.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.500</td><td>0.300</td><td>0.4</td><td>4.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.508</td><td>0.308</td><td>0.4</td><td>4.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.505</td><td>0.305</td><td>0.4</td><td>4.2</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.496</td><td>0.296</td><td>0.4</td><td>4.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.474</td><td>0.274</td><td>0.4</td><td>3.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.450</td><td>0.250</td><td>0.4</td><td>3.5</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.426</td><td>0.226</td><td>0.4</td><td>3.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.403</td><td>0.203</td><td>0.4</td><td>2.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.358</td><td>0.158</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.293</td><td>0.093</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.250</td><td>0.050</td><td>0.4</td><td>0.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.241</td><td>0.041</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.229</td><td>0.029</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.223</td><td>0.023</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.219</td><td>0.019</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.217</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>168.215</td><td>0.015</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.465</td><td>0.265</td><td>0.4</td><td>3.7</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>60</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>98</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>130</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>164</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>234</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>300</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>368</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>432</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>552</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>780</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2912</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3600</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4376</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5088</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>18</td></tr></tbody></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.433	0.233	0.4	3.2	O K	30 min Summer	168.471	0.271	0.4	3.7	O K	60 min Summer	168.500	0.300	0.4	4.1	O K	120 min Summer	168.508	0.308	0.4	4.3	O K	180 min Summer	168.505	0.305	0.4	4.2	O K	240 min Summer	168.496	0.296	0.4	4.1	O K	360 min Summer	168.474	0.274	0.4	3.8	O K	480 min Summer	168.450	0.250	0.4	3.5	O K	600 min Summer	168.426	0.226	0.4	3.1	O K	720 min Summer	168.403	0.203	0.4	2.8	O K	960 min Summer	168.358	0.158	0.4	2.2	O K	1440 min Summer	168.293	0.093	0.4	1.3	O K	2160 min Summer	168.250	0.050	0.4	0.7	O K	2880 min Summer	168.241	0.041	0.3	0.6	O K	4320 min Summer	168.229	0.029	0.3	0.4	O K	5760 min Summer	168.223	0.023	0.2	0.3	O K	7200 min Summer	168.219	0.019	0.2	0.3	O K	8640 min Summer	168.217	0.017	0.1	0.2	O K	10080 min Summer	168.215	0.015	0.1	0.2	O K	15 min Winter	168.465	0.265	0.4	3.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	18	30 min Summer	101.161	0.0	32	60 min Summer	61.321	0.0	60	120 min Summer	37.171	0.0	98	180 min Summer	27.735	0.0	130	240 min Summer	22.532	0.0	164	360 min Summer	16.812	0.0	234	480 min Summer	13.658	0.0	300	600 min Summer	11.625	0.0	368	720 min Summer	10.191	0.0	432	960 min Summer	8.220	0.0	552	1440 min Summer	6.071	0.0	780	2160 min Summer	4.484	0.0	1104	2880 min Summer	3.617	0.0	1468	4320 min Summer	2.580	0.0	2200	5760 min Summer	2.030	0.0	2912	7200 min Summer	1.686	0.0	3600	8640 min Summer	1.448	0.0	4376	10080 min Summer	1.274	0.0	5088	15 min Winter	166.885	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 8 Front Permeable paving			
Date 10/02/2023 10:56 File PLOT 8 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.510	0.310	0.4	4.3	O K
60 min Winter	168.547	0.347	0.4	4.8	O K
120 min Winter	168.558	0.358	0.4	4.9	O K
180 min Winter	168.551	0.351	0.4	4.8	O K
240 min Winter	168.538	0.338	0.4	4.7	O K
360 min Winter	168.502	0.302	0.4	4.2	O K
480 min Winter	168.462	0.262	0.4	3.6	O K
600 min Winter	168.423	0.223	0.4	3.1	O K
720 min Winter	168.387	0.187	0.4	2.6	O K
960 min Winter	168.320	0.120	0.4	1.7	O K
1440 min Winter	168.249	0.049	0.4	0.7	O K
2160 min Winter	168.237	0.037	0.3	0.5	O K
2880 min Winter	168.230	0.030	0.3	0.4	O K
4320 min Winter	168.221	0.021	0.2	0.3	O K
5760 min Winter	168.217	0.017	0.1	0.2	O K
7200 min Winter	168.214	0.014	0.1	0.2	O K
8640 min Winter	168.212	0.012	0.1	0.2	O K
10080 min Winter	168.211	0.011	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	32		
60 min Winter	61.321	0.0	60		
120 min Winter	37.171	0.0	112		
180 min Winter	27.735	0.0	140		
240 min Winter	22.532	0.0	180		
360 min Winter	16.812	0.0	254		
480 min Winter	13.658	0.0	326		
600 min Winter	11.625	0.0	392		
720 min Winter	10.191	0.0	456		
960 min Winter	8.220	0.0	576		
1440 min Winter	6.071	0.0	748		
2160 min Winter	4.484	0.0	1104		
2880 min Winter	3.617	0.0	1444		
4320 min Winter	2.580	0.0	2192		
5760 min Winter	2.030	0.0	2888		
7200 min Winter	1.686	0.0	3696		
8640 min Winter	1.448	0.0	4408		
10080 min Winter	1.274	0.0	5088		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Front Permeable paving	
Date 10/02/2023 10:56 File PLOT 8 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Front Permeable paving																									
Date 10/02/2023 10:56 File PLOT 8 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
Innovyze	Source Control 2019.1																									
Model Details Storage is Online Cover Level (m) 168.700 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.6</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.8</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.200</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.6	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.8	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.200	Membrane Depth (m)	0
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 69 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.357</td><td>0.157</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.381</td><td>0.181</td><td>0.4</td><td>2.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.394</td><td>0.194</td><td>0.4</td><td>2.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.397</td><td>0.197</td><td>0.4</td><td>2.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.390</td><td>0.190</td><td>0.4</td><td>2.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.380</td><td>0.180</td><td>0.4</td><td>2.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.357</td><td>0.157</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.335</td><td>0.135</td><td>0.4</td><td>1.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.315</td><td>0.115</td><td>0.4</td><td>1.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.298</td><td>0.098</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.270</td><td>0.070</td><td>0.4</td><td>1.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.246</td><td>0.046</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.235</td><td>0.035</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.229</td><td>0.029</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.221</td><td>0.021</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.216</td><td>0.016</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.214</td><td>0.014</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.212</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>168.210</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.380</td><td>0.180</td><td>0.4</td><td>2.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>31</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>54</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>86</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>122</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>156</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>222</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>286</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>348</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>406</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>520</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3656</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4368</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5088</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>17</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.357	0.157	0.4	2.2	O K	30 min Summer	168.381	0.181	0.4	2.5	O K	60 min Summer	168.394	0.194	0.4	2.7	O K	120 min Summer	168.397	0.197	0.4	2.7	O K	180 min Summer	168.390	0.190	0.4	2.6	O K	240 min Summer	168.380	0.180	0.4	2.5	O K	360 min Summer	168.357	0.157	0.4	2.2	O K	480 min Summer	168.335	0.135	0.4	1.9	O K	600 min Summer	168.315	0.115	0.4	1.6	O K	720 min Summer	168.298	0.098	0.4	1.3	O K	960 min Summer	168.270	0.070	0.4	1.0	O K	1440 min Summer	168.246	0.046	0.4	0.6	O K	2160 min Summer	168.235	0.035	0.3	0.5	O K	2880 min Summer	168.229	0.029	0.2	0.4	O K	4320 min Summer	168.221	0.021	0.2	0.3	O K	5760 min Summer	168.216	0.016	0.1	0.2	O K	7200 min Summer	168.214	0.014	0.1	0.2	O K	8640 min Summer	168.212	0.012	0.1	0.2	O K	10080 min Summer	168.210	0.010	0.1	0.1	O K	15 min Winter	168.380	0.180	0.4	2.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	17	30 min Summer	72.258	0.0	31	60 min Summer	43.800	0.0	54	120 min Summer	26.551	0.0	86	180 min Summer	19.811	0.0	122	240 min Summer	16.094	0.0	156	360 min Summer	12.009	0.0	222	480 min Summer	9.756	0.0	286	600 min Summer	8.304	0.0	348	720 min Summer	7.279	0.0	406	960 min Summer	5.871	0.0	520	1440 min Summer	4.337	0.0	738	2160 min Summer	3.203	0.0	1104	2880 min Summer	2.584	0.0	1468	4320 min Summer	1.843	0.0	2200	5760 min Summer	1.450	0.0	2936	7200 min Summer	1.204	0.0	3656	8640 min Summer	1.034	0.0	4368	10080 min Summer	0.910	0.0	5088	15 min Winter	119.204	0.0	17
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<u>Summary of Results for 100 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>168.408</td><td>0.208</td><td></td><td>2.9</td><td>O K</td></tr><tr><td>60 min Winter</td><td>168.426</td><td>0.226</td><td>0.4</td><td>3.1</td><td>O K</td></tr><tr><td>120 min Winter</td><td>168.425</td><td>0.225</td><td>0.4</td><td>3.1</td><td>O K</td></tr><tr><td>180 min Winter</td><td>168.412</td><td>0.212</td><td>0.4</td><td>2.9</td><td>O K</td></tr><tr><td>240 min Winter</td><td>168.396</td><td>0.196</td><td>0.4</td><td>2.7</td><td>O K</td></tr><tr><td>360 min Winter</td><td>168.358</td><td>0.158</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>480 min Winter</td><td>168.323</td><td>0.123</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>600 min Winter</td><td>168.293</td><td>0.093</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>720 min Winter</td><td>168.269</td><td>0.069</td><td>0.4</td><td>1.0</td><td>O K</td></tr><tr><td>960 min Winter</td><td>168.247</td><td>0.047</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>168.235</td><td>0.035</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>168.226</td><td>0.026</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>168.221</td><td>0.021</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>168.215</td><td>0.015</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>168.212</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>168.210</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>168.209</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>168.208</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>72.258</td><td>0.0</td><td>31</td></tr><tr><td>60 min Winter</td><td>43.800</td><td>0.0</td><td>58</td></tr><tr><td>120 min Winter</td><td>26.551</td><td>0.0</td><td>94</td></tr><tr><td>180 min Winter</td><td>19.811</td><td>0.0</td><td>132</td></tr><tr><td>240 min Winter</td><td>16.094</td><td>0.0</td><td>168</td></tr><tr><td>360 min Winter</td><td>12.009</td><td>0.0</td><td>238</td></tr><tr><td>480 min Winter</td><td>9.756</td><td>0.0</td><td>302</td></tr><tr><td>600 min Winter</td><td>8.304</td><td>0.0</td><td>362</td></tr><tr><td>720 min Winter</td><td>7.279</td><td>0.0</td><td>412</td></tr><tr><td>960 min Winter</td><td>5.871</td><td>0.0</td><td>508</td></tr><tr><td>1440 min Winter</td><td>4.337</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Winter</td><td>3.203</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Winter</td><td>2.584</td><td>0.0</td><td>1444</td></tr><tr><td>4320 min Winter</td><td>1.843</td><td>0.0</td><td>2176</td></tr><tr><td>5760 min Winter</td><td>1.450</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Winter</td><td>1.204</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Winter</td><td>1.034</td><td>0.0</td><td>4352</td></tr><tr><td>10080 min Winter</td><td>0.910</td><td>0.0</td><td>5152</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	168.408	0.208		2.9	O K	60 min Winter	168.426	0.226	0.4	3.1	O K	120 min Winter	168.425	0.225	0.4	3.1	O K	180 min Winter	168.412	0.212	0.4	2.9	O K	240 min Winter	168.396	0.196	0.4	2.7	O K	360 min Winter	168.358	0.158	0.4	2.2	O K	480 min Winter	168.323	0.123	0.4	1.7	O K	600 min Winter	168.293	0.093	0.4	1.3	O K	720 min Winter	168.269	0.069	0.4	1.0	O K	960 min Winter	168.247	0.047	0.4	0.6	O K	1440 min Winter	168.235	0.035	0.3	0.5	O K	2160 min Winter	168.226	0.026	0.2	0.4	O K	2880 min Winter	168.221	0.021	0.2	0.3	O K	4320 min Winter	168.215	0.015	0.1	0.2	O K	5760 min Winter	168.212	0.012	0.1	0.2	O K	7200 min Winter	168.210	0.010	0.1	0.1	O K	8640 min Winter	168.209	0.009	0.1	0.1	O K	10080 min Winter	168.208	0.008	0.1	0.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	72.258	0.0	31	60 min Winter	43.800	0.0	58	120 min Winter	26.551	0.0	94	180 min Winter	19.811	0.0	132	240 min Winter	16.094	0.0	168	360 min Winter	12.009	0.0	238	480 min Winter	9.756	0.0	302	600 min Winter	8.304	0.0	362	720 min Winter	7.279	0.0	412	960 min Winter	5.871	0.0	508	1440 min Winter	4.337	0.0	738	2160 min Winter	3.203	0.0	1100	2880 min Winter	2.584	0.0	1444	4320 min Winter	1.843	0.0	2176	5760 min Winter	1.450	0.0	2936	7200 min Winter	1.204	0.0	3672	8640 min Winter	1.034	0.0	4352	10080 min Winter	0.910	0.0	5152
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Front Permeable paving	
Date 23/02/2023 11:56 File PLOT 8 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

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Model Details Storage is Online Cover Level (m) 168.700 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.6</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.8</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.200</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.6	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.8	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.200	Membrane Depth (m)	0
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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 40 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.294</td><td>0.094</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.310</td><td>0.110</td><td>0.4</td><td>1.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.320</td><td>0.120</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.323</td><td>0.123</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.317</td><td>0.117</td><td>0.4</td><td>1.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.309</td><td>0.109</td><td>0.4</td><td>1.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.291</td><td>0.091</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.276</td><td>0.076</td><td>0.4</td><td>1.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.264</td><td>0.064</td><td>0.4</td><td>0.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.255</td><td>0.055</td><td>0.4</td><td>0.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.245</td><td>0.045</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.236</td><td>0.036</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.228</td><td>0.028</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.223</td><td>0.023</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.217</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.213</td><td>0.013</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.211</td><td>0.011</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min 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Summer	168.310	0.110	0.4	1.5	O K	60 min Summer	168.320	0.120	0.4	1.7	O K	120 min Summer	168.323	0.123	0.4	1.7	O K	180 min Summer	168.317	0.117	0.4	1.6	O K	240 min Summer	168.309	0.109	0.4	1.5	O K	360 min Summer	168.291	0.091	0.4	1.3	O K	480 min Summer	168.276	0.076	0.4	1.0	O K	600 min Summer	168.264	0.064	0.4	0.9	O K	720 min Summer	168.255	0.055	0.4	0.8	O K	960 min Summer	168.245	0.045	0.4	0.6	O K	1440 min Summer	168.236	0.036	0.3	0.5	O K	2160 min Summer	168.228	0.028	0.2	0.4	O K	2880 min Summer	168.223	0.023	0.2	0.3	O K	4320 min Summer	168.217	0.017	0.1	0.2	O K	5760 min Summer	168.213	0.013	0.1	0.2	O K	7200 min Summer	168.211	0.011	0.1	0.2	O K	8640 min Summer	168.210	0.010	0.1	0.1	O K	10080 min Summer	168.209	0.009	0.1	0.1	O K	15 min Winter	168.309	0.109	0.4	1.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	17	30 min Summer	48.985	0.0	30	60 min Summer	30.377	0.0	46	120 min Summer	18.837	0.0	80	180 min Summer	14.244	0.0	114	240 min Summer	11.681	0.0	148	360 min Summer	8.833	0.0	212	480 min Summer	7.244	0.0	272	600 min Summer	6.211	0.0	328	720 min Summer	5.477	0.0	384	960 min Summer	4.460	0.0	500	1440 min Summer	3.338	0.0	738	2160 min Summer	2.499	0.0	1104	2880 min Summer	2.035	0.0	1468	4320 min Summer	1.471	0.0	2180	5760 min Summer	1.168	0.0	2888	7200 min Summer	0.977	0.0	3600	8640 min Summer	0.845	0.0	4344	10080 min Summer	0.746	0.0	5128	15 min Winter	78.992	0.0	17
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<u>Summary of Results for 30 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>168.327</td><td>0.127</td><td></td><td>1.8</td><td>O K</td></tr><tr><td>60 min Winter</td><td>168.337</td><td>0.137</td><td>0.4</td><td>1.9</td><td>O K</td></tr><tr><td>120 min Winter</td><td>168.336</td><td>0.136</td><td>0.4</td><td>1.9</td><td>O K</td></tr><tr><td>180 min Winter</td><td>168.324</td><td>0.124</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>240 min Winter</td><td>168.310</td><td>0.110</td><td>0.4</td><td>1.5</td><td>O K</td></tr><tr><td>360 min Winter</td><td>168.281</td><td>0.081</td><td>0.4</td><td>1.1</td><td>O K</td></tr><tr><td>480 min Winter</td><td>168.259</td><td>0.059</td><td>0.4</td><td>0.8</td><td>O K</td></tr><tr><td>600 min Winter</td><td>168.248</td><td>0.048</td><td>0.4</td><td>0.7</td><td>O K</td></tr><tr><td>720 min Winter</td><td>168.243</td><td>0.043</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>960 min Winter</td><td>168.236</td><td>0.036</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>168.227</td><td>0.027</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>168.220</td><td>0.020</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>168.217</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>168.212</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>168.210</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>168.208</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>168.207</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>168.206</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>48.985</td><td>0.0</td><td>30</td></tr><tr><td>60 min Winter</td><td>30.377</td><td>0.0</td><td>50</td></tr><tr><td>120 min Winter</td><td>18.837</td><td>0.0</td><td>88</td></tr><tr><td>180 min Winter</td><td>14.244</td><td>0.0</td><td>124</td></tr><tr><td>240 min Winter</td><td>11.681</td><td>0.0</td><td>158</td></tr><tr><td>360 min Winter</td><td>8.833</td><td>0.0</td><td>222</td></tr><tr><td>480 min Winter</td><td>7.244</td><td>0.0</td><td>276</td></tr><tr><td>600 min Winter</td><td>6.211</td><td>0.0</td><td>324</td></tr><tr><td>720 min Winter</td><td>5.477</td><td>0.0</td><td>384</td></tr><tr><td>960 min Winter</td><td>4.460</td><td>0.0</td><td>502</td></tr><tr><td>1440 min Winter</td><td>3.338</td><td>0.0</td><td>746</td></tr><tr><td>2160 min Winter</td><td>2.499</td><td>0.0</td><td>1108</td></tr><tr><td>2880 min Winter</td><td>2.035</td><td>0.0</td><td>1456</td></tr><tr><td>4320 min Winter</td><td>1.471</td><td>0.0</td><td>2164</td></tr><tr><td>5760 min Winter</td><td>1.168</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Winter</td><td>0.977</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Winter</td><td>0.845</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Winter</td><td>0.746</td><td>0.0</td><td>5024</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	168.327	0.127		1.8	O K	60 min Winter	168.337	0.137	0.4	1.9	O K	120 min Winter	168.336	0.136	0.4	1.9	O K	180 min Winter	168.324	0.124	0.4	1.7	O K	240 min Winter	168.310	0.110	0.4	1.5	O K	360 min Winter	168.281	0.081	0.4	1.1	O K	480 min Winter	168.259	0.059	0.4	0.8	O K	600 min Winter	168.248	0.048	0.4	0.7	O K	720 min Winter	168.243	0.043	0.4	0.6	O K	960 min Winter	168.236	0.036	0.3	0.5	O K	1440 min Winter	168.227	0.027	0.2	0.4	O K	2160 min Winter	168.220	0.020	0.2	0.3	O K	2880 min Winter	168.217	0.017	0.1	0.2	O K	4320 min Winter	168.212	0.012	0.1	0.2	O K	5760 min Winter	168.210	0.010	0.1	0.1	O K	7200 min Winter	168.208	0.008	0.1	0.1	O K	8640 min Winter	168.207	0.007	0.1	0.1	O K	10080 min Winter	168.206	0.006	0.1	0.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	48.985	0.0	30	60 min Winter	30.377	0.0	50	120 min Winter	18.837	0.0	88	180 min Winter	14.244	0.0	124	240 min Winter	11.681	0.0	158	360 min Winter	8.833	0.0	222	480 min Winter	7.244	0.0	276	600 min Winter	6.211	0.0	324	720 min Winter	5.477	0.0	384	960 min Winter	4.460	0.0	502	1440 min Winter	3.338	0.0	746	2160 min Winter	2.499	0.0	1108	2880 min Winter	2.035	0.0	1456	4320 min Winter	1.471	0.0	2164	5760 min Winter	1.168	0.0	2936	7200 min Winter	0.977	0.0	3672	8640 min Winter	0.845	0.0	4408	10080 min Winter	0.746	0.0	5024
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Summer	168.244	0.044	0.4	0.6	O K	180 min Summer	168.243	0.043	0.4	0.6	O K	240 min Summer	168.241	0.041	0.3	0.6	O K	360 min Summer	168.237	0.037	0.3	0.5	O K	480 min Summer	168.233	0.033	0.3	0.5	O K	600 min Summer	168.231	0.031	0.3	0.4	O K	720 min Summer	168.228	0.028	0.2	0.4	O K	960 min Summer	168.225	0.025	0.2	0.3	O K	1440 min Summer	168.220	0.020	0.2	0.3	O K	2160 min Summer	168.216	0.016	0.1	0.2	O K	2880 min Summer	168.213	0.013	0.1	0.2	O K	4320 min Summer	168.210	0.010	0.1	0.1	O K	5760 min Summer	168.208	0.008	0.1	0.1	O K	7200 min Summer	168.207	0.007	0.1	0.1	O K	8640 min Summer	168.206	0.006	0.1	0.1	O K	10080 min Summer	168.205	0.005	0.0	0.1	O K	15 min Winter	168.233	0.033	0.3	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	16	30 min Summer	20.720	0.0	24	60 min Summer	13.513	0.0	40	120 min Summer	8.812	0.0	74	180 min Summer	6.863	0.0	104	240 min Summer	5.747	0.0	136	360 min Summer	4.476	0.0	198	480 min Summer	3.748	0.0	258	600 min Summer	3.266	0.0	318	720 min Summer	2.919	0.0	378	960 min Summer	2.427	0.0	500	1440 min Summer	1.871	0.0	738	2160 min Summer	1.442	0.0	1104	2880 min Summer	1.199	0.0	1468	4320 min Summer	0.893	0.0	2192	5760 min Summer	0.724	0.0	2880	7200 min Summer	0.616	0.0	3672	8640 min Summer	0.539	0.0	4384	10080 min Summer	0.482	0.0	5136	15 min Winter	31.772	0.0	16
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600 min Winter	3.266	0.0	324																																																																																																																																																																																																
720 min Winter	2.919	0.0	384																																																																																																																																																																																																
960 min Winter	2.427	0.0	504																																																																																																																																																																																																
1440 min Winter	1.871	0.0	734																																																																																																																																																																																																
2160 min Winter	1.442	0.0	1112																																																																																																																																																																																																
2880 min Winter	1.199	0.0	1420																																																																																																																																																																																																
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Front Permeable paving																																									
Date 23/02/2023 11:57 File PLOT 8 FRONT PERMEABLE....	Designed by APL Checked by MBD																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.012
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Model Details Storage is Online Cover Level (m) 168.700 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.6</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.8</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.200</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.6	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.8	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.200	Membrane Depth (m)	0
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K</td></tr><tr><td>600 min Summer</td><td>168.226</td><td>0.026</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.224</td><td>0.024</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.221</td><td>0.021</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.217</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.214</td><td>0.014</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.212</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.209</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.207</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.206</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.205</td><td>0.005</td><td>0.0</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>168.205</td><td>0.005</td><td>0.0</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.223</td><td>0.023</td><td>0.2</td><td>0.3</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>16</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>25</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>42</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>74</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>106</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>136</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>198</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>258</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>320</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>378</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>500</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>2904</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>4976</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.219	0.019	0.2	0.3	O K	30 min Summer	168.225	0.025	0.2	0.4	O K	60 min Summer	168.232	0.032	0.3	0.4	O K	120 min Summer	168.235	0.035	0.3	0.5	O K	180 min Summer	168.235	0.035	0.3	0.5	O K	240 min Summer	168.234	0.034	0.3	0.5	O K	360 min Summer	168.231	0.031	0.3	0.4	O K	480 min Summer	168.228	0.028	0.2	0.4	O K	600 min Summer	168.226	0.026	0.2	0.4	O K	720 min Summer	168.224	0.024	0.2	0.3	O K	960 min Summer	168.221	0.021	0.2	0.3	O K	1440 min Summer	168.217	0.017	0.1	0.2	O K	2160 min Summer	168.214	0.014	0.1	0.2	O K	2880 min Summer	168.212	0.012	0.1	0.2	O K	4320 min Summer	168.209	0.009	0.1	0.1	O K	5760 min Summer	168.207	0.007	0.1	0.1	O K	7200 min Summer	168.206	0.006	0.1	0.1	O K	8640 min Summer	168.205	0.005	0.0	0.1	O K	10080 min Summer	168.205	0.005	0.0	0.1	O K	15 min Winter	168.223	0.023	0.2	0.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	16	30 min Summer	16.602	0.0	25	60 min Summer	10.968	0.0	42	120 min Summer	7.246	0.0	74	180 min Summer	5.686	0.0	106	240 min Summer	4.787	0.0	136	360 min Summer	3.757	0.0	198	480 min Summer	3.163	0.0	258	600 min Summer	2.768	0.0	320	720 min Summer	2.482	0.0	378	960 min Summer	2.075	0.0	500	1440 min Summer	1.612	0.0	736	2160 min Summer	1.252	0.0	1104	2880 min Summer	1.046	0.0	1468	4320 min Summer	0.785	0.0	2200	5760 min Summer	0.640	0.0	2904	7200 min Summer	0.546	0.0	3616	8640 min Summer	0.480	0.0	4408	10080 min Summer	0.430	0.0	4976	15 min Winter	25.129	0.0	16
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Date 23/02/2023 11:58 File PLOT 8 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.230	0.030	0.3	0.4	O K
60 min Winter	168.235	0.035	0.3	0.5	O K
120 min Winter	168.236	0.036	0.3	0.5	O K
180 min Winter	168.234	0.034	0.3	0.5	O K
240 min Winter	168.231	0.031	0.3	0.4	O K
360 min Winter	168.227	0.027	0.2	0.4	O K
480 min Winter	168.224	0.024	0.2	0.3	O K
600 min Winter	168.221	0.021	0.2	0.3	O K
720 min Winter	168.219	0.019	0.2	0.3	O K
960 min Winter	168.217	0.017	0.1	0.2	O K
1440 min Winter	168.213	0.013	0.1	0.2	O K
2160 min Winter	168.210	0.010	0.1	0.1	O K
2880 min Winter	168.209	0.009	0.1	0.1	O K
4320 min Winter	168.206	0.006	0.1	0.1	O K
5760 min Winter	168.205	0.005	0.0	0.1	O K
7200 min Winter	168.205	0.005	0.0	0.1	O K
8640 min Winter	168.204	0.004	0.0	0.1	O K
10080 min Winter	168.204	0.004	0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	26		
60 min Winter	10.968	0.0	44		
120 min Winter	7.246	0.0	78		
180 min Winter	5.686	0.0	110		
240 min Winter	4.787	0.0	142		
360 min Winter	3.757	0.0	202		
480 min Winter	3.163	0.0	264		
600 min Winter	2.768	0.0	326		
720 min Winter	2.482	0.0	386		
960 min Winter	2.075	0.0	504		
1440 min Winter	1.612	0.0	744		
2160 min Winter	1.252	0.0	1100		
2880 min Winter	1.046	0.0	1488		
4320 min Winter	0.785	0.0	2208		
5760 min Winter	0.640	0.0	2904		
7200 min Winter	0.546	0.0	3656		
8640 min Winter	0.480	0.0	4416		
10080 min Winter	0.430	0.0	5320		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 8 Front Permeable paving																																									
Date 23/02/2023 11:58 File PLOT 8 FRONT PERMEABLE....	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.012
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Model Details Storage is Online Cover Level (m) 168.700 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.6</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.8</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.200</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.6	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.8	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.200	Membrane Depth (m)	0
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Summer</td><td>167.177</td><td>0.327</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.179</td><td>0.329</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.181</td><td>0.331</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.178</td><td>0.328</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.167</td><td>0.317</td><td>0.1</td><td>4.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.147</td><td>0.297</td><td>0.1</td><td>4.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.126</td><td>0.276</td><td>0.1</td><td>4.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.072</td><td>0.222</td><td>0.1</td><td>3.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.028</td><td>0.178</td><td>0.1</td><td>2.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.992</td><td>0.142</td><td>0.1</td><td>2.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.963</td><td>0.113</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.939</td><td>0.089</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.031</td><td>0.181</td><td>0.1</td><td>2.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>360</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>478</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>526</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>592</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>720</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>984</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1404</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1816</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2596</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>3352</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>4104</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4760</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5448</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.012	0.162	0.1	2.5	O K	30 min Summer	167.044	0.194	0.1	2.9	O K	60 min Summer	167.080	0.230	0.1	3.5	O K	120 min Summer	167.119	0.269	0.1	4.1	O K	180 min Summer	167.141	0.291	0.1	4.4	O K	240 min Summer	167.155	0.305	0.1	4.6	O K	360 min Summer	167.170	0.320	0.1	4.9	O K	480 min Summer	167.177	0.327	0.1	5.0	O K	600 min Summer	167.179	0.329	0.1	5.0	O K	720 min Summer	167.181	0.331	0.1	5.0	O K	960 min Summer	167.178	0.328	0.1	5.0	O K	1440 min Summer	167.167	0.317	0.1	4.8	O K	2160 min Summer	167.147	0.297	0.1	4.5	O K	2880 min Summer	167.126	0.276	0.1	4.2	O K	4320 min Summer	167.072	0.222	0.1	3.4	O K	5760 min Summer	167.028	0.178	0.1	2.7	O K	7200 min Summer	166.992	0.142	0.1	2.2	O K	8640 min Summer	166.963	0.113	0.1	1.7	O K	10080 min Summer	166.939	0.089	0.1	1.4	O K	15 min Winter	167.031	0.181	0.1	2.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	19	30 min Summer	101.161	0.0	34	60 min Summer	61.321	0.0	64	120 min Summer	37.171	0.0	122	180 min Summer	27.735	0.0	182	240 min Summer	22.532	0.0	242	360 min Summer	16.812	0.0	360	480 min Summer	13.658	0.0	478	600 min Summer	11.625	0.0	526	720 min Summer	10.191	0.0	592	960 min Summer	8.220	0.0	720	1440 min Summer	6.071	0.0	984	2160 min Summer	4.484	0.0	1404	2880 min Summer	3.617	0.0	1816	4320 min Summer	2.580	0.0	2596	5760 min Summer	2.030	0.0	3352	7200 min Summer	1.686	0.0	4104	8640 min Summer	1.448	0.0	4760	10080 min Summer	1.274	0.0	5448	15 min Winter	166.885	0.0	19
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Date 10/02/2023 10:32 File PLOT 7 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.067	0.217	0.1	3.3	O K
60 min Winter	167.109	0.259	0.1	3.9	O K
120 min Winter	167.153	0.303	0.1	4.6	O K
180 min Winter	167.179	0.329	0.1	5.0	O K
240 min Winter	167.196	0.346	0.1	5.3	O K
360 min Winter	167.217	0.367	0.1	5.6	O K
480 min Winter	167.227	0.377	0.1	5.7	O K
600 min Winter	167.231	0.381	0.1	5.8	O K
720 min Winter	167.232	0.382	0.1	5.8	O K
960 min Winter	167.227	0.377	0.1	5.7	O K
1440 min Winter	167.211	0.361	0.1	5.5	O K
2160 min Winter	167.180	0.330	0.1	5.0	O K
2880 min Winter	167.147	0.297	0.1	4.5	O K
4320 min Winter	167.070	0.220	0.1	3.3	O K
5760 min Winter	167.007	0.157	0.1	2.4	O K
7200 min Winter	166.958	0.108	0.1	1.6	O K
8640 min Winter	166.922	0.072	0.1	1.1	O K
10080 min Winter	166.901	0.051	0.1	0.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	33		
60 min Winter	61.321	0.0	62		
120 min Winter	37.171	0.0	120		
180 min Winter	27.735	0.0	178		
240 min Winter	22.532	0.0	236		
360 min Winter	16.812	0.0	352		
480 min Winter	13.658	0.0	462		
600 min Winter	11.625	0.0	570		
720 min Winter	10.191	0.0	672		
960 min Winter	8.220	0.0	760		
1440 min Winter	6.071	0.0	1068		
2160 min Winter	4.484	0.0	1516		
2880 min Winter	3.617	0.0	1960		
4320 min Winter	2.580	0.0	2768		
5760 min Winter	2.030	0.0	3520		
7200 min Winter	1.686	0.0	4248		
8640 min Winter	1.448	0.0	4840		
10080 min Winter	1.274	0.0	5248		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+40	Time (mins)	Area	From: To:	(ha)	0	4 0.008
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Date 10/02/2023 10:32 File PLOT 7 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Model Details

Storage is Online Cover Level (m) 167.850

Cellular Storage Structure

Invert Level (m) 166.850 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.02500 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.02500

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	16.0	16.0	0.401	0.0	22.4
0.400	16.0	22.4			

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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 487 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>166.965</td><td>0.115</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>166.987</td><td>0.137</td><td>0.1</td><td>2.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.012</td><td>0.162</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.037</td><td>0.187</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.051</td><td>0.201</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.059</td><td>0.209</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.065</td><td>0.215</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.068</td><td>0.218</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.069</td><td>0.219</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.069</td><td>0.219</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.064</td><td>0.214</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.053</td><td>0.203</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.033</td><td>0.183</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.014</td><td>0.164</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.971</td><td>0.121</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.940</td><td>0.090</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.918</td><td>0.068</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.903</td><td>0.053</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.897</td><td>0.047</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>15 min Winter</td><td>166.979</td><td>0.129</td><td>0.1</td><td>2.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>350</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>404</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>468</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>532</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>666</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>940</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1344</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1756</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2504</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>3176</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3888</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4496</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.965	0.115	0.1	1.7	O K	30 min Summer	166.987	0.137	0.1	2.1	O K	60 min Summer	167.012	0.162	0.1	2.5	O K	120 min Summer	167.037	0.187	0.1	2.8	O K	180 min Summer	167.051	0.201	0.1	3.1	O K	240 min Summer	167.059	0.209	0.1	3.2	O K	360 min Summer	167.065	0.215	0.1	3.3	O K	480 min Summer	167.068	0.218	0.1	3.3	O K	600 min Summer	167.069	0.219	0.1	3.3	O K	720 min Summer	167.069	0.219	0.1	3.3	O K	960 min Summer	167.064	0.214	0.1	3.3	O K	1440 min Summer	167.053	0.203	0.1	3.1	O K	2160 min Summer	167.033	0.183	0.1	2.8	O K	2880 min Summer	167.014	0.164	0.1	2.5	O K	4320 min Summer	166.971	0.121	0.1	1.8	O K	5760 min Summer	166.940	0.090	0.1	1.4	O K	7200 min Summer	166.918	0.068	0.1	1.0	O K	8640 min Summer	166.903	0.053	0.1	0.8	O K	10080 min Summer	166.897	0.047	0.1	0.7	O K	15 min Winter	166.979	0.129	0.1	2.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	19	30 min Summer	72.258	0.0	33	60 min Summer	43.800	0.0	62	120 min Summer	26.551	0.0	122	180 min Summer	19.811	0.0	182	240 min Summer	16.094	0.0	240	360 min Summer	12.009	0.0	350	480 min Summer	9.756	0.0	404	600 min Summer	8.304	0.0	468	720 min Summer	7.279	0.0	532	960 min Summer	5.871	0.0	666	1440 min Summer	4.337	0.0	940	2160 min Summer	3.203	0.0	1344	2880 min Summer	2.584	0.0	1756	4320 min Summer	1.843	0.0	2504	5760 min Summer	1.450	0.0	3176	7200 min Summer	1.204	0.0	3888	8640 min Summer	1.034	0.0	4496	10080 min Summer	0.910	0.0	5152	15 min Winter	119.204	0.0	19
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<u>Summary of Results for 100 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>167.004</td><td>0.154</td><td>0.1</td><td>2.3</td><td>O K</td></tr><tr><td>60 min Winter</td><td>167.032</td><td>0.182</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>120 min Winter</td><td>167.062</td><td>0.212</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>180 min Winter</td><td>167.078</td><td>0.228</td><td>0.1</td><td>3.5</td><td>O K</td></tr><tr><td>240 min Winter</td><td>167.088</td><td>0.238</td><td>0.1</td><td>3.6</td><td>O K</td></tr><tr><td>360 min Winter</td><td>167.098</td><td>0.248</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>480 min Winter</td><td>167.101</td><td>0.251</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>600 min Winter</td><td>167.100</td><td>0.250</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>720 min Winter</td><td>167.100</td><td>0.250</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>960 min Winter</td><td>167.094</td><td>0.244</td><td>0.1</td><td>3.7</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>167.075</td><td>0.225</td><td>0.1</td><td>3.4</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>167.044</td><td>0.194</td><td>0.1</td><td>3.0</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>167.015</td><td>0.165</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>166.954</td><td>0.104</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>166.914</td><td>0.064</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>166.897</td><td>0.047</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>166.891</td><td>0.041</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>166.886</td><td>0.036</td><td>0.0</td><td>0.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>72.258</td><td>0.0</td><td>33</td></tr><tr><td>60 min Winter</td><td>43.800</td><td>0.0</td><td>62</td></tr><tr><td>120 min Winter</td><td>26.551</td><td>0.0</td><td>120</td></tr><tr><td>180 min Winter</td><td>19.811</td><td>0.0</td><td>178</td></tr><tr><td>240 min Winter</td><td>16.094</td><td>0.0</td><td>236</td></tr><tr><td>360 min Winter</td><td>12.009</td><td>0.0</td><td>346</td></tr><tr><td>480 min Winter</td><td>9.756</td><td>0.0</td><td>452</td></tr><tr><td>600 min Winter</td><td>8.304</td><td>0.0</td><td>502</td></tr><tr><td>720 min Winter</td><td>7.279</td><td>0.0</td><td>566</td></tr><tr><td>960 min Winter</td><td>5.871</td><td>0.0</td><td>722</td></tr><tr><td>1440 min Winter</td><td>4.337</td><td>0.0</td><td>1024</td></tr><tr><td>2160 min Winter</td><td>3.203</td><td>0.0</td><td>1468</td></tr><tr><td>2880 min Winter</td><td>2.584</td><td>0.0</td><td>1872</td></tr><tr><td>4320 min Winter</td><td>1.843</td><td>0.0</td><td>2596</td></tr><tr><td>5760 min Winter</td><td>1.450</td><td>0.0</td><td>3232</td></tr><tr><td>7200 min Winter</td><td>1.204</td><td>0.0</td><td>3752</td></tr><tr><td>8640 min Winter</td><td>1.034</td><td>0.0</td><td>4496</td></tr><tr><td>10080 min Winter</td><td>0.910</td><td>0.0</td><td>5240</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	167.004	0.154	0.1	2.3	O K	60 min Winter	167.032	0.182	0.1	2.8	O K	120 min Winter	167.062	0.212	0.1	3.2	O K	180 min Winter	167.078	0.228	0.1	3.5	O K	240 min Winter	167.088	0.238	0.1	3.6	O K	360 min Winter	167.098	0.248	0.1	3.8	O K	480 min Winter	167.101	0.251	0.1	3.8	O K	600 min Winter	167.100	0.250	0.1	3.8	O K	720 min Winter	167.100	0.250	0.1	3.8	O K	960 min Winter	167.094	0.244	0.1	3.7	O K	1440 min Winter	167.075	0.225	0.1	3.4	O K	2160 min Winter	167.044	0.194	0.1	3.0	O K	2880 min Winter	167.015	0.165	0.1	2.5	O K	4320 min Winter	166.954	0.104	0.1	1.6	O K	5760 min Winter	166.914	0.064	0.1	1.0	O K	7200 min Winter	166.897	0.047	0.1	0.7	O K	8640 min Winter	166.891	0.041	0.0	0.6	O K	10080 min Winter	166.886	0.036	0.0	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	72.258	0.0	33	60 min Winter	43.800	0.0	62	120 min Winter	26.551	0.0	120	180 min Winter	19.811	0.0	178	240 min Winter	16.094	0.0	236	360 min Winter	12.009	0.0	346	480 min Winter	9.756	0.0	452	600 min Winter	8.304	0.0	502	720 min Winter	7.279	0.0	566	960 min Winter	5.871	0.0	722	1440 min Winter	4.337	0.0	1024	2160 min Winter	3.203	0.0	1468	2880 min Winter	2.584	0.0	1872	4320 min Winter	1.843	0.0	2596	5760 min Winter	1.450	0.0	3232	7200 min Winter	1.204	0.0	3752	8640 min Winter	1.034	0.0	4496	10080 min Winter	0.910	0.0	5240
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Infrastruct CS Ltd		Page 3
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Date 23/02/2023 11:53 File PLOT 7 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.008

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																			
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Innovyze		Source Control 2020.1.3																		
Model Details Storage is Online Cover Level (m) 167.850 Cellular Storage Structure Invert Level (m) 166.850 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.02500 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.02500 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>16.0</td><td>16.0</td><td>0.401</td><td>0.0</td><td>22.4</td></tr><tr><td>0.400</td><td>16.0</td><td>22.4</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	16.0	16.0	0.401	0.0	22.4	0.400	16.0	22.4			
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min Summer</td><td>6.211</td><td>0.0</td><td>428</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>498</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>636</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>910</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1316</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1700</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2420</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>3064</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3744</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4488</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>18</td></tr></tbody></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.925	0.075	0.1	1.1	O K	30 min 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Summer	11.681	0.0	240	360 min Summer	8.833	0.0	298	480 min Summer	7.244	0.0	362	600 min Summer	6.211	0.0	428	720 min Summer	5.477	0.0	498	960 min Summer	4.460	0.0	636	1440 min Summer	3.338	0.0	910	2160 min Summer	2.499	0.0	1316	2880 min Summer	2.035	0.0	1700	4320 min Summer	1.471	0.0	2420	5760 min Summer	1.168	0.0	3064	7200 min Summer	0.977	0.0	3744	8640 min Summer	0.845	0.0	4488	10080 min Summer	0.746	0.0	5152	15 min Winter	78.992	0.0	18
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																			
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30 min Summer	166.942	0.092	0.1	1.4	O K																																																																																																																																																																																																																			
60 min Summer	166.960	0.110	0.1	1.7	O K																																																																																																																																																																																																																			
120 min Summer	166.979	0.129	0.1	2.0	O K																																																																																																																																																																																																																			
180 min Summer	166.988	0.138	0.1	2.1	O K																																																																																																																																																																																																																			
240 min Summer	166.993	0.143	0.1	2.2	O K																																																																																																																																																																																																																			
360 min Summer	166.999	0.149	0.1	2.3	O K																																																																																																																																																																																																																			
480 min Summer	167.002	0.152	0.1	2.3	O K																																																																																																																																																																																																																			
600 min Summer	167.003	0.153	0.1	2.3	O K																																																																																																																																																																																																																			
720 min Summer	167.003	0.153	0.1	2.3	O K																																																																																																																																																																																																																			
960 min Summer	167.000	0.150	0.1	2.3	O K																																																																																																																																																																																																																			
1440 min Summer	166.991	0.141	0.1	2.1	O K																																																																																																																																																																																																																			
2160 min Summer	166.975	0.125	0.1	1.9	O K																																																																																																																																																																																																																			
2880 min Summer	166.960	0.110	0.1	1.7	O K																																																																																																																																																																																																																			
4320 min Summer	166.929	0.079	0.1	1.2	O K																																																																																																																																																																																																																			
5760 min Summer	166.909	0.059	0.1	0.9	O K																																																																																																																																																																																																																			
7200 min Summer	166.898	0.048	0.1	0.7	O K																																																																																																																																																																																																																			
8640 min Summer	166.893	0.043	0.0	0.6	O K																																																																																																																																																																																																																			
10080 min Summer	166.888	0.038	0.0	0.6	O K																																																																																																																																																																																																																			
15 min Winter	166.935	0.085	0.1	1.3	O K																																																																																																																																																																																																																			
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																					
15 min Summer	78.992	0.0	18																																																																																																																																																																																																																					
30 min Summer	48.985	0.0	33																																																																																																																																																																																																																					
60 min Summer	30.377	0.0	62																																																																																																																																																																																																																					
120 min Summer	18.837	0.0	122																																																																																																																																																																																																																					
180 min Summer	14.244	0.0	180																																																																																																																																																																																																																					
240 min Summer	11.681	0.0	240																																																																																																																																																																																																																					
360 min Summer	8.833	0.0	298																																																																																																																																																																																																																					
480 min Summer	7.244	0.0	362																																																																																																																																																																																																																					
600 min Summer	6.211	0.0	428																																																																																																																																																																																																																					
720 min Summer	5.477	0.0	498																																																																																																																																																																																																																					
960 min Summer	4.460	0.0	636																																																																																																																																																																																																																					
1440 min Summer	3.338	0.0	910																																																																																																																																																																																																																					
2160 min Summer	2.499	0.0	1316																																																																																																																																																																																																																					
2880 min Summer	2.035	0.0	1700																																																																																																																																																																																																																					
4320 min Summer	1.471	0.0	2420																																																																																																																																																																																																																					
5760 min Summer	1.168	0.0	3064																																																																																																																																																																																																																					
7200 min Summer	0.977	0.0	3744																																																																																																																																																																																																																					
8640 min Summer	0.845	0.0	4488																																																																																																																																																																																																																					
10080 min Summer	0.746	0.0	5152																																																																																																																																																																																																																					
15 min Winter	78.992	0.0	18																																																																																																																																																																																																																					
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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																	
<u>Summary of Results for 30 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>166.953</td><td>0.103</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>60 min Winter</td><td>166.974</td><td>0.124</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>120 min Winter</td><td>166.996</td><td>0.146</td><td>0.1</td><td>2.2</td><td>O K</td></tr><tr><td>180 min Winter</td><td>167.008</td><td>0.158</td><td>0.1</td><td>2.4</td><td>O K</td></tr><tr><td>240 min Winter</td><td>167.014</td><td>0.164</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>360 min Winter</td><td>167.021</td><td>0.171</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>480 min Winter</td><td>167.023</td><td>0.173</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>600 min Winter</td><td>167.024</td><td>0.174</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>720 min Winter</td><td>167.023</td><td>0.173</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>960 min Winter</td><td>167.017</td><td>0.167</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>167.002</td><td>0.152</td><td>0.1</td><td>2.3</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>166.976</td><td>0.126</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>166.952</td><td>0.102</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>166.910</td><td>0.060</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>166.895</td><td>0.045</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>166.888</td><td>0.038</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>166.883</td><td>0.033</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>166.880</td><td>0.030</td><td>0.0</td><td>0.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>48.985</td><td>0.0</td><td>33</td></tr><tr><td>60 min Winter</td><td>30.377</td><td>0.0</td><td>62</td></tr><tr><td>120 min Winter</td><td>18.837</td><td>0.0</td><td>120</td></tr><tr><td>180 min Winter</td><td>14.244</td><td>0.0</td><td>176</td></tr><tr><td>240 min Winter</td><td>11.681</td><td>0.0</td><td>232</td></tr><tr><td>360 min Winter</td><td>8.833</td><td>0.0</td><td>338</td></tr><tr><td>480 min Winter</td><td>7.244</td><td>0.0</td><td>386</td></tr><tr><td>600 min Winter</td><td>6.211</td><td>0.0</td><td>462</td></tr><tr><td>720 min Winter</td><td>5.477</td><td>0.0</td><td>542</td></tr><tr><td>960 min Winter</td><td>4.460</td><td>0.0</td><td>694</td></tr><tr><td>1440 min Winter</td><td>3.338</td><td>0.0</td><td>994</td></tr><tr><td>2160 min Winter</td><td>2.499</td><td>0.0</td><td>1404</td></tr><tr><td>2880 min Winter</td><td>2.035</td><td>0.0</td><td>1788</td></tr><tr><td>4320 min Winter</td><td>1.471</td><td>0.0</td><td>2460</td></tr><tr><td>5760 min Winter</td><td>1.168</td><td>0.0</td><td>3056</td></tr><tr><td>7200 min Winter</td><td>0.977</td><td>0.0</td><td>3816</td></tr><tr><td>8640 min Winter</td><td>0.845</td><td>0.0</td><td>4504</td></tr><tr><td>10080 min Winter</td><td>0.746</td><td>0.0</td><td>5240</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	166.953	0.103	0.1	1.6	O K	60 min Winter	166.974	0.124	0.1	1.9	O K	120 min Winter	166.996	0.146	0.1	2.2	O K	180 min Winter	167.008	0.158	0.1	2.4	O K	240 min Winter	167.014	0.164	0.1	2.5	O K	360 min Winter	167.021	0.171	0.1	2.6	O K	480 min Winter	167.023	0.173	0.1	2.6	O K	600 min Winter	167.024	0.174	0.1	2.6	O K	720 min Winter	167.023	0.173	0.1	2.6	O K	960 min Winter	167.017	0.167	0.1	2.5	O K	1440 min Winter	167.002	0.152	0.1	2.3	O K	2160 min Winter	166.976	0.126	0.1	1.9	O K	2880 min Winter	166.952	0.102	0.1	1.6	O K	4320 min Winter	166.910	0.060	0.1	0.9	O K	5760 min Winter	166.895	0.045	0.1	0.7	O K	7200 min Winter	166.888	0.038	0.0	0.6	O K	8640 min Winter	166.883	0.033	0.0	0.5	O K	10080 min Winter	166.880	0.030	0.0	0.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	48.985	0.0	33	60 min Winter	30.377	0.0	62	120 min Winter	18.837	0.0	120	180 min Winter	14.244	0.0	176	240 min Winter	11.681	0.0	232	360 min Winter	8.833	0.0	338	480 min Winter	7.244	0.0	386	600 min Winter	6.211	0.0	462	720 min Winter	5.477	0.0	542	960 min Winter	4.460	0.0	694	1440 min Winter	3.338	0.0	994	2160 min Winter	2.499	0.0	1404	2880 min Winter	2.035	0.0	1788	4320 min Winter	1.471	0.0	2460	5760 min Winter	1.168	0.0	3056	7200 min Winter	0.977	0.0	3816	8640 min Winter	0.845	0.0	4504	10080 min Winter	0.746	0.0	5240
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																														
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	30	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.008
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway	
Date 23/02/2023 11:54 File PLOT 7 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 167.850

Cellular Storage Structure

Invert Level (m) 166.850 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.02500 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.02500

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	16.0	16.0	0.401	0.0	22.4
0.400	16.0	22.4			

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<u>Summary of Results for 2 year Return Period</u> Half Drain Time : 184 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>166.880</td><td>0.030</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>30 min Summer</td><td>166.888</td><td>0.038</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>60 min Summer</td><td>166.896</td><td>0.046</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>166.904</td><td>0.054</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>166.909</td><td>0.059</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>166.912</td><td>0.062</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.916</td><td>0.066</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>166.918</td><td>0.068</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.919</td><td>0.069</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.919</td><td>0.069</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.917</td><td>0.067</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.912</td><td>0.062</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.904</td><td>0.054</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.898</td><td>0.048</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.890</td><td>0.040</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.884</td><td>0.034</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.880</td><td>0.030</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>3.266</td><td>0.0</td><td>384</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>454</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>586</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>840</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1208</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1560</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2292</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>3008</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3744</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4488</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.880	0.030	0.0	0.5	O K	30 min Summer	166.888	0.038	0.0	0.6	O K	60 min Summer	166.896	0.046	0.1	0.7	O K	120 min Summer	166.904	0.054	0.1	0.8	O K	180 min Summer	166.909	0.059	0.1	0.9	O K	240 min Summer	166.912	0.062	0.1	0.9	O K	360 min Summer	166.916	0.066	0.1	1.0	O K	480 min Summer	166.918	0.068	0.1	1.0	O K	600 min Summer	166.919	0.069	0.1	1.0	O K	720 min Summer	166.919	0.069	0.1	1.0	O K	960 min Summer	166.917	0.067	0.1	1.0	O K	1440 min Summer	166.912	0.062	0.1	0.9	O K	2160 min Summer	166.904	0.054	0.1	0.8	O K	2880 min Summer	166.898	0.048	0.1	0.7	O K	4320 min Summer	166.890	0.040	0.0	0.6	O K	5760 min Summer	166.884	0.034	0.0	0.5	O K	7200 min Summer	166.880	0.030	0.0	0.5	O K	8640 min Summer	166.877	0.027	0.0	0.4	O K	10080 min Summer	166.875	0.025	0.0	0.4	O K	15 min Winter	166.884	0.034	0.0	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	18	30 min Summer	20.720	0.0	32	60 min Summer	13.513	0.0	62	120 min Summer	8.812	0.0	104	180 min Summer	6.863	0.0	138	240 min Summer	5.747	0.0	172	360 min Summer	4.476	0.0	244	480 min Summer	3.748	0.0	314	600 min Summer	3.266	0.0	384	720 min Summer	2.919	0.0	454	960 min Summer	2.427	0.0	586	1440 min Summer	1.871	0.0	840	2160 min Summer	1.442	0.0	1208	2880 min Summer	1.199	0.0	1560	4320 min Summer	0.893	0.0	2292	5760 min Summer	0.724	0.0	3008	7200 min Summer	0.616	0.0	3744	8640 min Summer	0.539	0.0	4488	10080 min Summer	0.482	0.0	5152	15 min Winter	31.772	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 7 Cellular soakaway			
Date 23/02/2023 11:54 File PLOT 7 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.893	0.043	0.0	0.6	O K
60 min Winter	166.902	0.052	0.1	0.8	O K
120 min Winter	166.912	0.062	0.1	0.9	O K
180 min Winter	166.917	0.067	0.1	1.0	O K
240 min Winter	166.920	0.070	0.1	1.1	O K
360 min Winter	166.924	0.074	0.1	1.1	O K
480 min Winter	166.925	0.075	0.1	1.1	O K
600 min Winter	166.924	0.074	0.1	1.1	O K
720 min Winter	166.923	0.073	0.1	1.1	O K
960 min Winter	166.919	0.069	0.1	1.0	O K
1440 min Winter	166.909	0.059	0.1	0.9	O K
2160 min Winter	166.899	0.049	0.1	0.7	O K
2880 min Winter	166.893	0.043	0.0	0.6	O K
4320 min Winter	166.884	0.034	0.0	0.5	O K
5760 min Winter	166.878	0.028	0.0	0.4	O K
7200 min Winter	166.874	0.024	0.0	0.4	O K
8640 min Winter	166.871	0.021	0.0	0.3	O K
10080 min Winter	166.869	0.019	0.0	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	32		
60 min Winter	13.513	0.0	60		
120 min Winter	8.812	0.0	116		
180 min Winter	6.863	0.0	148		
240 min Winter	5.747	0.0	186		
360 min Winter	4.476	0.0	266		
480 min Winter	3.748	0.0	342		
600 min Winter	3.266	0.0	416		
720 min Winter	2.919	0.0	490		
960 min Winter	2.427	0.0	628		
1440 min Winter	1.871	0.0	882		
2160 min Winter	1.442	0.0	1232		
2880 min Winter	1.199	0.0	1612		
4320 min Winter	0.893	0.0	2332		
5760 min Winter	0.724	0.0	3064		
7200 min Winter	0.616	0.0	3752		
8640 min Winter	0.539	0.0	4496		
10080 min Winter	0.482	0.0	5152		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From: To:	(ha)	0	4 0.008
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Model Details Storage is Online Cover Level (m) 167.850 Cellular Storage Structure Invert Level (m) 166.850 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.02500 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.02500 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>16.0</td><td>16.0</td><td>0.401</td><td>0.0</td><td>22.4</td></tr><tr><td>0.400</td><td>16.0</td><td>22.4</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	16.0	16.0	0.401	0.0	22.4	0.400	16.0	22.4			
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K</td></tr><tr><td>10080 min Summer</td><td>166.872</td><td>0.022</td><td>0.0</td><td>0.3</td><td>O K</td></tr><tr><td>15 min Winter</td><td>166.877</td><td>0.027</td><td>0.0</td><td>0.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>102</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>132</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>166</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>236</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>306</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>374</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>442</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>576</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>822</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1192</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1560</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2292</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>3008</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3752</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4488</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.874	0.024	0.0	0.4	O K	30 min Summer	166.880	0.030	0.0	0.5	O K	60 min Summer	166.888	0.038	0.0	0.6	O K	120 min 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Summer	2.768	0.0	374	720 min Summer	2.482	0.0	442	960 min Summer	2.075	0.0	576	1440 min Summer	1.612	0.0	822	2160 min Summer	1.252	0.0	1192	2880 min Summer	1.046	0.0	1560	4320 min Summer	0.785	0.0	2292	5760 min Summer	0.640	0.0	3008	7200 min Summer	0.546	0.0	3752	8640 min Summer	0.480	0.0	4488	10080 min Summer	0.430	0.0	5152	15 min Winter	25.129	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 7 Cellular soakaway			
Date 23/02/2023 11:55 File PLOT 7 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.884	0.034	0.0	0.5	O K
60 min Winter	166.892	0.042	0.0	0.6	O K
120 min Winter	166.900	0.050	0.1	0.8	O K
180 min Winter	166.904	0.054	0.1	0.8	O K
240 min Winter	166.907	0.057	0.1	0.9	O K
360 min Winter	166.909	0.059	0.1	0.9	O K
480 min Winter	166.910	0.060	0.1	0.9	O K
600 min Winter	166.910	0.060	0.1	0.9	O K
720 min Winter	166.909	0.059	0.1	0.9	O K
960 min Winter	166.905	0.055	0.1	0.8	O K
1440 min Winter	166.899	0.049	0.1	0.7	O K
2160 min Winter	166.892	0.042	0.0	0.6	O K
2880 min Winter	166.887	0.037	0.0	0.6	O K
4320 min Winter	166.880	0.030	0.0	0.4	O K
5760 min Winter	166.875	0.025	0.0	0.4	O K
7200 min Winter	166.871	0.021	0.0	0.3	O K
8640 min Winter	166.869	0.019	0.0	0.3	O K
10080 min Winter	166.867	0.017	0.0	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	32		
60 min Winter	10.968	0.0	60		
120 min Winter	7.246	0.0	112		
180 min Winter	5.686	0.0	140		
240 min Winter	4.787	0.0	180		
360 min Winter	3.757	0.0	258		
480 min Winter	3.163	0.0	332		
600 min Winter	2.768	0.0	404		
720 min Winter	2.482	0.0	476		
960 min Winter	2.075	0.0	608		
1440 min Winter	1.612	0.0	854		
2160 min Winter	1.252	0.0	1232		
2880 min Winter	1.046	0.0	1612		
4320 min Winter	0.785	0.0	2332		
5760 min Winter	0.640	0.0	3056		
7200 min Winter	0.546	0.0	3816		
8640 min Winter	0.480	0.0	4504		
10080 min Winter	0.430	0.0	5152		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.008
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Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 167.850

Cellular Storage Structure

Invert Level (m) 166.850 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.02500 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.02500

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	16.0	16.0	0.401	0.0	22.4
0.400	16.0	22.4			

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Summer</td><td>167.662</td><td>0.312</td><td>0.3</td><td>3.5</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.638</td><td>0.288</td><td>0.3</td><td>3.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.614</td><td>0.264</td><td>0.3</td><td>2.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.565</td><td>0.215</td><td>0.3</td><td>2.4</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.485</td><td>0.135</td><td>0.3</td><td>1.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.416</td><td>0.066</td><td>0.3</td><td>0.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.396</td><td>0.046</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.383</td><td>0.033</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.376</td><td>0.026</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.372</td><td>0.022</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>11.625</td><td>0.0</td><td>374</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>440</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>568</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>806</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1128</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4376</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5048</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.620	0.270	0.3	3.0	O K	30 min Summer	167.666	0.316	0.3	3.5	O K	60 min Summer	167.703	0.353	0.3	3.9	Flood Risk	120 min Summer	167.717	0.367	0.3	4.1	Flood Risk	180 min Summer	167.714	0.364	0.3	4.0	Flood Risk	240 min Summer	167.707	0.357	0.3	4.0	Flood Risk	360 min Summer	167.686	0.336	0.3	3.7	Flood Risk	480 min Summer	167.662	0.312	0.3	3.5	O K	600 min Summer	167.638	0.288	0.3	3.2	O K	720 min Summer	167.614	0.264	0.3	2.9	O K	960 min Summer	167.565	0.215	0.3	2.4	O K	1440 min Summer	167.485	0.135	0.3	1.5	O K	2160 min Summer	167.416	0.066	0.3	0.7	O K	2880 min Summer	167.396	0.046	0.3	0.5	O K	4320 min Summer	167.383	0.033	0.2	0.4	O K	5760 min Summer	167.376	0.026	0.2	0.3	O K	7200 min Summer	167.372	0.022	0.1	0.2	O K	8640 min Summer	167.369	0.019	0.1	0.2	O K	10080 min Summer	167.367	0.017	0.1	0.2	O K	15 min Winter	167.657	0.307	0.3	3.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	18	30 min Summer	101.161	0.0	32	60 min Summer	61.321	0.0	62	120 min Summer	37.171	0.0	104	180 min Summer	27.735	0.0	136	240 min Summer	22.532	0.0	170	360 min Summer	16.812	0.0	238	480 min Summer	13.658	0.0	306	600 min Summer	11.625	0.0	374	720 min Summer	10.191	0.0	440	960 min Summer	8.220	0.0	568	1440 min Summer	6.071	0.0	806	2160 min Summer	4.484	0.0	1128	2880 min Summer	3.617	0.0	1468	4320 min Summer	2.580	0.0	2200	5760 min Summer	2.030	0.0	2936	7200 min Summer	1.686	0.0	3672	8640 min Summer	1.448	0.0	4376	10080 min Summer	1.274	0.0	5048	15 min Winter	166.885	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN			Howle Hill Plot 7 Front Permeable paving		
Date 10/02/2023 11:04 File PLOT 7 FRONT PERMEABLE....			Designed by APL Checked by MBD		
Innovyze			Source Control 2019.1		
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.710	0.360	0.3	4.0	Flood Risk
60 min Winter	167.757	0.407	0.3	4.5	Flood Risk
120 min Winter	167.779	0.429	0.3	4.8	Flood Risk
180 min Winter	167.772	0.422	0.3	4.7	Flood Risk
240 min Winter	167.761	0.411	0.3	4.6	Flood Risk
360 min Winter	167.728	0.378	0.3	4.2	Flood Risk
480 min Winter	167.689	0.339	0.3	3.8	Flood Risk
600 min Winter	167.649	0.299	0.3	3.3	O K
720 min Winter	167.610	0.260	0.3	2.9	O K
960 min Winter	167.534	0.184	0.3	2.0	O K
1440 min Winter	167.425	0.075	0.3	0.8	O K
2160 min Winter	167.392	0.042	0.3	0.5	O K
2880 min Winter	167.384	0.034	0.2	0.4	O K
4320 min Winter	167.374	0.024	0.2	0.3	O K
5760 min Winter	167.369	0.019	0.1	0.2	O K
7200 min Winter	167.366	0.016	0.1	0.2	O K
8640 min Winter	167.364	0.014	0.1	0.2	O K
10080 min Winter	167.362	0.012	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	32		
60 min Winter	61.321	0.0	60		
120 min Winter	37.171	0.0	116		
180 min Winter	27.735	0.0	146		
240 min Winter	22.532	0.0	184		
360 min Winter	16.812	0.0	260		
480 min Winter	13.658	0.0	334		
600 min Winter	11.625	0.0	404		
720 min Winter	10.191	0.0	470		
960 min Winter	8.220	0.0	596		
1440 min Winter	6.071	0.0	808		
2160 min Winter	4.484	0.0	1104		
2880 min Winter	3.617	0.0	1468		
4320 min Winter	2.580	0.0	2168		
5760 min Winter	2.030	0.0	2936		
7200 min Winter	1.686	0.0	3624		
8640 min Winter	1.448	0.0	4416		
10080 min Winter	1.274	0.0	5144		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving	
Date 10/02/2023 11:04 File PLOT 7 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.011

Time (mins)	Area
From:	To: (ha)
0	4 0.011

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving																									
Date 10/02/2023 11:04 File PLOT 7 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
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Model Details Storage is Online Cover Level (m) 167.800 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>3.7</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>10.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.350</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	10.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.350	Membrane Depth (m)	0
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 73 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>167.534</td><td>0.184</td><td>0.3</td><td>2.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.562</td><td>0.212</td><td>0.3</td><td>2.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.580</td><td>0.230</td><td>0.3</td><td>2.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.585</td><td>0.235</td><td>0.3</td><td>2.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.579</td><td>0.229</td><td>0.3</td><td>2.5</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.569</td><td>0.219</td><td>0.3</td><td>2.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.546</td><td>0.196</td><td>0.3</td><td>2.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.523</td><td>0.173</td><td>0.3</td><td>1.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.501</td><td>0.151</td><td>0.3</td><td>1.7</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.481</td><td>0.131</td><td>0.3</td><td>1.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.446</td><td>0.096</td><td>0.3</td><td>1.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.404</td><td>0.054</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.390</td><td>0.040</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.383</td><td>0.033</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.374</td><td>0.024</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.369</td><td>0.019</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.366</td><td>0.016</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min 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min Summer</td><td>8.304</td><td>0.0</td><td>356</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>416</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>530</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>750</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2880</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5096</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>18</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.534	0.184	0.3	2.0	O K	30 min Summer	167.562	0.212	0.3	2.4	O K	60 min Summer	167.580	0.230	0.3	2.6	O K	120 min Summer	167.585	0.235	0.3	2.6	O K	180 min Summer	167.579	0.229	0.3	2.5	O K	240 min Summer	167.569	0.219	0.3	2.4	O K	360 min Summer	167.546	0.196	0.3	2.2	O K	480 min Summer	167.523	0.173	0.3	1.9	O K	600 min Summer	167.501	0.151	0.3	1.7	O K	720 min Summer	167.481	0.131	0.3	1.5	O K	960 min Summer	167.446	0.096	0.3	1.1	O K	1440 min Summer	167.404	0.054	0.3	0.6	O K	2160 min Summer	167.390	0.040	0.3	0.4	O K	2880 min Summer	167.383	0.033	0.2	0.4	O K	4320 min Summer	167.374	0.024	0.2	0.3	O K	5760 min Summer	167.369	0.019	0.1	0.2	O K	7200 min Summer	167.366	0.016	0.1	0.2	O K	8640 min Summer	167.363	0.013	0.1	0.1	O K	10080 min Summer	167.362	0.012	0.1	0.1	O K	15 min Winter	167.559	0.209	0.3	2.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	18	30 min Summer	72.258	0.0	32	60 min Summer	43.800	0.0	60	120 min Summer	26.551	0.0	90	180 min Summer	19.811	0.0	124	240 min Summer	16.094	0.0	158	360 min Summer	12.009	0.0	226	480 min Summer	9.756	0.0	292	600 min Summer	8.304	0.0	356	720 min Summer	7.279	0.0	416	960 min Summer	5.871	0.0	530	1440 min Summer	4.337	0.0	750	2160 min Summer	3.203	0.0	1104	2880 min Summer	2.584	0.0	1468	4320 min Summer	1.843	0.0	2200	5760 min Summer	1.450	0.0	2880	7200 min Summer	1.204	0.0	3616	8640 min Summer	1.034	0.0	4400	10080 min Summer	0.910	0.0	5096	15 min Winter	119.204	0.0	18
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5760 min Winter	167.364	0.014	0.1	0.2	O K																																																																																																																																																																																														
7200 min Winter	167.361	0.011	0.1	0.1	O K																																																																																																																																																																																														
8640 min Winter	167.360	0.010	0.1	0.1	O K																																																																																																																																																																																														
10080 min Winter	167.359	0.009	0.1	0.1	O K																																																																																																																																																																																														
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																
30 min Winter	72.258	0.0	31																																																																																																																																																																																																
60 min Winter	43.800	0.0	60																																																																																																																																																																																																
120 min Winter	26.551	0.0	96																																																																																																																																																																																																
180 min Winter	19.811	0.0	136																																																																																																																																																																																																
240 min Winter	16.094	0.0	172																																																																																																																																																																																																
360 min Winter	12.009	0.0	244																																																																																																																																																																																																
480 min Winter	9.756	0.0	312																																																																																																																																																																																																
600 min Winter	8.304	0.0	374																																																																																																																																																																																																
720 min Winter	7.279	0.0	434																																																																																																																																																																																																
960 min Winter	5.871	0.0	530																																																																																																																																																																																																
1440 min Winter	4.337	0.0	738																																																																																																																																																																																																
2160 min Winter	3.203	0.0	1104																																																																																																																																																																																																
2880 min Winter	2.584	0.0	1464																																																																																																																																																																																																
4320 min Winter	1.843	0.0	2164																																																																																																																																																																																																
5760 min Winter	1.450	0.0	2952																																																																																																																																																																																																
7200 min Winter	1.204	0.0	3584																																																																																																																																																																																																
8640 min Winter	1.034	0.0	4296																																																																																																																																																																																																
10080 min Winter	0.910	0.0	5184																																																																																																																																																																																																
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving																																									
Date 23/02/2023 11:50 File PLOT 7 FRONT PERMEABLE....	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.011 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.011</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.011
Rainfall Model	FEH																																									
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving																									
Date 23/02/2023 11:50 File PLOT 7 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
Innovyze	Source Control 2020.1.3																									
Model Details Storage is Online Cover Level (m) 167.800 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>3.7</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>10.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.350</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	10.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.350	Membrane Depth (m)	0
Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7																							
Membrane Percolation (mm/hr)	1000	Length (m)	10.0																							
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Invert Level (m)	167.350	Membrane Depth (m)	0																							
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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 47 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.461</td><td>0.111</td><td>0.3</td><td>1.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.480</td><td>0.130</td><td>0.3</td><td>1.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.493</td><td>0.143</td><td>0.3</td><td>1.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.497</td><td>0.147</td><td>0.3</td><td>1.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.492</td><td>0.142</td><td>0.3</td><td>1.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.484</td><td>0.134</td><td>0.3</td><td>1.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.466</td><td>0.116</td><td>0.3</td><td>1.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.448</td><td>0.098</td><td>0.3</td><td>1.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.433</td><td>0.083</td><td>0.3</td><td>0.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.420</td><td>0.070</td><td>0.3</td><td>0.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.402</td><td>0.052</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.391</td><td>0.041</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.381</td><td>0.031</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.376</td><td>0.026</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.369</td><td>0.019</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.365</td><td>0.015</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.363</td><td>0.013</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.361</td><td>0.011</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.360</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.478</td><td>0.128</td><td>0.3</td><td>1.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>30</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>48</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>82</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>118</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>150</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>216</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>278</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>338</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>394</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>502</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>2904</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5128</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>17</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.461	0.111	0.3	1.2	O K	30 min Summer	167.480	0.130	0.3	1.4	O K	60 min Summer	167.493	0.143	0.3	1.6	O K	120 min Summer	167.497	0.147	0.3	1.6	O K	180 min Summer	167.492	0.142	0.3	1.6	O K	240 min Summer	167.484	0.134	0.3	1.5	O K	360 min Summer	167.466	0.116	0.3	1.3	O K	480 min Summer	167.448	0.098	0.3	1.1	O K	600 min Summer	167.433	0.083	0.3	0.9	O K	720 min Summer	167.420	0.070	0.3	0.8	O K	960 min Summer	167.402	0.052	0.3	0.6	O K	1440 min Summer	167.391	0.041	0.3	0.4	O K	2160 min Summer	167.381	0.031	0.2	0.3	O K	2880 min Summer	167.376	0.026	0.2	0.3	O K	4320 min Summer	167.369	0.019	0.1	0.2	O K	5760 min Summer	167.365	0.015	0.1	0.2	O K	7200 min Summer	167.363	0.013	0.1	0.1	O K	8640 min Summer	167.361	0.011	0.1	0.1	O K	10080 min Summer	167.360	0.010	0.1	0.1	O K	15 min Winter	167.478	0.128	0.3	1.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	17	30 min Summer	48.985	0.0	30	60 min Summer	30.377	0.0	48	120 min Summer	18.837	0.0	82	180 min Summer	14.244	0.0	118	240 min Summer	11.681	0.0	150	360 min Summer	8.833	0.0	216	480 min Summer	7.244	0.0	278	600 min Summer	6.211	0.0	338	720 min Summer	5.477	0.0	394	960 min Summer	4.460	0.0	502	1440 min Summer	3.338	0.0	738	2160 min Summer	2.499	0.0	1104	2880 min Summer	2.035	0.0	1468	4320 min Summer	1.471	0.0	2204	5760 min Summer	1.168	0.0	2904	7200 min Summer	0.977	0.0	3616	8640 min Summer	0.845	0.0	4400	10080 min Summer	0.746	0.0	5128	15 min Winter	78.992	0.0	17
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8640 min Summer	167.361	0.011	0.1	0.1	O K																																																																																																																																																																																																																		
10080 min Summer	167.360	0.010	0.1	0.1	O K																																																																																																																																																																																																																		
15 min Winter	167.478	0.128	0.3	1.4	O K																																																																																																																																																																																																																		
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Date 23/02/2023 11:50 File PLOT 7 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.501	0.151	0.3	1.7	O K
60 min Winter	167.514	0.164	0.3	1.8	O K
120 min Winter	167.515	0.165	0.3	1.8	O K
180 min Winter	167.504	0.154	0.3	1.7	O K
240 min Winter	167.490	0.140	0.3	1.5	O K
360 min Winter	167.459	0.109	0.3	1.2	O K
480 min Winter	167.431	0.081	0.3	0.9	O K
600 min Winter	167.410	0.060	0.3	0.7	O K
720 min Winter	167.399	0.049	0.3	0.5	O K
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1440 min Winter	167.381	0.031	0.2	0.3	O K
2160 min Winter	167.373	0.023	0.2	0.3	O K
2880 min Winter	167.369	0.019	0.1	0.2	O K
4320 min Winter	167.364	0.014	0.1	0.2	O K
5760 min Winter	167.361	0.011	0.1	0.1	O K
7200 min Winter	167.359	0.009	0.1	0.1	O K
8640 min Winter	167.358	0.008	0.1	0.1	O K
10080 min Winter	167.357	0.007	0.0	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	31		
60 min Winter	30.377	0.0	54		
120 min Winter	18.837	0.0	90		
180 min Winter	14.244	0.0	128		
240 min Winter	11.681	0.0	162		
360 min Winter	8.833	0.0	230		
480 min Winter	7.244	0.0	288		
600 min Winter	6.211	0.0	340		
720 min Winter	5.477	0.0	384		
960 min Winter	4.460	0.0	502		
1440 min Winter	3.338	0.0	750		
2160 min Winter	2.499	0.0	1104		
2880 min Winter	2.035	0.0	1476		
4320 min Winter	1.471	0.0	2140		
5760 min Winter	1.168	0.0	2944		
7200 min Winter	0.977	0.0	3632		
8640 min Winter	0.845	0.0	4408		
10080 min Winter	0.746	0.0	5136		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving																																									
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Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.011 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.011</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	30	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.011
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Model Details Storage is Online Cover Level (m) 167.800 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>3.7</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>10.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.350</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	10.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.350	Membrane Depth (m)	0
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K</td></tr><tr><td>600 min Summer</td><td>167.385</td><td>0.035</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.382</td><td>0.032</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.378</td><td>0.028</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.373</td><td>0.023</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.368</td><td>0.018</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.365</td><td>0.015</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.361</td><td>0.011</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.359</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.358</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.357</td><td>0.007</td><td>0.0</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.356</td><td>0.006</td><td>0.0</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.389</td><td>0.039</td><td>0.3</td><td>0.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>31.772</td><td>0.0</td><td>16</td></tr><tr><td>30 min Summer</td><td>20.720</td><td>0.0</td><td>24</td></tr><tr><td>60 min Summer</td><td>13.513</td><td>0.0</td><td>40</td></tr><tr><td>120 min Summer</td><td>8.812</td><td>0.0</td><td>74</td></tr><tr><td>180 min Summer</td><td>6.863</td><td>0.0</td><td>104</td></tr><tr><td>240 min Summer</td><td>5.747</td><td>0.0</td><td>136</td></tr><tr><td>360 min Summer</td><td>4.476</td><td>0.0</td><td>198</td></tr><tr><td>480 min Summer</td><td>3.748</td><td>0.0</td><td>258</td></tr><tr><td>600 min Summer</td><td>3.266</td><td>0.0</td><td>318</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>378</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>500</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4384</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5064</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.383	0.033	0.2	0.4	O K	30 min Summer	167.391	0.041	0.3	0.5	O K	60 min Summer	167.398	0.048	0.3	0.5	O K	120 min Summer	167.401	0.051	0.3	0.6	O K	180 min Summer	167.399	0.049	0.3	0.5	O K	240 min Summer	167.397	0.047	0.3	0.5	O K	360 min Summer	167.392	0.042	0.3	0.5	O K	480 min Summer	167.388	0.038	0.3	0.4	O K	600 min Summer	167.385	0.035	0.2	0.4	O K	720 min Summer	167.382	0.032	0.2	0.4	O K	960 min Summer	167.378	0.028	0.2	0.3	O K	1440 min Summer	167.373	0.023	0.2	0.3	O K	2160 min Summer	167.368	0.018	0.1	0.2	O K	2880 min Summer	167.365	0.015	0.1	0.2	O K	4320 min Summer	167.361	0.011	0.1	0.1	O K	5760 min Summer	167.359	0.009	0.1	0.1	O K	7200 min Summer	167.358	0.008	0.1	0.1	O K	8640 min Summer	167.357	0.007	0.0	0.1	O K	10080 min Summer	167.356	0.006	0.0	0.1	O K	15 min Winter	167.389	0.039	0.3	0.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	16	30 min Summer	20.720	0.0	24	60 min Summer	13.513	0.0	40	120 min Summer	8.812	0.0	74	180 min Summer	6.863	0.0	104	240 min Summer	5.747	0.0	136	360 min Summer	4.476	0.0	198	480 min Summer	3.748	0.0	258	600 min Summer	3.266	0.0	318	720 min Summer	2.919	0.0	378	960 min Summer	2.427	0.0	500	1440 min Summer	1.871	0.0	738	2160 min Summer	1.442	0.0	1104	2880 min Summer	1.199	0.0	1468	4320 min Summer	0.893	0.0	2204	5760 min Summer	0.724	0.0	2936	7200 min Summer	0.616	0.0	3672	8640 min Summer	0.539	0.0	4384	10080 min Summer	0.482	0.0	5064	15 min Winter	31.772	0.0	16
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Date 23/02/2023 11:51 File PLOT 7 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.397	0.047	0.3	0.5	O K
60 min Winter	167.403	0.053	0.3	0.6	O K
120 min Winter	167.402	0.052	0.3	0.6	O K
180 min Winter	167.397	0.047	0.3	0.5	O K
240 min Winter	167.393	0.043	0.3	0.5	O K
360 min Winter	167.387	0.037	0.3	0.4	O K
480 min Winter	167.382	0.032	0.2	0.4	O K
600 min Winter	167.379	0.029	0.2	0.3	O K
720 min Winter	167.376	0.026	0.2	0.3	O K
960 min Winter	167.372	0.022	0.2	0.2	O K
1440 min Winter	167.367	0.017	0.1	0.2	O K
2160 min Winter	167.363	0.013	0.1	0.1	O K
2880 min Winter	167.361	0.011	0.1	0.1	O K
4320 min Winter	167.358	0.008	0.1	0.1	O K
5760 min Winter	167.357	0.007	0.0	0.1	O K
7200 min Winter	167.356	0.006	0.0	0.1	O K
8640 min Winter	167.355	0.005	0.0	0.1	O K
10080 min Winter	167.355	0.005	0.0	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	25		
60 min Winter	13.513	0.0	44		
120 min Winter	8.812	0.0	78		
180 min Winter	6.863	0.0	110		
240 min Winter	5.747	0.0	142		
360 min Winter	4.476	0.0	202		
480 min Winter	3.748	0.0	264		
600 min Winter	3.266	0.0	324		
720 min Winter	2.919	0.0	382		
960 min Winter	2.427	0.0	500		
1440 min Winter	1.871	0.0	738		
2160 min Winter	1.442	0.0	1108		
2880 min Winter	1.199	0.0	1456		
4320 min Winter	0.893	0.0	2160		
5760 min Winter	0.724	0.0	2904		
7200 min Winter	0.616	0.0	3560		
8640 min Winter	0.539	0.0	4400		
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Model Details Storage is Online Cover Level (m) 167.800 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>3.7</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>10.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.350</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	10.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.350	Membrane Depth (m)	0
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Summer	167.391	0.041	0.3	0.5	O K	180 min Summer	167.390	0.040	0.3	0.4	O K	240 min Summer	167.389	0.039	0.3	0.4	O K	360 min Summer	167.385	0.035	0.2	0.4	O K	480 min Summer	167.382	0.032	0.2	0.4	O K	600 min Summer	167.379	0.029	0.2	0.3	O K	720 min Summer	167.377	0.027	0.2	0.3	O K	960 min Summer	167.374	0.024	0.2	0.3	O K	1440 min Summer	167.369	0.019	0.1	0.2	O K	2160 min Summer	167.366	0.016	0.1	0.2	O K	2880 min Summer	167.363	0.013	0.1	0.1	O K	4320 min Summer	167.360	0.010	0.1	0.1	O K	5760 min Summer	167.358	0.008	0.1	0.1	O K	7200 min Summer	167.357	0.007	0.0	0.1	O K	8640 min Summer	167.356	0.006	0.0	0.1	O K	10080 min Summer	167.356	0.006	0.0	0.1	O K	15 min Winter	167.378	0.028	0.2	0.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	16	30 min Summer	16.602	0.0	24	60 min Summer	10.968	0.0	40	120 min Summer	7.246	0.0	74	180 min Summer	5.686	0.0	106	240 min Summer	4.787	0.0	136	360 min Summer	3.757	0.0	196	480 min Summer	3.163	0.0	258	600 min 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Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.386	0.036	0.2	0.4	O K
60 min Winter	167.391	0.041	0.3	0.5	O K
120 min Winter	167.392	0.042	0.3	0.5	O K
180 min Winter	167.389	0.039	0.3	0.4	O K
240 min Winter	167.386	0.036	0.2	0.4	O K
360 min Winter	167.381	0.031	0.2	0.3	O K
480 min Winter	167.377	0.027	0.2	0.3	O K
600 min Winter	167.374	0.024	0.2	0.3	O K
720 min Winter	167.372	0.022	0.2	0.2	O K
960 min Winter	167.369	0.019	0.1	0.2	O K
1440 min Winter	167.365	0.015	0.1	0.2	O K
2160 min Winter	167.362	0.012	0.1	0.1	O K
2880 min Winter	167.360	0.010	0.1	0.1	O K
4320 min Winter	167.357	0.007	0.0	0.1	O K
5760 min Winter	167.356	0.006	0.0	0.1	O K
7200 min Winter	167.355	0.005	0.0	0.1	O K
8640 min Winter	167.355	0.005	0.0	0.1	O K
10080 min Winter	167.354	0.004	0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	25		
60 min Winter	10.968	0.0	44		
120 min Winter	7.246	0.0	78		
180 min Winter	5.686	0.0	110		
240 min Winter	4.787	0.0	142		
360 min Winter	3.757	0.0	204		
480 min Winter	3.163	0.0	264		
600 min Winter	2.768	0.0	326		
720 min Winter	2.482	0.0	384		
960 min Winter	2.075	0.0	504		
1440 min Winter	1.612	0.0	750		
2160 min Winter	1.252	0.0	1096		
2880 min Winter	1.046	0.0	1444		
4320 min Winter	0.785	0.0	2168		
5760 min Winter	0.640	0.0	2968		
7200 min Winter	0.546	0.0	3696		
8640 min Winter	0.480	0.0	4448		
10080 min Winter	0.430	0.0	5000		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.011 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.011</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.011
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Infrastruct CS Ltd		Page 4																								
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Front Permeable paving																									
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Model Details Storage is Online Cover Level (m) 167.800 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>3.7</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>10.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.350</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	3.7	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	10.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.350	Membrane Depth (m)	0
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Summer</td><td>115.776</td><td>0.326</td><td>0.1</td><td>8.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.783</td><td>0.333</td><td>0.1</td><td>8.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.786</td><td>0.336</td><td>0.1</td><td>8.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.786</td><td>0.336</td><td>0.1</td><td>8.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.782</td><td>0.332</td><td>0.1</td><td>8.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.770</td><td>0.320</td><td>0.1</td><td>7.9</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.756</td><td>0.306</td><td>0.1</td><td>7.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.712</td><td>0.262</td><td>0.1</td><td>6.5</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.674</td><td>0.224</td><td>0.1</td><td>5.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.641</td><td>0.191</td><td>0.1</td><td>4.7</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>11.625</td><td>0.0</td><td>600</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>716</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>824</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>1080</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1476</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1900</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2720</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>3512</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>4256</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>5008</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5744</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.600	0.150	0.1	3.7	O K	30 min Summer	115.630	0.180	0.1	4.4	O K	60 min Summer	115.665	0.215	0.1	5.3	O K	120 min Summer	115.704	0.254	0.1	6.3	O K	180 min Summer	115.727	0.277	0.1	6.8	O K	240 min Summer	115.743	0.293	0.1	7.2	O K	360 min Summer	115.764	0.314	0.1	7.8	O K	480 min Summer	115.776	0.326	0.1	8.1	O K	600 min Summer	115.783	0.333	0.1	8.2	O K	720 min Summer	115.786	0.336	0.1	8.3	O K	960 min Summer	115.786	0.336	0.1	8.3	O K	1440 min Summer	115.782	0.332	0.1	8.2	O K	2160 min Summer	115.770	0.320	0.1	7.9	O K	2880 min Summer	115.756	0.306	0.1	7.6	O K	4320 min Summer	115.712	0.262	0.1	6.5	O K	5760 min Summer	115.674	0.224	0.1	5.5	O K	7200 min Summer	115.641	0.191	0.1	4.7	O K	8640 min Summer	115.612	0.162	0.1	4.0	O K	10080 min Summer	115.587	0.137	0.1	3.4	O K	15 min Winter	115.618	0.168	0.1	4.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	19	30 min Summer	101.161	0.0	34	60 min Summer	61.321	0.0	64	120 min Summer	37.171	0.0	122	180 min Summer	27.735	0.0	182	240 min 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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 6 Cellular soakaway			
Date 10/02/2023 10:28 File PLOT 6 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.652	0.202	0.1	5.0	O K
60 min Winter	115.692	0.242	0.1	6.0	O K
120 min Winter	115.736	0.286	0.1	7.1	O K
180 min Winter	115.763	0.313	0.1	7.7	O K
240 min Winter	115.782	0.332	0.1	8.2	O K
360 min Winter	115.807	0.357	0.1	8.8	O K
480 min Winter	115.823	0.373	0.1	9.2	O K
600 min Winter	115.832	0.382	0.1	9.4	O K
720 min Winter	115.838	0.388	0.1	9.6	O K
960 min Winter	115.840	0.390	0.1	9.6	O K
1440 min Winter	115.832	0.382	0.1	9.4	O K
2160 min Winter	115.815	0.365	0.1	9.0	O K
2880 min Winter	115.793	0.343	0.1	8.5	O K
4320 min Winter	115.730	0.280	0.1	6.9	O K
5760 min Winter	115.675	0.225	0.1	5.5	O K
7200 min Winter	115.627	0.177	0.1	4.4	O K
8640 min Winter	115.586	0.136	0.1	3.4	O K
10080 min Winter	115.553	0.103	0.1	2.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	33		
60 min Winter	61.321	0.0	62		
120 min Winter	37.171	0.0	122		
180 min Winter	27.735	0.0	180		
240 min Winter	22.532	0.0	238		
360 min Winter	16.812	0.0	354		
480 min Winter	13.658	0.0	470		
600 min Winter	11.625	0.0	582		
720 min Winter	10.191	0.0	694		
960 min Winter	8.220	0.0	906		
1440 min Winter	6.071	0.0	1140		
2160 min Winter	4.484	0.0	1600		
2880 min Winter	3.617	0.0	2052		
4320 min Winter	2.580	0.0	2936		
5760 min Winter	2.030	0.0	3744		
7200 min Winter	1.686	0.0	4536		
8640 min Winter	1.448	0.0	5264		
10080 min Winter	1.274	0.0	5944		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway	
Date 10/02/2023 10:28 File PLOT 6 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway	
Date 10/02/2023 10:28 File PLOT 6 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
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Model Details

Storage is Online Cover Level (m) 116.450

Cellular Storage Structure

Invert Level (m) 115.450 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01800 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01800

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	26.0	26.0	0.401	0.0	34.2
0.400	26.0	34.2			

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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 712 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.557</td><td>0.107</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.578</td><td>0.128</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.602</td><td>0.152</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.628</td><td>0.178</td><td>0.1</td><td>4.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.643</td><td>0.193</td><td>0.1</td><td>4.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.653</td><td>0.203</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.664</td><td>0.214</td><td>0.1</td><td>5.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.670</td><td>0.220</td><td>0.1</td><td>5.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.672</td><td>0.222</td><td>0.1</td><td>5.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.673</td><td>0.223</td><td>0.1</td><td>5.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.672</td><td>0.222</td><td>0.1</td><td>5.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.666</td><td>0.216</td><td>0.1</td><td>5.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.653</td><td>0.203</td><td>0.1</td><td>5.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.639</td><td>0.189</td><td>0.1</td><td>4.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.602</td><td>0.152</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.572</td><td>0.122</td><td>0.1</td><td>3.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.548</td><td>0.098</td><td>0.1</td><td>2.4</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.529</td><td>0.079</td><td>0.1</td><td>2.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.515</td><td>0.065</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.570</td><td>0.120</td><td>0.1</td><td>3.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>360</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>480</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>546</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>604</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>728</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>996</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1408</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1816</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2596</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>3344</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>4040</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4752</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5352</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.557	0.107	0.1	2.6	O K	30 min Summer	115.578	0.128	0.1	3.2	O K	60 min Summer	115.602	0.152	0.1	3.8	O K	120 min Summer	115.628	0.178	0.1	4.4	O K	180 min Summer	115.643	0.193	0.1	4.8	O K	240 min Summer	115.653	0.203	0.1	5.0	O K	360 min Summer	115.664	0.214	0.1	5.3	O K	480 min Summer	115.670	0.220	0.1	5.4	O K	600 min Summer	115.672	0.222	0.1	5.5	O K	720 min Summer	115.673	0.223	0.1	5.5	O K	960 min Summer	115.672	0.222	0.1	5.5	O K	1440 min Summer	115.666	0.216	0.1	5.3	O K	2160 min Summer	115.653	0.203	0.1	5.0	O K	2880 min Summer	115.639	0.189	0.1	4.7	O K	4320 min Summer	115.602	0.152	0.1	3.8	O K	5760 min Summer	115.572	0.122	0.1	3.0	O K	7200 min Summer	115.548	0.098	0.1	2.4	O K	8640 min Summer	115.529	0.079	0.1	2.0	O K	10080 min Summer	115.515	0.065	0.1	1.6	O K	15 min Winter	115.570	0.120	0.1	3.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	19	30 min Summer	72.258	0.0	34	60 min Summer	43.800	0.0	64	120 min Summer	26.551	0.0	122	180 min Summer	19.811	0.0	182	240 min Summer	16.094	0.0	242	360 min Summer	12.009	0.0	360	480 min Summer	9.756	0.0	480	600 min Summer	8.304	0.0	546	720 min Summer	7.279	0.0	604	960 min Summer	5.871	0.0	728	1440 min Summer	4.337	0.0	996	2160 min Summer	3.203	0.0	1408	2880 min Summer	2.584	0.0	1816	4320 min Summer	1.843	0.0	2596	5760 min Summer	1.450	0.0	3344	7200 min Summer	1.204	0.0	4040	8640 min Summer	1.034	0.0	4752	10080 min Summer	0.910	0.0	5352	15 min Winter	119.204	0.0	19
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Date 23/02/2023 11:47 File PLOT 6 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 100 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.594	0.144	0.1	3.5	O K
60 min Winter	115.621	0.171	0.1	4.2	O K
120 min Winter	115.651	0.201	0.1	5.0	O K
180 min Winter	115.669	0.219	0.1	5.4	O K
240 min Winter	115.680	0.230	0.1	5.7	O K
360 min Winter	115.695	0.245	0.1	6.0	O K
480 min Winter	115.702	0.252	0.1	6.2	O K
600 min Winter	115.706	0.256	0.1	6.3	O K
720 min Winter	115.707	0.257	0.1	6.4	O K
960 min Winter	115.704	0.254	0.1	6.3	O K
1440 min Winter	115.695	0.245	0.1	6.1	O K
2160 min Winter	115.675	0.225	0.1	5.6	O K
2880 min Winter	115.653	0.203	0.1	5.0	O K
4320 min Winter	115.600	0.150	0.1	3.7	O K
5760 min Winter	115.557	0.107	0.1	2.6	O K
7200 min Winter	115.524	0.074	0.1	1.8	O K
8640 min Winter	115.503	0.053	0.1	1.3	O K
10080 min Winter	115.496	0.046	0.1	1.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	72.258	0.0	33		
60 min Winter	43.800	0.0	62		
120 min Winter	26.551	0.0	120		
180 min Winter	19.811	0.0	180		
240 min Winter	16.094	0.0	238		
360 min Winter	12.009	0.0	352		
480 min Winter	9.756	0.0	464		
600 min Winter	8.304	0.0	572		
720 min Winter	7.279	0.0	678		
960 min Winter	5.871	0.0	772		
1440 min Winter	4.337	0.0	1080		
2160 min Winter	3.203	0.0	1536		
2880 min Winter	2.584	0.0	1964		
4320 min Winter	1.843	0.0	2768		
5760 min Winter	1.450	0.0	3520		
7200 min Winter	1.204	0.0	4176		
8640 min Winter	1.034	0.0	4672		
10080 min Winter	0.910	0.0	5248		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From: To:	(ha)	0	4 0.012
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Model Details Storage is Online Cover Level (m) 116.450 Cellular Storage Structure Invert Level (m) 115.450 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01800 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01800 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>26.0</td><td>26.0</td><td>0.401</td><td>0.0</td><td>34.2</td></tr><tr><td>0.400</td><td>26.0</td><td>34.2</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	26.0	26.0	0.401	0.0	34.2	0.400	26.0	34.2			
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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 521 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.520</td><td>0.070</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.536</td><td>0.086</td><td>0.1</td><td>2.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.554</td><td>0.104</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.573</td><td>0.123</td><td>0.1</td><td>3.0</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.584</td><td>0.134</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.591</td><td>0.141</td><td>0.1</td><td>3.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.599</td><td>0.149</td><td>0.1</td><td>3.7</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.603</td><td>0.153</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.606</td><td>0.156</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.607</td><td>0.157</td><td>0.1</td><td>3.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.607</td><td>0.157</td><td>0.1</td><td>3.9</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.603</td><td>0.153</td><td>0.1</td><td>3.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.593</td><td>0.143</td><td>0.1</td><td>3.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.582</td><td>0.132</td><td>0.1</td><td>3.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.553</td><td>0.103</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.531</td><td>0.081</td><td>0.1</td><td>2.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.515</td><td>0.065</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.504</td><td>0.054</td><td>0.1</td><td>1.3</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.498</td><td>0.048</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.529</td><td>0.079</td><td>0.1</td><td>1.9</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>356</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>412</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>476</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>542</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>674</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>952</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1364</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1760</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2512</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>3232</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3896</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4576</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5248</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.520	0.070	0.1	1.7	O K	30 min Summer	115.536	0.086	0.1	2.1	O K	60 min Summer	115.554	0.104	0.1	2.6	O K	120 min Summer	115.573	0.123	0.1	3.0	O K	180 min Summer	115.584	0.134	0.1	3.3	O K	240 min Summer	115.591	0.141	0.1	3.5	O K	360 min Summer	115.599	0.149	0.1	3.7	O K	480 min Summer	115.603	0.153	0.1	3.8	O K	600 min Summer	115.606	0.156	0.1	3.8	O K	720 min Summer	115.607	0.157	0.1	3.9	O K	960 min Summer	115.607	0.157	0.1	3.9	O K	1440 min Summer	115.603	0.153	0.1	3.8	O K	2160 min Summer	115.593	0.143	0.1	3.5	O K	2880 min Summer	115.582	0.132	0.1	3.3	O K	4320 min Summer	115.553	0.103	0.1	2.6	O K	5760 min Summer	115.531	0.081	0.1	2.0	O K	7200 min Summer	115.515	0.065	0.1	1.6	O K	8640 min Summer	115.504	0.054	0.1	1.3	O K	10080 min Summer	115.498	0.048	0.1	1.2	O K	15 min Winter	115.529	0.079	0.1	1.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	19	30 min Summer	48.985	0.0	33	60 min Summer	30.377	0.0	62	120 min Summer	18.837	0.0	122	180 min Summer	14.244	0.0	182	240 min Summer	11.681	0.0	240	360 min Summer	8.833	0.0	356	480 min Summer	7.244	0.0	412	600 min Summer	6.211	0.0	476	720 min Summer	5.477	0.0	542	960 min Summer	4.460	0.0	674	1440 min Summer	3.338	0.0	952	2160 min Summer	2.499	0.0	1364	2880 min Summer	2.035	0.0	1760	4320 min Summer	1.471	0.0	2512	5760 min Summer	1.168	0.0	3232	7200 min Summer	0.977	0.0	3896	8640 min Summer	0.845	0.0	4576	10080 min Summer	0.746	0.0	5248	15 min Winter	78.992	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 6 Cellular soakaway			
Date 23/02/2023 11:48 File PLOT 6 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.546	0.096	0.1	2.4	O K
60 min Winter	115.567	0.117	0.1	2.9	O K
120 min Winter	115.589	0.139	0.1	3.4	O K
180 min Winter	115.602	0.152	0.1	3.8	O K
240 min Winter	115.611	0.161	0.1	4.0	O K
360 min Winter	115.621	0.171	0.1	4.2	O K
480 min Winter	115.626	0.176	0.1	4.4	O K
600 min Winter	115.628	0.178	0.1	4.4	O K
720 min Winter	115.629	0.179	0.1	4.4	O K
960 min Winter	115.628	0.178	0.1	4.4	O K
1440 min Winter	115.620	0.170	0.1	4.2	O K
2160 min Winter	115.603	0.153	0.1	3.8	O K
2880 min Winter	115.585	0.135	0.1	3.3	O K
4320 min Winter	115.543	0.093	0.1	2.3	O K
5760 min Winter	115.513	0.063	0.1	1.6	O K
7200 min Winter	115.498	0.048	0.1	1.2	O K
8640 min Winter	115.492	0.042	0.1	1.0	O K
10080 min Winter	115.488	0.038	0.1	0.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	33		
60 min Winter	30.377	0.0	62		
120 min Winter	18.837	0.0	120		
180 min Winter	14.244	0.0	178		
240 min Winter	11.681	0.0	236		
360 min Winter	8.833	0.0	348		
480 min Winter	7.244	0.0	456		
600 min Winter	6.211	0.0	552		
720 min Winter	5.477	0.0	578		
960 min Winter	4.460	0.0	730		
1440 min Winter	3.338	0.0	1038		
2160 min Winter	2.499	0.0	1472		
2880 min Winter	2.035	0.0	1900		
4320 min Winter	1.471	0.0	2640		
5760 min Winter	1.168	0.0	3296		
7200 min Winter	0.977	0.0	3888		
8640 min Winter	0.845	0.0	4584		
10080 min Winter	0.746	0.0	5344		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	30	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From: To:	(ha)	0	4 0.012
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<u>Model Details</u> Storage is Online Cover Level (m) 116.450 <u>Cellular Storage Structure</u> Invert Level (m) 115.450 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01800 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01800 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>26.0</td> <td>26.0</td> <td>0.401</td> <td>0.0</td> <td>34.2</td> </tr> <tr> <td>0.400</td> <td>26.0</td> <td>34.2</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	26.0	26.0	0.401	0.0	34.2	0.400	26.0	34.2			
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<u>Summary of Results for 2 year Return Period</u> Half Drain Time : 269 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.478</td><td>0.028</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.486</td><td>0.036</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.495</td><td>0.045</td><td>0.1</td><td>1.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.503</td><td>0.053</td><td>0.1</td><td>1.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.508</td><td>0.058</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.512</td><td>0.062</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.517</td><td>0.067</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.520</td><td>0.070</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.521</td><td>0.071</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.523</td><td>0.073</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.523</td><td>0.073</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.520</td><td>0.070</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.514</td><td>0.064</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.508</td><td>0.058</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.498</td><td>0.048</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.492</td><td>0.042</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.487</td><td>0.037</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.484</td><td>0.034</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.481</td><td>0.031</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.481</td><td>0.031</td><td>0.0</td><td>0.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>31.772</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>20.720</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>13.513</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>8.812</td><td>0.0</td><td>120</td></tr><tr><td>180 min Summer</td><td>6.863</td><td>0.0</td><td>156</td></tr><tr><td>240 min Summer</td><td>5.747</td><td>0.0</td><td>192</td></tr><tr><td>360 min Summer</td><td>4.476</td><td>0.0</td><td>260</td></tr><tr><td>480 min Summer</td><td>3.748</td><td>0.0</td><td>330</td></tr><tr><td>600 min Summer</td><td>3.266</td><td>0.0</td><td>400</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>470</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>608</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>880</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1260</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1640</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2336</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>3056</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3816</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4496</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5248</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.478	0.028	0.0	0.7	O K	30 min Summer	115.486	0.036	0.0	0.9	O K	60 min Summer	115.495	0.045	0.1	1.1	O K	120 min Summer	115.503	0.053	0.1	1.3	O K	180 min Summer	115.508	0.058	0.1	1.4	O K	240 min Summer	115.512	0.062	0.1	1.5	O K	360 min Summer	115.517	0.067	0.1	1.6	O K	480 min Summer	115.520	0.070	0.1	1.7	O K	600 min Summer	115.521	0.071	0.1	1.8	O K	720 min Summer	115.523	0.073	0.1	1.8	O K	960 min Summer	115.523	0.073	0.1	1.8	O K	1440 min Summer	115.520	0.070	0.1	1.7	O K	2160 min Summer	115.514	0.064	0.1	1.6	O K	2880 min Summer	115.508	0.058	0.1	1.4	O K	4320 min Summer	115.498	0.048	0.1	1.2	O K	5760 min Summer	115.492	0.042	0.1	1.0	O K	7200 min Summer	115.487	0.037	0.1	0.9	O K	8640 min Summer	115.484	0.034	0.0	0.8	O K	10080 min Summer	115.481	0.031	0.0	0.8	O K	15 min Winter	115.481	0.031	0.0	0.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	18	30 min Summer	20.720	0.0	33	60 min Summer	13.513	0.0	62	120 min Summer	8.812	0.0	120	180 min Summer	6.863	0.0	156	240 min Summer	5.747	0.0	192	360 min Summer	4.476	0.0	260	480 min Summer	3.748	0.0	330	600 min Summer	3.266	0.0	400	720 min Summer	2.919	0.0	470	960 min Summer	2.427	0.0	608	1440 min Summer	1.871	0.0	880	2160 min Summer	1.442	0.0	1260	2880 min Summer	1.199	0.0	1640	4320 min Summer	0.893	0.0	2336	5760 min Summer	0.724	0.0	3056	7200 min Summer	0.616	0.0	3816	8640 min Summer	0.539	0.0	4496	10080 min Summer	0.482	0.0	5248	15 min Winter	31.772	0.0	18
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Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																
30 min Winter	20.720	0.0	32																																																																																																																																																																																																
60 min Winter	13.513	0.0	60																																																																																																																																																																																																
120 min Winter	8.812	0.0	118																																																																																																																																																																																																
180 min Winter	6.863	0.0	172																																																																																																																																																																																																
240 min Winter	5.747	0.0	222																																																																																																																																																																																																
360 min Winter	4.476	0.0	280																																																																																																																																																																																																
480 min Winter	3.748	0.0	358																																																																																																																																																																																																
600 min Winter	3.266	0.0	436																																																																																																																																																																																																
720 min Winter	2.919	0.0	514																																																																																																																																																																																																
960 min Winter	2.427	0.0	664																																																																																																																																																																																																
1440 min Winter	1.871	0.0	940																																																																																																																																																																																																
2160 min Winter	1.442	0.0	1324																																																																																																																																																																																																
2880 min Winter	1.199	0.0	1672																																																																																																																																																																																																
4320 min Winter	0.893	0.0	2380																																																																																																																																																																																																
5760 min Winter	0.724	0.0	3112																																																																																																																																																																																																
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8640 min Winter	0.539	0.0	4576																																																																																																																																																																																																
10080 min Winter	0.482	0.0	5344																																																																																																																																																																																																
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.012
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway	
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Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 116.450

Cellular Storage Structure

Invert Level (m) 115.450 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01800 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01800

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	26.0	26.0	0.401	0.0	34.2
0.400	26.0	34.2			

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<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 239 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.472</td><td>0.022</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.479</td><td>0.029</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.486</td><td>0.036</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.493</td><td>0.043</td><td>0.1</td><td>1.1</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.497</td><td>0.047</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.500</td><td>0.050</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.505</td><td>0.055</td><td>0.1</td><td>1.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.507</td><td>0.057</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.509</td><td>0.059</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.510</td><td>0.060</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.510</td><td>0.060</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.507</td><td>0.057</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.503</td><td>0.053</td><td>0.1</td><td>1.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.499</td><td>0.049</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.492</td><td>0.042</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.487</td><td>0.037</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.483</td><td>0.033</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.480</td><td>0.030</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.478</td><td>0.028</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.475</td><td>0.025</td><td>0.0</td><td>0.6</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>120</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>148</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>178</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>248</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>320</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>390</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>460</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>596</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>864</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1232</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1588</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2336</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>3056</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3816</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4504</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>5240</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.472	0.022	0.0	0.5	O K	30 min Summer	115.479	0.029	0.0	0.7	O K	60 min Summer	115.486	0.036	0.0	0.9	O K	120 min Summer	115.493	0.043	0.1	1.1	O K	180 min Summer	115.497	0.047	0.1	1.2	O K	240 min Summer	115.500	0.050	0.1	1.2	O K	360 min Summer	115.505	0.055	0.1	1.3	O K	480 min Summer	115.507	0.057	0.1	1.4	O K	600 min Summer	115.509	0.059	0.1	1.4	O K	720 min Summer	115.510	0.060	0.1	1.5	O K	960 min Summer	115.510	0.060	0.1	1.5	O K	1440 min Summer	115.507	0.057	0.1	1.4	O K	2160 min Summer	115.503	0.053	0.1	1.3	O K	2880 min Summer	115.499	0.049	0.1	1.2	O K	4320 min Summer	115.492	0.042	0.1	1.0	O K	5760 min Summer	115.487	0.037	0.0	0.9	O K	7200 min Summer	115.483	0.033	0.0	0.8	O K	8640 min Summer	115.480	0.030	0.0	0.7	O K	10080 min Summer	115.478	0.028	0.0	0.7	O K	15 min Winter	115.475	0.025	0.0	0.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	18	30 min Summer	16.602	0.0	33	60 min Summer	10.968	0.0	62	120 min Summer	7.246	0.0	120	180 min Summer	5.686	0.0	148	240 min Summer	4.787	0.0	178	360 min Summer	3.757	0.0	248	480 min Summer	3.163	0.0	320	600 min Summer	2.768	0.0	390	720 min Summer	2.482	0.0	460	960 min Summer	2.075	0.0	596	1440 min Summer	1.612	0.0	864	2160 min Summer	1.252	0.0	1232	2880 min Summer	1.046	0.0	1588	4320 min Summer	0.785	0.0	2336	5760 min Summer	0.640	0.0	3056	7200 min Summer	0.546	0.0	3816	8640 min Summer	0.480	0.0	4504	10080 min Summer	0.430	0.0	5240	15 min Winter	25.129	0.0	18
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Date 23/02/2023 11:49 File PLOT 6 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.482	0.032	0.0	0.8	O K
60 min Winter	115.491	0.041	0.1	1.0	O K
120 min Winter	115.499	0.049	0.1	1.2	O K
180 min Winter	115.504	0.054	0.1	1.3	O K
240 min Winter	115.507	0.057	0.1	1.4	O K
360 min Winter	115.511	0.061	0.1	1.5	O K
480 min Winter	115.513	0.063	0.1	1.6	O K
600 min Winter	115.514	0.064	0.1	1.6	O K
720 min Winter	115.515	0.065	0.1	1.6	O K
960 min Winter	115.513	0.063	0.1	1.6	O K
1440 min Winter	115.508	0.058	0.1	1.4	O K
2160 min Winter	115.500	0.050	0.1	1.2	O K
2880 min Winter	115.495	0.045	0.1	1.1	O K
4320 min Winter	115.487	0.037	0.0	0.9	O K
5760 min Winter	115.481	0.031	0.0	0.8	O K
7200 min Winter	115.477	0.027	0.0	0.7	O K
8640 min Winter	115.474	0.024	0.0	0.6	O K
10080 min Winter	115.472	0.022	0.0	0.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	32		
60 min Winter	10.968	0.0	60		
120 min Winter	7.246	0.0	116		
180 min Winter	5.686	0.0	166		
240 min Winter	4.787	0.0	190		
360 min Winter	3.757	0.0	270		
480 min Winter	3.163	0.0	348		
600 min Winter	2.768	0.0	426		
720 min Winter	2.482	0.0	500		
960 min Winter	2.075	0.0	644		
1440 min Winter	1.612	0.0	910		
2160 min Winter	1.252	0.0	1276		
2880 min Winter	1.046	0.0	1648		
4320 min Winter	0.785	0.0	2380		
5760 min Winter	0.640	0.0	3112		
7200 min Winter	0.546	0.0	3824		
8640 min Winter	0.480	0.0	4576		
10080 min Winter	0.430	0.0	5344		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway	
Date 23/02/2023 11:49 File PLOT 6 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FEH
Return Period (years)	1
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.012

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

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Infrastruct CS Ltd		Page 4																		
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Cellular soakaway																			
Date 23/02/2023 11:49 File PLOT 6 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																			
Innovyze		Source Control 2020.1.3																		
Model Details Storage is Online Cover Level (m) 116.450 Cellular Storage Structure Invert Level (m) 115.450 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01800 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01800 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>26.0</td><td>26.0</td><td>0.401</td><td>0.0</td><td>34.2</td></tr><tr><td>0.400</td><td>26.0</td><td>34.2</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	26.0	26.0	0.401	0.0	34.2	0.400	26.0	34.2			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 1986 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>166.173</td><td>0.423</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>166.217</td><td>0.467</td><td>0.1</td><td>6.3</td><td>O K</td></tr><tr><td>60 min Summer</td><td>166.270</td><td>0.520</td><td>0.1</td><td>7.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>166.331</td><td>0.581</td><td>0.1</td><td>9.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>166.370</td><td>0.620</td><td>0.1</td><td>10.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>166.400</td><td>0.650</td><td>0.1</td><td>11.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.442</td><td>0.692</td><td>0.1</td><td>12.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>166.473</td><td>0.723</td><td>0.1</td><td>13.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.495</td><td>0.745</td><td>0.1</td><td>13.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.513</td><td>0.763</td><td>0.1</td><td>14.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.534</td><td>0.784</td><td>0.1</td><td>14.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.553</td><td>0.803</td><td>0.1</td><td>15.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.565</td><td>0.815</td><td>0.1</td><td>15.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.570</td><td>0.820</td><td>0.1</td><td>15.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.539</td><td>0.789</td><td>0.1</td><td>14.7</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.506</td><td>0.756</td><td>0.1</td><td>13.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.472</td><td>0.722</td><td>0.1</td><td>13.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.438</td><td>0.688</td><td>0.1</td><td>12.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.407</td><td>0.657</td><td>0.1</td><td>11.3</td><td>O K</td></tr><tr><td>15 min Winter</td><td>166.199</td><td>0.449</td><td>0.1</td><td>5.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>23</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>38</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>68</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>126</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>186</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>246</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>364</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>484</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>604</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>722</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>962</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>1376</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1716</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>2104</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2900</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>3696</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>4536</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>5272</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>6048</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>23</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.173	0.423	0.0	5.2	O K	30 min Summer	166.217	0.467	0.1	6.3	O K	60 min Summer	166.270	0.520	0.1	7.7	O K	120 min Summer	166.331	0.581	0.1	9.3	O K	180 min Summer	166.370	0.620	0.1	10.3	O K	240 min Summer	166.400	0.650	0.1	11.1	O K	360 min Summer	166.442	0.692	0.1	12.2	O K	480 min Summer	166.473	0.723	0.1	13.0	O K	600 min Summer	166.495	0.745	0.1	13.6	O K	720 min Summer	166.513	0.763	0.1	14.0	O K	960 min Summer	166.534	0.784	0.1	14.6	O K	1440 min Summer	166.553	0.803	0.1	15.1	O K	2160 min Summer	166.565	0.815	0.1	15.4	O K	2880 min Summer	166.570	0.820	0.1	15.5	O K	4320 min Summer	166.539	0.789	0.1	14.7	O K	5760 min Summer	166.506	0.756	0.1	13.9	O K	7200 min Summer	166.472	0.722	0.1	13.0	O K	8640 min Summer	166.438	0.688	0.1	12.1	O K	10080 min Summer	166.407	0.657	0.1	11.3	O K	15 min Winter	166.199	0.449	0.1	5.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	23	30 min Summer	101.161	0.0	38	60 min Summer	61.321	0.0	68	120 min Summer	37.171	0.0	126	180 min Summer	27.735	0.0	186	240 min Summer	22.532	0.0	246	360 min Summer	16.812	0.0	364	480 min Summer	13.658	0.0	484	600 min Summer	11.625	0.0	604	720 min Summer	10.191	0.0	722	960 min Summer	8.220	0.0	962	1440 min Summer	6.071	0.0	1376	2160 min Summer	4.484	0.0	1716	2880 min Summer	3.617	0.0	2104	4320 min Summer	2.580	0.0	2900	5760 min Summer	2.030	0.0	3696	7200 min Summer	1.686	0.0	4536	8640 min Summer	1.448	0.0	5272	10080 min Summer	1.274	0.0	6048	15 min Winter	166.885	0.0	23
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 6 Front Complex Plot 6			
Date 10/02/2023 10:20 File PLOT 6 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.248	0.498	0.1	7.1	O K
60 min Winter	166.308	0.558	0.1	8.7	O K
120 min Winter	166.377	0.627	0.1	10.5	O K
180 min Winter	166.422	0.672	0.1	11.7	O K
240 min Winter	166.455	0.705	0.1	12.5	O K
360 min Winter	166.504	0.754	0.1	13.8	O K
480 min Winter	166.539	0.789	0.1	14.7	O K
600 min Winter	166.566	0.816	0.1	15.4	O K
720 min Winter	166.587	0.837	0.1	16.0	O K
960 min Winter	166.613	0.863	0.1	16.6	O K
1440 min Winter	166.639	0.889	0.1	17.3	Flood Risk
2160 min Winter	166.649	0.899	0.1	17.6	Flood Risk
2880 min Winter	166.648	0.898	0.1	17.6	Flood Risk
4320 min Winter	166.601	0.851	0.1	16.3	O K
5760 min Winter	166.549	0.799	0.1	15.0	O K
7200 min Winter	166.496	0.746	0.1	13.6	O K
8640 min Winter	166.445	0.695	0.1	12.3	O K
10080 min Winter	166.396	0.646	0.1	11.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	37		
60 min Winter	61.321	0.0	66		
120 min Winter	37.171	0.0	124		
180 min Winter	27.735	0.0	184		
240 min Winter	22.532	0.0	242		
360 min Winter	16.812	0.0	360		
480 min Winter	13.658	0.0	476		
600 min Winter	11.625	0.0	592		
720 min Winter	10.191	0.0	708		
960 min Winter	8.220	0.0	938		
1440 min Winter	6.071	0.0	1386		
2160 min Winter	4.484	0.0	2008		
2880 min Winter	3.617	0.0	2256		
4320 min Winter	2.580	0.0	3160		
5760 min Winter	2.030	0.0	4040		
7200 min Winter	1.686	0.0	4896		
8640 min Winter	1.448	0.0	5704		
10080 min Winter	1.274	0.0	6456		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Front Complex Plot 6																																															
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Date 10/02/2023 10:20 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD																																											
Innovyze	Source Control 2019.1																																											
<u>Model Details</u> Storage is Online Cover Level (m) 166.750 <u>Complex Structure</u> <u>Cellular Storage</u> Invert Level (m) 165.750 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00513 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00513 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>12.0</td> <td>12.0</td> <td>0.401</td> <td>0.0</td> <td>17.5</td> </tr> <tr> <td>0.400</td> <td>12.0</td> <td>17.5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <u>Porous Car Park</u> <table style="width: 100%;"> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00513</td> <td>Width (m)</td> <td>10.0</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>8.7</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>24.2</td> <td>Slope (1:X)</td> <td>0.0</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Invert Level (m)</td> <td>166.150</td> <td>Membrane Depth (m)</td> <td>0</td> </tr> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	12.0	12.0	0.401	0.0	17.5	0.400	12.0	17.5				Infiltration Coefficient Base (m/hr)	0.00513	Width (m)	10.0	Membrane Percolation (mm/hr)	1000	Length (m)	8.7	Max Percolation (l/s)	24.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	166.150	Membrane Depth (m)	0
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Summer</td><td>166.315</td><td>0.565</td><td>0.1</td><td>8.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.328</td><td>0.578</td><td>0.1</td><td>9.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.338</td><td>0.588</td><td>0.1</td><td>9.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.347</td><td>0.597</td><td>0.1</td><td>9.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.359</td><td>0.609</td><td>0.1</td><td>10.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.367</td><td>0.617</td><td>0.1</td><td>10.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.368</td><td>0.618</td><td>0.1</td><td>10.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.343</td><td>0.593</td><td>0.1</td><td>9.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.317</td><td>0.567</td><td>0.1</td><td>8.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.292</td><td>0.542</td><td>0.1</td><td>8.3</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>8.304</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>900</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>1138</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1520</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1936</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2728</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>3520</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>4256</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>5016</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5744</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>23</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration Volume (l/s)	Max Volume (m³)	Status	15 min Summer	166.064	0.314	0.0	3.6	O K	30 min Summer	166.138	0.388	0.0	4.4	O K	60 min Summer	166.182	0.432	0.1	5.4	O K	120 min Summer	166.223	0.473	0.1	6.5	O K	180 min Summer	166.250	0.500	0.1	7.2	O K	240 min Summer	166.269	0.519	0.1	7.7	O K	360 min Summer	166.296	0.546	0.1	8.4	O K	480 min Summer	166.315	0.565	0.1	8.9	O K	600 min Summer	166.328	0.578	0.1	9.2	O K	720 min Summer	166.338	0.588	0.1	9.5	O K	960 min Summer	166.347	0.597	0.1	9.7	O K	1440 min Summer	166.359	0.609	0.1	10.0	O K	2160 min Summer	166.367	0.617	0.1	10.2	O K	2880 min Summer	166.368	0.618	0.1	10.3	O K	4320 min Summer	166.343	0.593	0.1	9.6	O K	5760 min Summer	166.317	0.567	0.1	8.9	O K	7200 min Summer	166.292	0.542	0.1	8.3	O K	8640 min Summer	166.269	0.519	0.1	7.7	O K	10080 min Summer	166.249	0.499	0.1	7.1	O K	15 min Winter	166.106	0.356	0.0	4.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	23	30 min Summer	72.258	0.0	38	60 min Summer	43.800	0.0	68	120 min Summer	26.551	0.0	126	180 min Summer	19.811	0.0	186	240 min Summer	16.094	0.0	244	360 min Summer	12.009	0.0	364	480 min Summer	9.756	0.0	482	600 min Summer	8.304	0.0	602	720 min Summer	7.279	0.0	720	960 min Summer	5.871	0.0	900	1440 min Summer	4.337	0.0	1138	2160 min Summer	3.203	0.0	1520	2880 min Summer	2.584	0.0	1936	4320 min Summer	1.843	0.0	2728	5760 min Summer	1.450	0.0	3520	7200 min Summer	1.204	0.0	4256	8640 min Summer	1.034	0.0	5016	10080 min Summer	0.910	0.0	5744	15 min Winter	119.204	0.0	23
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Summary of Results for 100 year Return Period <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>166.167</td><td>0.417</td><td>0.0</td><td>5.0</td><td>O K</td></tr><tr><td>60 min Winter</td><td>166.208</td><td>0.458</td><td>0.1</td><td>6.1</td><td>O K</td></tr><tr><td>120 min Winter</td><td>166.256</td><td>0.506</td><td>0.1</td><td>7.3</td><td>O K</td></tr><tr><td>180 min Winter</td><td>166.286</td><td>0.536</td><td>0.1</td><td>8.1</td><td>O K</td></tr><tr><td>240 min Winter</td><td>166.309</td><td>0.559</td><td>0.1</td><td>8.7</td><td>O K</td></tr><tr><td>360 min Winter</td><td>166.341</td><td>0.591</td><td>0.1</td><td>9.5</td><td>O K</td></tr><tr><td>480 min Winter</td><td>166.363</td><td>0.613</td><td>0.1</td><td>10.1</td><td>O K</td></tr><tr><td>600 min Winter</td><td>166.379</td><td>0.629</td><td>0.1</td><td>10.6</td><td>O K</td></tr><tr><td>720 min Winter</td><td>166.392</td><td>0.642</td><td>0.1</td><td>10.9</td><td>O K</td></tr><tr><td>960 min Winter</td><td>166.405</td><td>0.655</td><td>0.1</td><td>11.2</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>166.414</td><td>0.664</td><td>0.1</td><td>11.4</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>166.418</td><td>0.668</td><td>0.1</td><td>11.5</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>166.413</td><td>0.663</td><td>0.1</td><td>11.4</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>166.371</td><td>0.621</td><td>0.1</td><td>10.3</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>166.329</td><td>0.579</td><td>0.1</td><td>9.2</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>166.290</td><td>0.540</td><td>0.1</td><td>8.2</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>166.255</td><td>0.505</td><td>0.1</td><td>7.3</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>166.227</td><td>0.477</td><td>0.1</td><td>6.6</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>72.258</td><td>0.0</td><td>37</td></tr><tr><td>60 min Winter</td><td>43.800</td><td>0.0</td><td>66</td></tr><tr><td>120 min Winter</td><td>26.551</td><td>0.0</td><td>124</td></tr><tr><td>180 min Winter</td><td>19.811</td><td>0.0</td><td>182</td></tr><tr><td>240 min Winter</td><td>16.094</td><td>0.0</td><td>240</td></tr><tr><td>360 min Winter</td><td>12.009</td><td>0.0</td><td>358</td></tr><tr><td>480 min Winter</td><td>9.756</td><td>0.0</td><td>472</td></tr><tr><td>600 min Winter</td><td>8.304</td><td>0.0</td><td>588</td></tr><tr><td>720 min Winter</td><td>7.279</td><td>0.0</td><td>700</td></tr><tr><td>960 min Winter</td><td>5.871</td><td>0.0</td><td>922</td></tr><tr><td>1440 min Winter</td><td>4.337</td><td>0.0</td><td>1326</td></tr><tr><td>2160 min Winter</td><td>3.203</td><td>0.0</td><td>1648</td></tr><tr><td>2880 min Winter</td><td>2.584</td><td>0.0</td><td>2108</td></tr><tr><td>4320 min Winter</td><td>1.843</td><td>0.0</td><td>2984</td></tr><tr><td>5760 min Winter</td><td>1.450</td><td>0.0</td><td>3800</td></tr><tr><td>7200 min Winter</td><td>1.204</td><td>0.0</td><td>4536</td></tr><tr><td>8640 min Winter</td><td>1.034</td><td>0.0</td><td>5192</td></tr><tr><td>10080 min Winter</td><td>0.910</td><td>0.0</td><td>5848</td></tr></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	166.167	0.417	0.0	5.0	O K	60 min Winter	166.208	0.458	0.1	6.1	O K	120 min Winter	166.256	0.506	0.1	7.3	O K	180 min Winter	166.286	0.536	0.1	8.1	O K	240 min Winter	166.309	0.559	0.1	8.7	O K	360 min Winter	166.341	0.591	0.1	9.5	O K	480 min Winter	166.363	0.613	0.1	10.1	O K	600 min Winter	166.379	0.629	0.1	10.6	O K	720 min Winter	166.392	0.642	0.1	10.9	O K	960 min Winter	166.405	0.655	0.1	11.2	O K	1440 min Winter	166.414	0.664	0.1	11.4	O K	2160 min Winter	166.418	0.668	0.1	11.5	O K	2880 min Winter	166.413	0.663	0.1	11.4	O K	4320 min Winter	166.371	0.621	0.1	10.3	O K	5760 min Winter	166.329	0.579	0.1	9.2	O K	7200 min Winter	166.290	0.540	0.1	8.2	O K	8640 min Winter	166.255	0.505	0.1	7.3	O K	10080 min Winter	166.227	0.477	0.1	6.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	72.258	0.0	37	60 min Winter	43.800	0.0	66	120 min Winter	26.551	0.0	124	180 min Winter	19.811	0.0	182	240 min Winter	16.094	0.0	240	360 min Winter	12.009	0.0	358	480 min Winter	9.756	0.0	472	600 min Winter	8.304	0.0	588	720 min Winter	7.279	0.0	700	960 min Winter	5.871	0.0	922	1440 min Winter	4.337	0.0	1326	2160 min Winter	3.203	0.0	1648	2880 min Winter	2.584	0.0	2108	4320 min Winter	1.843	0.0	2984	5760 min Winter	1.450	0.0	3800	7200 min Winter	1.204	0.0	4536	8640 min Winter	1.034	0.0	5192	10080 min Winter	0.910	0.0	5848
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.018 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> <th>From:</th> <th>To: (ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4 0.009</td> <td>4</td> <td>8 0.009</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	Time (mins)	Area	From:	To: (ha)	From:	To: (ha)	0	4 0.009	4	8 0.009
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Front Complex Plot 6	
Date 23/02/2023 11:44 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 166.750

Complex Structure

Cellular Storage

Invert Level (m) 165.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00513 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00513

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	17.5
0.400	12.0	17.5			

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00513	Width (m)	10.0
Membrane Percolation (mm/hr)	1000	Length (m)	8.7
Max Percolation (l/s)	24.2	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	166.150	Membrane Depth (m)	0

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Summer</td><td>166.217</td><td>0.467</td><td>0.1</td><td>6.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.226</td><td>0.476</td><td>0.1</td><td>6.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.234</td><td>0.484</td><td>0.1</td><td>6.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.244</td><td>0.494</td><td>0.1</td><td>7.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.257</td><td>0.507</td><td>0.1</td><td>7.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.266</td><td>0.516</td><td>0.1</td><td>7.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.269</td><td>0.519</td><td>0.1</td><td>7.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.254</td><td>0.504</td><td>0.1</td><td>7.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.237</td><td>0.487</td><td>0.1</td><td>6.8</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.222</td><td>0.472</td><td>0.1</td><td>6.4</td><td>O K</td></tr><tr><td>8640 min 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min Summer</td><td>6.211</td><td>0.0</td><td>588</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>642</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>766</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>1028</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1448</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1848</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2640</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>3408</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>4112</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4840</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5456</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>23</td></tr></tbody></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	165.945	0.195	0.0	2.2	O K	30 min Summer	166.000	0.250	0.0	2.9	O K	60 min Summer	166.068	0.318	0.0	3.6	O K	120 min Summer	166.150	0.400	0.0	4.6	O K	180 min Summer	166.173	0.423	0.0	5.2	O K	240 min Summer	166.187	0.437	0.1	5.5	O K	360 min Summer	166.205	0.455	0.1	6.0	O K	480 min Summer	166.217	0.467	0.1	6.3	O K	600 min Summer	166.226	0.476	0.1	6.6	O K	720 min Summer	166.234	0.484	0.1	6.7	O K	960 min Summer	166.244	0.494	0.1	7.0	O K	1440 min Summer	166.257	0.507	0.1	7.3	O K	2160 min Summer	166.266	0.516	0.1	7.6	O K	2880 min Summer	166.269	0.519	0.1	7.7	O K	4320 min Summer	166.254	0.504	0.1	7.3	O K	5760 min Summer	166.237	0.487	0.1	6.8	O K	7200 min Summer	166.222	0.472	0.1	6.4	O K	8640 min Summer	166.209	0.459	0.1	6.1	O K	10080 min Summer	166.200	0.450	0.1	5.9	O K	15 min Winter	165.973	0.223	0.0	2.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	23	30 min Summer	48.985	0.0	38	60 min Summer	30.377	0.0	68	120 min Summer	18.837	0.0	128	180 min Summer	14.244	0.0	186	240 min Summer	11.681	0.0	244	360 min Summer	8.833	0.0	362	480 min Summer	7.244	0.0	480	600 min Summer	6.211	0.0	588	720 min Summer	5.477	0.0	642	960 min Summer	4.460	0.0	766	1440 min Summer	3.338	0.0	1028	2160 min Summer	2.499	0.0	1448	2880 min Summer	2.035	0.0	1848	4320 min Summer	1.471	0.0	2640	5760 min Summer	1.168	0.0	3408	7200 min Summer	0.977	0.0	4112	8640 min Summer	0.845	0.0	4840	10080 min Summer	0.746	0.0	5456	15 min Winter	78.992	0.0	23
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																			
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240 min Summer	11.681	0.0	244																																																																																																																																																																																																																					
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 6 Front Complex Plot 6			
Date 23/02/2023 11:45 File PLOT 6 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.035	0.285	0.0	3.2	O K
60 min Winter	166.111	0.361	0.0	4.1	O K
120 min Winter	166.172	0.422	0.0	5.1	O K
180 min Winter	166.195	0.445	0.1	5.8	O K
240 min Winter	166.212	0.462	0.1	6.2	O K
360 min Winter	166.236	0.486	0.1	6.8	O K
480 min Winter	166.253	0.503	0.1	7.2	O K
600 min Winter	166.265	0.515	0.1	7.6	O K
720 min Winter	166.274	0.524	0.1	7.8	O K
960 min Winter	166.284	0.534	0.1	8.1	O K
1440 min Winter	166.296	0.546	0.1	8.4	O K
2160 min Winter	166.302	0.552	0.1	8.5	O K
2880 min Winter	166.300	0.550	0.1	8.5	O K
4320 min Winter	166.270	0.520	0.1	7.7	O K
5760 min Winter	166.242	0.492	0.1	7.0	O K
7200 min Winter	166.218	0.468	0.1	6.3	O K
8640 min Winter	166.202	0.452	0.1	5.9	O K
10080 min Winter	166.195	0.445	0.1	5.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	38		
60 min Winter	30.377	0.0	68		
120 min Winter	18.837	0.0	124		
180 min Winter	14.244	0.0	182		
240 min Winter	11.681	0.0	240		
360 min Winter	8.833	0.0	354		
480 min Winter	7.244	0.0	468		
600 min Winter	6.211	0.0	580		
720 min Winter	5.477	0.0	690		
960 min Winter	4.460	0.0	892		
1440 min Winter	3.338	0.0	1112		
2160 min Winter	2.499	0.0	1580		
2880 min Winter	2.035	0.0	2020		
4320 min Winter	1.471	0.0	2856		
5760 min Winter	1.168	0.0	3624		
7200 min Winter	0.977	0.0	4256		
8640 min Winter	0.845	0.0	4848		
10080 min Winter	0.746	0.0	5544		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Front Complex Plot 6	
Date 23/02/2023 11:45 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FEH
Return Period (years)	30
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.018

Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:
	(ha)		(ha)
0	4 0.009	4	8 0.009

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Front Complex Plot 6																			
Date 23/02/2023 11:45 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD																			
Innovyze	Source Control 2020.1.3																			
Model Details Storage is Online Cover Level (m) 166.750 Complex Structure Cellular Storage Invert Level (m) 165.750 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00513 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00513 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>12.0</td><td>12.0</td><td>0.401</td><td>0.0</td><td>17.5</td></tr><tr><td>0.400</td><td>12.0</td><td>17.5</td><td></td><td></td><td></td></tr></tbody></table> Porous Car Park Infiltration Coefficient Base (m/hr) 0.00513 Width (m) 10.0 Membrane Percolation (mm/hr) 1000 Length (m) 8.7 Max Percolation (l/s) 24.2 Slope (1:X) 0.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 166.150 Membrane Depth (m) 0			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	12.0	12.0	0.401	0.0	17.5	0.400	12.0	17.5			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	12.0	12.0	0.401	0.0	17.5															
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<u>Summary of Results for 2 year Return Period</u> Half Drain Time : 1532 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>165.805</td><td>0.055</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>165.833</td><td>0.083</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>165.869</td><td>0.119</td><td>0.0</td><td>1.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>165.915</td><td>0.165</td><td>0.0</td><td>1.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>165.947</td><td>0.197</td><td>0.0</td><td>2.2</td><td>O K</td></tr><tr><td>240 min Summer</td><td>165.972</td><td>0.222</td><td>0.0</td><td>2.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.012</td><td>0.262</td><td>0.0</td><td>3.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>166.042</td><td>0.292</td><td>0.0</td><td>3.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.067</td><td>0.317</td><td>0.0</td><td>3.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.088</td><td>0.338</td><td>0.0</td><td>3.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.118</td><td>0.368</td><td>0.0</td><td>4.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.153</td><td>0.403</td><td>0.0</td><td>4.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.159</td><td>0.409</td><td>0.0</td><td>4.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.164</td><td>0.414</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.165</td><td>0.415</td><td>0.0</td><td>5.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.164</td><td>0.414</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.163</td><td>0.413</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.161</td><td>0.411</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.159</td><td>0.409</td><td>0.0</td><td>4.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>165.816</td><td>0.066</td><td>0.0</td><td>0.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>31.772</td><td>0.0</td><td>23</td></tr><tr><td>30 min Summer</td><td>20.720</td><td>0.0</td><td>38</td></tr><tr><td>60 min Summer</td><td>13.513</td><td>0.0</td><td>68</td></tr><tr><td>120 min Summer</td><td>8.812</td><td>0.0</td><td>128</td></tr><tr><td>180 min Summer</td><td>6.863</td><td>0.0</td><td>186</td></tr><tr><td>240 min Summer</td><td>5.747</td><td>0.0</td><td>246</td></tr><tr><td>360 min Summer</td><td>4.476</td><td>0.0</td><td>366</td></tr><tr><td>480 min Summer</td><td>3.748</td><td>0.0</td><td>486</td></tr><tr><td>600 min Summer</td><td>3.266</td><td>0.0</td><td>604</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>724</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>964</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>1442</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1668</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1964</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2768</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>3624</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>4464</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>5272</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>6144</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>23</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	165.805	0.055	0.0	0.6	O K	30 min Summer	165.833	0.083	0.0	0.9	O K	60 min Summer	165.869	0.119	0.0	1.4	O K	120 min Summer	165.915	0.165	0.0	1.9	O K	180 min Summer	165.947	0.197	0.0	2.2	O K	240 min Summer	165.972	0.222	0.0	2.5	O K	360 min Summer	166.012	0.262	0.0	3.0	O K	480 min Summer	166.042	0.292	0.0	3.3	O K	600 min Summer	166.067	0.317	0.0	3.6	O K	720 min Summer	166.088	0.338	0.0	3.8	O K	960 min Summer	166.118	0.368	0.0	4.2	O K	1440 min Summer	166.153	0.403	0.0	4.6	O K	2160 min Summer	166.159	0.409	0.0	4.8	O K	2880 min Summer	166.164	0.414	0.0	4.9	O K	4320 min Summer	166.165	0.415	0.0	5.0	O K	5760 min Summer	166.164	0.414	0.0	4.9	O K	7200 min Summer	166.163	0.413	0.0	4.9	O K	8640 min Summer	166.161	0.411	0.0	4.9	O K	10080 min Summer	166.159	0.409	0.0	4.8	O K	15 min Winter	165.816	0.066	0.0	0.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	23	30 min Summer	20.720	0.0	38	60 min Summer	13.513	0.0	68	120 min Summer	8.812	0.0	128	180 min Summer	6.863	0.0	186	240 min Summer	5.747	0.0	246	360 min Summer	4.476	0.0	366	480 min Summer	3.748	0.0	486	600 min Summer	3.266	0.0	604	720 min Summer	2.919	0.0	724	960 min Summer	2.427	0.0	964	1440 min Summer	1.871	0.0	1442	2160 min Summer	1.442	0.0	1668	2880 min Summer	1.199	0.0	1964	4320 min Summer	0.893	0.0	2768	5760 min Summer	0.724	0.0	3624	7200 min Summer	0.616	0.0	4464	8640 min Summer	0.539	0.0	5272	10080 min Summer	0.482	0.0	6144	15 min Winter	31.772	0.0	23
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480 min Winter	3.748	0.0	478																																																																																																																																																																																																
600 min Winter	3.266	0.0	596																																																																																																																																																																																																
720 min Winter	2.919	0.0	714																																																																																																																																																																																																
960 min Winter	2.427	0.0	936																																																																																																																																																																																																
1440 min Winter	1.871	0.0	1214																																																																																																																																																																																																
2160 min Winter	1.442	0.0	1576																																																																																																																																																																																																
2880 min Winter	1.199	0.0	1992																																																																																																																																																																																																
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5760 min Winter	0.724	0.0	3688																																																																																																																																																																																																
7200 min Winter	0.616	0.0	4536																																																																																																																																																																																																
8640 min Winter	0.539	0.0	5368																																																																																																																																																																																																
10080 min Winter	0.482	0.0	6256																																																																																																																																																																																																
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.018 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> <th>From:</th> <th>To: (ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4 0.009</td> <td>4</td> <td>8 0.009</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	Time (mins)	Area	From:	To: (ha)	From:	To: (ha)	0	4 0.009	4	8 0.009
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Innovyze	Source Control 2020.1.3																			
Model Details Storage is Online Cover Level (m) 166.750 Complex Structure Cellular Storage Invert Level (m) 165.750 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00513 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00513 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>12.0</td><td>12.0</td><td>0.401</td><td>0.0</td><td>17.5</td></tr><tr><td>0.400</td><td>12.0</td><td>17.5</td><td></td><td></td><td></td></tr></tbody></table> Porous Car Park Infiltration Coefficient Base (m/hr) 0.00513 Width (m) 10.0 Membrane Percolation (mm/hr) 1000 Length (m) 8.7 Max Percolation (l/s) 24.2 Slope (1:X) 0.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 166.150 Membrane Depth (m) 0			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	12.0	12.0	0.401	0.0	17.5	0.400	12.0	17.5			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	12.0	12.0	0.401	0.0	17.5															
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Summer</td><td>165.988</td><td>0.238</td><td>0.0</td><td>2.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.009</td><td>0.259</td><td>0.0</td><td>3.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.027</td><td>0.277</td><td>0.0</td><td>3.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.054</td><td>0.304</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.091</td><td>0.341</td><td>0.0</td><td>3.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.123</td><td>0.373</td><td>0.0</td><td>4.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.144</td><td>0.394</td><td>0.0</td><td>4.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.150</td><td>0.400</td><td>0.0</td><td>4.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.151</td><td>0.401</td><td>0.0</td><td>4.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.148</td><td>0.398</td><td>0.0</td><td>4.5</td><td>O K</td></tr><tr><td>8640 min 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Summer	165.809	0.059	0.0	0.7	O K	60 min Summer	165.839	0.089	0.0	1.0	O K	120 min Summer	165.878	0.128	0.0	1.5	O K	180 min Summer	165.906	0.156	0.0	1.8	O K	240 min Summer	165.927	0.177	0.0	2.0	O K	360 min Summer	165.961	0.211	0.0	2.4	O K	480 min Summer	165.988	0.238	0.0	2.7	O K	600 min Summer	166.009	0.259	0.0	3.0	O K	720 min Summer	166.027	0.277	0.0	3.2	O K	960 min Summer	166.054	0.304	0.0	3.5	O K	1440 min Summer	166.091	0.341	0.0	3.9	O K	2160 min Summer	166.123	0.373	0.0	4.3	O K	2880 min Summer	166.144	0.394	0.0	4.5	O K	4320 min Summer	166.150	0.400	0.0	4.6	O K	5760 min Summer	166.151	0.401	0.0	4.6	O K	7200 min Summer	166.148	0.398	0.0	4.5	O K	8640 min Summer	166.143	0.393	0.0	4.5	O K	10080 min Summer	166.135	0.385	0.0	4.4	O K	15 min Winter	165.794	0.044	0.0	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	23	30 min Summer	16.602	0.0	38	60 min Summer	10.968	0.0	68	120 min Summer	7.246	0.0	126	180 min Summer	5.686	0.0	186	240 min Summer	4.787	0.0	246	360 min Summer	3.757	0.0	366	480 min Summer	3.163	0.0	486	600 min Summer	2.768	0.0	604	720 min Summer	2.482	0.0	724	960 min Summer	2.075	0.0	964	1440 min Summer	1.612	0.0	1442	2160 min Summer	1.252	0.0	2144	2880 min Summer	1.046	0.0	2480	4320 min Summer	0.785	0.0	3240	5760 min Summer	0.640	0.0	3992	7200 min Summer	0.546	0.0	4896	8640 min Summer	0.480	0.0	5712	10080 min Summer	0.430	0.0	6552	15 min Winter	25.129	0.0	23
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Date 23/02/2023 11:46 File PLOT 6 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	165.821	0.071	0.0	0.8	O K
60 min Winter	165.855	0.105	0.0	1.2	O K
120 min Winter	165.898	0.148	0.0	1.7	O K
180 min Winter	165.930	0.180	0.0	2.0	O K
240 min Winter	165.954	0.204	0.0	2.3	O K
360 min Winter	165.993	0.243	0.0	2.8	O K
480 min Winter	166.023	0.273	0.0	3.1	O K
600 min Winter	166.047	0.297	0.0	3.4	O K
720 min Winter	166.068	0.318	0.0	3.6	O K
960 min Winter	166.100	0.350	0.0	4.0	O K
1440 min Winter	166.143	0.393	0.0	4.5	O K
2160 min Winter	166.157	0.407	0.0	4.7	O K
2880 min Winter	166.162	0.412	0.0	4.9	O K
4320 min Winter	166.163	0.413	0.0	4.9	O K
5760 min Winter	166.162	0.412	0.0	4.9	O K
7200 min Winter	166.160	0.410	0.0	4.8	O K
8640 min Winter	166.158	0.408	0.0	4.8	O K
10080 min Winter	166.156	0.406	0.0	4.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	37		
60 min Winter	10.968	0.0	66		
120 min Winter	7.246	0.0	126		
180 min Winter	5.686	0.0	184		
240 min Winter	4.787	0.0	242		
360 min Winter	3.757	0.0	360		
480 min Winter	3.163	0.0	478		
600 min Winter	2.768	0.0	596		
720 min Winter	2.482	0.0	712		
960 min Winter	2.075	0.0	944		
1440 min Winter	1.612	0.0	1402		
2160 min Winter	1.252	0.0	1776		
2880 min Winter	1.046	0.0	2112		
4320 min Winter	0.785	0.0	3024		
5760 min Winter	0.640	0.0	3920		
7200 min Winter	0.546	0.0	4760		
8640 min Winter	0.480	0.0	5704		
10080 min Winter	0.430	0.0	6656		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 6 Front Complex Plot 6																																															
Date 23/02/2023 11:46 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD																																															
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.018 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> <th>From:</th> <th>To: (ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4 0.009</td> <td>4</td> <td>8 0.009</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	Time (mins)	Area	From:	To: (ha)	From:	To: (ha)	0	4 0.009	4	8 0.009
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Date 23/02/2023 11:46 File PLOT 6 FRONT PERMEABLE....	Designed by APL Checked by MBD																			
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Model Details Storage is Online Cover Level (m) 166.750 Complex Structure Cellular Storage Invert Level (m) 165.750 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00513 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00513 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>12.0</td><td>12.0</td><td>0.401</td><td>0.0</td><td>17.5</td></tr><tr><td>0.400</td><td>12.0</td><td>17.5</td><td></td><td></td><td></td></tr></tbody></table> Porous Car Park Infiltration Coefficient Base (m/hr) 0.00513 Width (m) 10.0 Membrane Percolation (mm/hr) 1000 Length (m) 8.7 Max Percolation (l/s) 24.2 Slope (1:X) 0.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 166.150 Membrane Depth (m) 0			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	12.0	12.0	0.401	0.0	17.5	0.400	12.0	17.5			
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Summer</td><td>115.629</td><td>0.579</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.647</td><td>0.597</td><td>0.0</td><td>5.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.659</td><td>0.609</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.667</td><td>0.617</td><td>0.0</td><td>5.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.668</td><td>0.618</td><td>0.0</td><td>5.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.660</td><td>0.610</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.646</td><td>0.596</td><td>0.0</td><td>5.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.588</td><td>0.538</td><td>0.0</td><td>4.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.539</td><td>0.489</td><td>0.0</td><td>4.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.494</td><td>0.444</td><td>0.0</td><td>3.8</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.455</td><td>0.405</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.418</td><td>0.368</td><td>0.0</td><td>3.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.334</td><td>0.284</td><td>0.0</td><td>2.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>954</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>1182</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1560</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1964</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2808</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>3632</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>4400</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>5192</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5960</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.304	0.254	0.0	2.2	O K	30 min Summer	115.356	0.306	0.0	2.6	O K	60 min Summer	115.416	0.366	0.0	3.1	O K	120 min Summer	115.486	0.436	0.0	3.7	O K	180 min Summer	115.529	0.479	0.0	4.1	O K	240 min Summer	115.560	0.510	0.0	4.4	O K	360 min Summer	115.602	0.552	0.0	4.7	O K	480 min Summer	115.629	0.579	0.0	4.9	O K	600 min Summer	115.647	0.597	0.0	5.1	O K	720 min Summer	115.659	0.609	0.0	5.2	O K	960 min Summer	115.667	0.617	0.0	5.3	O K	1440 min Summer	115.668	0.618	0.0	5.3	O K	2160 min Summer	115.660	0.610	0.0	5.2	O K	2880 min Summer	115.646	0.596	0.0	5.1	O K	4320 min Summer	115.588	0.538	0.0	4.6	O K	5760 min Summer	115.539	0.489	0.0	4.2	O K	7200 min Summer	115.494	0.444	0.0	3.8	O K	8640 min Summer	115.455	0.405	0.0	3.5	O K	10080 min Summer	115.418	0.368	0.0	3.2	O K	15 min Winter	115.334	0.284	0.0	2.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	19	30 min Summer	101.161	0.0	34	60 min Summer	61.321	0.0	64	120 min Summer	37.171	0.0	124	180 min Summer	27.735	0.0	182	240 min Summer	22.532	0.0	242	360 min Summer	16.812	0.0	362	480 min Summer	13.658	0.0	482	600 min Summer	11.625	0.0	602	720 min Summer	10.191	0.0	720	960 min Summer	8.220	0.0	954	1440 min Summer	6.071	0.0	1182	2160 min Summer	4.484	0.0	1560	2880 min Summer	3.617	0.0	1964	4320 min Summer	2.580	0.0	2808	5760 min Summer	2.030	0.0	3632	7200 min Summer	1.686	0.0	4400	8640 min Summer	1.448	0.0	5192	10080 min Summer	1.274	0.0	5960	15 min Winter	166.885	0.0	19
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Date 20/02/2023 16:49 File PLOT 5 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.393	0.343	0.0	2.9	O K
60 min Winter	115.461	0.411	0.0	3.5	O K
120 min Winter	115.540	0.490	0.0	4.2	O K
180 min Winter	115.589	0.539	0.0	4.6	O K
240 min Winter	115.625	0.575	0.0	4.9	O K
360 min Winter	115.674	0.624	0.0	5.3	O K
480 min Winter	115.707	0.657	0.0	5.6	O K
600 min Winter	115.730	0.680	0.0	5.8	O K
720 min Winter	115.746	0.696	0.0	6.0	O K
960 min Winter	115.760	0.710	0.0	6.1	O K
1440 min Winter	115.762	0.712	0.0	6.1	O K
2160 min Winter	115.750	0.700	0.0	6.0	O K
2880 min Winter	115.731	0.681	0.0	5.8	O K
4320 min Winter	115.651	0.601	0.0	5.1	O K
5760 min Winter	115.581	0.531	0.0	4.5	O K
7200 min Winter	115.518	0.468	0.0	4.0	O K
8640 min Winter	115.462	0.412	0.0	3.5	O K
10080 min Winter	115.412	0.362	0.0	3.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	33		
60 min Winter	61.321	0.0	64		
120 min Winter	37.171	0.0	122		
180 min Winter	27.735	0.0	180		
240 min Winter	22.532	0.0	240		
360 min Winter	16.812	0.0	356		
480 min Winter	13.658	0.0	472		
600 min Winter	11.625	0.0	586		
720 min Winter	10.191	0.0	700		
960 min Winter	8.220	0.0	922		
1440 min Winter	6.071	0.0	1328		
2160 min Winter	4.484	0.0	1664		
2880 min Winter	3.617	0.0	2132		
4320 min Winter	2.580	0.0	3028		
5760 min Winter	2.030	0.0	3920		
7200 min Winter	1.686	0.0	4752		
8640 min Winter	1.448	0.0	5544		
10080 min Winter	1.274	0.0	6360		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.007 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.007</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+40	Time (mins)	Area	From:	To: (ha)	0	4 0.007
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Innovyze Source Control 2019.1		

Model Details

Storage is Online Cover Level (m) 116.450

Cellular Storage Structure

Invert Level (m) 115.050 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01700 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01700

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	0.801	0.0	18.6
0.800	9.0	18.6			

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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 1100 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.231</td><td>0.181</td><td>0.0</td><td>1.5</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.267</td><td>0.217</td><td>0.0</td><td>1.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.310</td><td>0.260</td><td>0.0</td><td>2.2</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.358</td><td>0.308</td><td>0.0</td><td>2.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.387</td><td>0.337</td><td>0.0</td><td>2.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.407</td><td>0.357</td><td>0.0</td><td>3.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.433</td><td>0.383</td><td>0.0</td><td>3.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.449</td><td>0.399</td><td>0.0</td><td>3.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.458</td><td>0.408</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.464</td><td>0.414</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.465</td><td>0.415</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.462</td><td>0.412</td><td>0.0</td><td>3.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.451</td><td>0.401</td><td>0.0</td><td>3.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.437</td><td>0.387</td><td>0.0</td><td>3.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.389</td><td>0.339</td><td>0.0</td><td>2.9</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.348</td><td>0.298</td><td>0.0</td><td>2.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.312</td><td>0.262</td><td>0.0</td><td>2.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.280</td><td>0.230</td><td>0.0</td><td>2.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.252</td><td>0.202</td><td>0.0</td><td>1.7</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.253</td><td>0.203</td><td>0.0</td><td>1.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>600</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>838</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>1084</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1492</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1904</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2724</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>3520</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>4320</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>5096</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5848</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.231	0.181	0.0	1.5	O K	30 min 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Summer	16.094	0.0	242	360 min Summer	12.009	0.0	362	480 min Summer	9.756	0.0	482	600 min Summer	8.304	0.0	600	720 min Summer	7.279	0.0	720	960 min Summer	5.871	0.0	838	1440 min Summer	4.337	0.0	1084	2160 min Summer	3.203	0.0	1492	2880 min Summer	2.584	0.0	1904	4320 min Summer	1.843	0.0	2724	5760 min Summer	1.450	0.0	3520	7200 min Summer	1.204	0.0	4320	8640 min Summer	1.034	0.0	5096	10080 min Summer	0.910	0.0	5848	15 min Winter	119.204	0.0	19
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Summary of Results for 100 year Return Period <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>115.294</td><td>0.244</td><td>0.0</td><td>2.1</td><td>O K</td></tr><tr><td>60 min Winter</td><td>115.342</td><td>0.292</td><td>0.0</td><td>2.5</td><td>O K</td></tr><tr><td>120 min Winter</td><td>115.396</td><td>0.346</td><td>0.0</td><td>3.0</td><td>O K</td></tr><tr><td>180 min Winter</td><td>115.430</td><td>0.380</td><td>0.0</td><td>3.2</td><td>O K</td></tr><tr><td>240 min Winter</td><td>115.453</td><td>0.403</td><td>0.0</td><td>3.4</td><td>O K</td></tr><tr><td>360 min Winter</td><td>115.485</td><td>0.435</td><td>0.0</td><td>3.7</td><td>O K</td></tr><tr><td>480 min Winter</td><td>115.505</td><td>0.455</td><td>0.0</td><td>3.9</td><td>O K</td></tr><tr><td>600 min Winter</td><td>115.517</td><td>0.467</td><td>0.0</td><td>4.0</td><td>O K</td></tr><tr><td>720 min Winter</td><td>115.526</td><td>0.476</td><td>0.0</td><td>4.1</td><td>O K</td></tr><tr><td>960 min Winter</td><td>115.529</td><td>0.479</td><td>0.0</td><td>4.1</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>115.523</td><td>0.473</td><td>0.0</td><td>4.0</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>115.508</td><td>0.458</td><td>0.0</td><td>3.9</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>115.487</td><td>0.437</td><td>0.0</td><td>3.7</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>115.419</td><td>0.369</td><td>0.0</td><td>3.2</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>115.360</td><td>0.310</td><td>0.0</td><td>2.7</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>115.309</td><td>0.259</td><td>0.0</td><td>2.2</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>115.264</td><td>0.214</td><td>0.0</td><td>1.8</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>115.226</td><td>0.176</td><td>0.0</td><td>1.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>72.258</td><td>0.0</td><td>33</td></tr><tr><td>60 min Winter</td><td>43.800</td><td>0.0</td><td>62</td></tr><tr><td>120 min Winter</td><td>26.551</td><td>0.0</td><td>122</td></tr><tr><td>180 min Winter</td><td>19.811</td><td>0.0</td><td>180</td></tr><tr><td>240 min Winter</td><td>16.094</td><td>0.0</td><td>238</td></tr><tr><td>360 min Winter</td><td>12.009</td><td>0.0</td><td>354</td></tr><tr><td>480 min Winter</td><td>9.756</td><td>0.0</td><td>470</td></tr><tr><td>600 min Winter</td><td>8.304</td><td>0.0</td><td>584</td></tr><tr><td>720 min Winter</td><td>7.279</td><td>0.0</td><td>694</td></tr><tr><td>960 min Winter</td><td>5.871</td><td>0.0</td><td>908</td></tr><tr><td>1440 min Winter</td><td>4.337</td><td>0.0</td><td>1142</td></tr><tr><td>2160 min Winter</td><td>3.203</td><td>0.0</td><td>1604</td></tr><tr><td>2880 min Winter</td><td>2.584</td><td>0.0</td><td>2072</td></tr><tr><td>4320 min Winter</td><td>1.843</td><td>0.0</td><td>2940</td></tr><tr><td>5760 min Winter</td><td>1.450</td><td>0.0</td><td>3800</td></tr><tr><td>7200 min Winter</td><td>1.204</td><td>0.0</td><td>4608</td></tr><tr><td>8640 min Winter</td><td>1.034</td><td>0.0</td><td>5360</td></tr><tr><td>10080 min Winter</td><td>0.910</td><td>0.0</td><td>6144</td></tr></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	115.294	0.244	0.0	2.1	O K	60 min Winter	115.342	0.292	0.0	2.5	O K	120 min Winter	115.396	0.346	0.0	3.0	O K	180 min Winter	115.430	0.380	0.0	3.2	O K	240 min Winter	115.453	0.403	0.0	3.4	O K	360 min Winter	115.485	0.435	0.0	3.7	O K	480 min Winter	115.505	0.455	0.0	3.9	O K	600 min Winter	115.517	0.467	0.0	4.0	O K	720 min Winter	115.526	0.476	0.0	4.1	O K	960 min Winter	115.529	0.479	0.0	4.1	O K	1440 min Winter	115.523	0.473	0.0	4.0	O K	2160 min Winter	115.508	0.458	0.0	3.9	O K	2880 min Winter	115.487	0.437	0.0	3.7	O K	4320 min Winter	115.419	0.369	0.0	3.2	O K	5760 min Winter	115.360	0.310	0.0	2.7	O K	7200 min Winter	115.309	0.259	0.0	2.2	O K	8640 min Winter	115.264	0.214	0.0	1.8	O K	10080 min Winter	115.226	0.176	0.0	1.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	72.258	0.0	33	60 min Winter	43.800	0.0	62	120 min Winter	26.551	0.0	122	180 min Winter	19.811	0.0	180	240 min Winter	16.094	0.0	238	360 min Winter	12.009	0.0	354	480 min Winter	9.756	0.0	470	600 min Winter	8.304	0.0	584	720 min Winter	7.279	0.0	694	960 min Winter	5.871	0.0	908	1440 min Winter	4.337	0.0	1142	2160 min Winter	3.203	0.0	1604	2880 min Winter	2.584	0.0	2072	4320 min Winter	1.843	0.0	2940	5760 min Winter	1.450	0.0	3800	7200 min Winter	1.204	0.0	4608	8640 min Winter	1.034	0.0	5360	10080 min Winter	0.910	0.0	6144
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Infrastruct CS Ltd		Page 3
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway	
Date 23/02/2023 11:41 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Infrastruct CS Ltd		Page 4																		
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Innovyze		Source Control 2020.1.3																		
<u>Model Details</u> Storage is Online Cover Level (m) 116.450 <u>Cellular Storage Structure</u> Invert Level (m) 115.050 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01700 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01700 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>9.0</td> <td>9.0</td> <td>0.801</td> <td>0.0</td> <td>18.6</td> </tr> <tr> <td>0.800</td> <td>9.0</td> <td>18.6</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	9.0	9.0	0.801	0.0	18.6	0.800	9.0	18.6			
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Summer	115.196	0.146	0.0	1.3	O K	60 min Summer	115.229	0.179	0.0	1.5	O K	120 min Summer	115.265	0.215	0.0	1.8	O K	180 min Summer	115.287	0.237	0.0	2.0	O K	240 min Summer	115.303	0.253	0.0	2.2	O K	360 min Summer	115.323	0.273	0.0	2.3	O K	480 min Summer	115.334	0.284	0.0	2.4	O K	600 min Summer	115.341	0.291	0.0	2.5	O K	720 min Summer	115.345	0.295	0.0	2.5	O K	960 min Summer	115.348	0.298	0.0	2.6	O K	1440 min Summer	115.349	0.299	0.0	2.6	O K	2160 min Summer	115.342	0.292	0.0	2.5	O K	2880 min Summer	115.331	0.281	0.0	2.4	O K	4320 min Summer	115.294	0.244	0.0	2.1	O K	5760 min Summer	115.261	0.211	0.0	1.8	O K	7200 min Summer	115.233	0.183	0.0	1.6	O K	8640 min Summer	115.207	0.157	0.0	1.3	O K	10080 min Summer	115.185	0.135	0.0	1.2	O K	15 min Winter	115.184	0.134	0.0	1.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	19	30 min Summer	48.985	0.0	34	60 min Summer	30.377	0.0	64	120 min Summer	18.837	0.0	122	180 min Summer	14.244	0.0	182	240 min Summer	11.681	0.0	242	360 min Summer	8.833	0.0	362	480 min Summer	7.244	0.0	480	600 min Summer	6.211	0.0	596	720 min Summer	5.477	0.0	646	960 min Summer	4.460	0.0	770	1440 min Summer	3.338	0.0	1028	2160 min Summer	2.499	0.0	1448	2880 min Summer	2.035	0.0	1872	4320 min Summer	1.471	0.0	2680	5760 min Summer	1.168	0.0	3464	7200 min Summer	0.977	0.0	4248	8640 min Summer	0.845	0.0	4936	10080 min Summer	0.746	0.0	5656	15 min Winter	78.992	0.0	19
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60 min Summer	115.229	0.179	0.0	1.5	O K																																																																																																																																																																																																																		
120 min Summer	115.265	0.215	0.0	1.8	O K																																																																																																																																																																																																																		
180 min Summer	115.287	0.237	0.0	2.0	O K																																																																																																																																																																																																																		
240 min Summer	115.303	0.253	0.0	2.2	O K																																																																																																																																																																																																																		
360 min Summer	115.323	0.273	0.0	2.3	O K																																																																																																																																																																																																																		
480 min Summer	115.334	0.284	0.0	2.4	O K																																																																																																																																																																																																																		
600 min Summer	115.341	0.291	0.0	2.5	O K																																																																																																																																																																																																																		
720 min Summer	115.345	0.295	0.0	2.5	O K																																																																																																																																																																																																																		
960 min Summer	115.348	0.298	0.0	2.6	O K																																																																																																																																																																																																																		
1440 min Summer	115.349	0.299	0.0	2.6	O K																																																																																																																																																																																																																		
2160 min Summer	115.342	0.292	0.0	2.5	O K																																																																																																																																																																																																																		
2880 min Summer	115.331	0.281	0.0	2.4	O K																																																																																																																																																																																																																		
4320 min Summer	115.294	0.244	0.0	2.1	O K																																																																																																																																																																																																																		
5760 min Summer	115.261	0.211	0.0	1.8	O K																																																																																																																																																																																																																		
7200 min Summer	115.233	0.183	0.0	1.6	O K																																																																																																																																																																																																																		
8640 min Summer	115.207	0.157	0.0	1.3	O K																																																																																																																																																																																																																		
10080 min Summer	115.185	0.135	0.0	1.2	O K																																																																																																																																																																																																																		
15 min Winter	115.184	0.134	0.0	1.1	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	78.992	0.0	19																																																																																																																																																																																																																				
30 min Summer	48.985	0.0	34																																																																																																																																																																																																																				
60 min Summer	30.377	0.0	64																																																																																																																																																																																																																				
120 min Summer	18.837	0.0	122																																																																																																																																																																																																																				
180 min Summer	14.244	0.0	182																																																																																																																																																																																																																				
240 min Summer	11.681	0.0	242																																																																																																																																																																																																																				
360 min Summer	8.833	0.0	362																																																																																																																																																																																																																				
480 min Summer	7.244	0.0	480																																																																																																																																																																																																																				
600 min Summer	6.211	0.0	596																																																																																																																																																																																																																				
720 min Summer	5.477	0.0	646																																																																																																																																																																																																																				
960 min Summer	4.460	0.0	770																																																																																																																																																																																																																				
1440 min Summer	3.338	0.0	1028																																																																																																																																																																																																																				
2160 min Summer	2.499	0.0	1448																																																																																																																																																																																																																				
2880 min Summer	2.035	0.0	1872																																																																																																																																																																																																																				
4320 min Summer	1.471	0.0	2680																																																																																																																																																																																																																				
5760 min Summer	1.168	0.0	3464																																																																																																																																																																																																																				
7200 min Summer	0.977	0.0	4248																																																																																																																																																																																																																				
8640 min Summer	0.845	0.0	4936																																																																																																																																																																																																																				
10080 min Summer	0.746	0.0	5656																																																																																																																																																																																																																				
15 min Winter	78.992	0.0	19																																																																																																																																																																																																																				
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Cellular soakaway			
Date 23/02/2023 11:41 File PLOT 5 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.214	0.164	0.0	1.4	O K
60 min Winter	115.251	0.201	0.0	1.7	O K
120 min Winter	115.292	0.242	0.0	2.1	O K
180 min Winter	115.318	0.268	0.0	2.3	O K
240 min Winter	115.336	0.286	0.0	2.4	O K
360 min Winter	115.360	0.310	0.0	2.7	O K
480 min Winter	115.375	0.325	0.0	2.8	O K
600 min Winter	115.385	0.335	0.0	2.9	O K
720 min Winter	115.391	0.341	0.0	2.9	O K
960 min Winter	115.393	0.343	0.0	2.9	O K
1440 min Winter	115.392	0.342	0.0	2.9	O K
2160 min Winter	115.379	0.329	0.0	2.8	O K
2880 min Winter	115.362	0.312	0.0	2.7	O K
4320 min Winter	115.307	0.257	0.0	2.2	O K
5760 min Winter	115.259	0.209	0.0	1.8	O K
7200 min Winter	115.218	0.168	0.0	1.4	O K
8640 min Winter	115.183	0.133	0.0	1.1	O K
10080 min Winter	115.154	0.104	0.0	0.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	33		
60 min Winter	30.377	0.0	62		
120 min Winter	18.837	0.0	120		
180 min Winter	14.244	0.0	180		
240 min Winter	11.681	0.0	238		
360 min Winter	8.833	0.0	352		
480 min Winter	7.244	0.0	466		
600 min Winter	6.211	0.0	578		
720 min Winter	5.477	0.0	686		
960 min Winter	4.460	0.0	884		
1440 min Winter	3.338	0.0	1108		
2160 min Winter	2.499	0.0	1576		
2880 min Winter	2.035	0.0	2020		
4320 min Winter	1.471	0.0	2892		
5760 min Winter	1.168	0.0	3688		
7200 min Winter	0.977	0.0	4472		
8640 min Winter	0.845	0.0	5192		
10080 min Winter	0.746	0.0	5856		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway																																									
Date 23/02/2023 11:41 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.007 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.007</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	30	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From: To:	(ha)	0	4 0.007
Rainfall Model	FEH																																									
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0	4 0.007																																									
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Infrastruct CS Ltd		Page 4																		
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway																			
Date 23/02/2023 11:41 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																			
Innovyze		Source Control 2020.1.3																		
Model Details Storage is Online Cover Level (m) 116.450 Cellular Storage Structure Invert Level (m) 115.050 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01700 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01700 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>9.0</td><td>9.0</td><td>0.801</td><td>0.0</td><td>18.6</td></tr><tr><td>0.800</td><td>9.0</td><td>18.6</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	9.0	9.0	0.801	0.0	18.6	0.800	9.0	18.6			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	9.0	9.0	0.801	0.0	18.6															
0.800	9.0	18.6																		
©1982-2020 Innovyze																				

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Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX		Designed by APL Checked by MBD																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 2 year Return Period</u> Half Drain Time : 466 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.097</td><td>0.047</td><td>0.0</td><td>0.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.111</td><td>0.061</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.127</td><td>0.077</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.145</td><td>0.095</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.157</td><td>0.107</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.164</td><td>0.114</td><td>0.0</td><td>1.0</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.174</td><td>0.124</td><td>0.0</td><td>1.1</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.180</td><td>0.130</td><td>0.0</td><td>1.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.185</td><td>0.135</td><td>0.0</td><td>1.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.188</td><td>0.138</td><td>0.0</td><td>1.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.192</td><td>0.142</td><td>0.0</td><td>1.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.193</td><td>0.143</td><td>0.0</td><td>1.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.188</td><td>0.138</td><td>0.0</td><td>1.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.182</td><td>0.132</td><td>0.0</td><td>1.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.159</td><td>0.109</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.141</td><td>0.091</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.126</td><td>0.076</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.114</td><td>0.064</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.105</td><td>0.055</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.103</td><td>0.053</td><td>0.0</td><td>0.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>31.772</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>20.720</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>13.513</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>8.812</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>6.863</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>5.747</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>4.476</td><td>0.0</td><td>320</td></tr><tr><td>480 min Summer</td><td>3.748</td><td>0.0</td><td>386</td></tr><tr><td>600 min Summer</td><td>3.266</td><td>0.0</td><td>452</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>520</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>662</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>940</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1360</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1760</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2548</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>3280</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3968</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4664</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5344</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.097	0.047	0.0	0.4	O K	30 min Summer	115.111	0.061	0.0	0.5	O K	60 min Summer	115.127	0.077	0.0	0.7	O K	120 min Summer	115.145	0.095	0.0	0.8	O K	180 min Summer	115.157	0.107	0.0	0.9	O K	240 min Summer	115.164	0.114	0.0	1.0	O K	360 min Summer	115.174	0.124	0.0	1.1	O K	480 min Summer	115.180	0.130	0.0	1.1	O K	600 min Summer	115.185	0.135	0.0	1.2	O K	720 min Summer	115.188	0.138	0.0	1.2	O K	960 min Summer	115.192	0.142	0.0	1.2	O K	1440 min Summer	115.193	0.143	0.0	1.2	O K	2160 min Summer	115.188	0.138	0.0	1.2	O K	2880 min Summer	115.182	0.132	0.0	1.1	O K	4320 min Summer	115.159	0.109	0.0	0.9	O K	5760 min Summer	115.141	0.091	0.0	0.8	O K	7200 min Summer	115.126	0.076	0.0	0.6	O K	8640 min Summer	115.114	0.064	0.0	0.5	O K	10080 min Summer	115.105	0.055	0.0	0.5	O K	15 min Winter	115.103	0.053	0.0	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	18	30 min Summer	20.720	0.0	33	60 min Summer	13.513	0.0	62	120 min Summer	8.812	0.0	122	180 min Summer	6.863	0.0	182	240 min Summer	5.747	0.0	240	360 min Summer	4.476	0.0	320	480 min Summer	3.748	0.0	386	600 min Summer	3.266	0.0	452	720 min Summer	2.919	0.0	520	960 min Summer	2.427	0.0	662	1440 min Summer	1.871	0.0	940	2160 min Summer	1.442	0.0	1360	2880 min Summer	1.199	0.0	1760	4320 min Summer	0.893	0.0	2548	5760 min Summer	0.724	0.0	3280	7200 min Summer	0.616	0.0	3968	8640 min Summer	0.539	0.0	4664	10080 min Summer	0.482	0.0	5344	15 min Winter	31.772	0.0	18
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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1440 min Summer	115.193	0.143	0.0	1.2	O K																																																																																																																																																																																																																		
2160 min Summer	115.188	0.138	0.0	1.2	O K																																																																																																																																																																																																																		
2880 min Summer	115.182	0.132	0.0	1.1	O K																																																																																																																																																																																																																		
4320 min Summer	115.159	0.109	0.0	0.9	O K																																																																																																																																																																																																																		
5760 min Summer	115.141	0.091	0.0	0.8	O K																																																																																																																																																																																																																		
7200 min Summer	115.126	0.076	0.0	0.6	O K																																																																																																																																																																																																																		
8640 min Summer	115.114	0.064	0.0	0.5	O K																																																																																																																																																																																																																		
10080 min Summer	115.105	0.055	0.0	0.5	O K																																																																																																																																																																																																																		
15 min Winter	115.103	0.053	0.0	0.5	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	31.772	0.0	18																																																																																																																																																																																																																				
30 min Summer	20.720	0.0	33																																																																																																																																																																																																																				
60 min Summer	13.513	0.0	62																																																																																																																																																																																																																				
120 min Summer	8.812	0.0	122																																																																																																																																																																																																																				
180 min Summer	6.863	0.0	182																																																																																																																																																																																																																				
240 min Summer	5.747	0.0	240																																																																																																																																																																																																																				
360 min Summer	4.476	0.0	320																																																																																																																																																																																																																				
480 min Summer	3.748	0.0	386																																																																																																																																																																																																																				
600 min Summer	3.266	0.0	452																																																																																																																																																																																																																				
720 min Summer	2.919	0.0	520																																																																																																																																																																																																																				
960 min Summer	2.427	0.0	662																																																																																																																																																																																																																				
1440 min Summer	1.871	0.0	940																																																																																																																																																																																																																				
2160 min Summer	1.442	0.0	1360																																																																																																																																																																																																																				
2880 min Summer	1.199	0.0	1760																																																																																																																																																																																																																				
4320 min Summer	0.893	0.0	2548																																																																																																																																																																																																																				
5760 min Summer	0.724	0.0	3280																																																																																																																																																																																																																				
7200 min Summer	0.616	0.0	3968																																																																																																																																																																																																																				
8640 min Summer	0.539	0.0	4664																																																																																																																																																																																																																				
10080 min Summer	0.482	0.0	5344																																																																																																																																																																																																																				
15 min Winter	31.772	0.0	18																																																																																																																																																																																																																				
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Cellular soakaway			
Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.118	0.068	0.0	0.6	O K
60 min Winter	115.137	0.087	0.0	0.7	O K
120 min Winter	115.158	0.108	0.0	0.9	O K
180 min Winter	115.171	0.121	0.0	1.0	O K
240 min Winter	115.180	0.130	0.0	1.1	O K
360 min Winter	115.192	0.142	0.0	1.2	O K
480 min Winter	115.199	0.149	0.0	1.3	O K
600 min Winter	115.203	0.153	0.0	1.3	O K
720 min Winter	115.207	0.157	0.0	1.3	O K
960 min Winter	115.210	0.160	0.0	1.4	O K
1440 min Winter	115.208	0.158	0.0	1.3	O K
2160 min Winter	115.198	0.148	0.0	1.3	O K
2880 min Winter	115.185	0.135	0.0	1.2	O K
4320 min Winter	115.151	0.101	0.0	0.9	O K
5760 min Winter	115.124	0.074	0.0	0.6	O K
7200 min Winter	115.105	0.055	0.0	0.5	O K
8640 min Winter	115.097	0.047	0.0	0.4	O K
10080 min Winter	115.092	0.042	0.0	0.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	33		
60 min Winter	13.513	0.0	62		
120 min Winter	8.812	0.0	120		
180 min Winter	6.863	0.0	178		
240 min Winter	5.747	0.0	234		
360 min Winter	4.476	0.0	344		
480 min Winter	3.748	0.0	446		
600 min Winter	3.266	0.0	482		
720 min Winter	2.919	0.0	558		
960 min Winter	2.427	0.0	716		
1440 min Winter	1.871	0.0	1024		
2160 min Winter	1.442	0.0	1472		
2880 min Winter	1.199	0.0	1900		
4320 min Winter	0.893	0.0	2680		
5760 min Winter	0.724	0.0	3392		
7200 min Winter	0.616	0.0	3968		
8640 min Winter	0.539	0.0	4584		
10080 min Winter	0.482	0.0	5344		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway																																									
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Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.007 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.007</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.007
Rainfall Model	FEH																																									
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway	
Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 116.450

Cellular Storage Structure

Invert Level (m) 115.050 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01700 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01700

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	0.801	0.0	18.6
0.800	9.0	18.6			

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Cellular soakaway																																																																																																																																																																																																																					
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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 386 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>115.087</td><td>0.037</td><td>0.0</td><td>0.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>115.098</td><td>0.048</td><td>0.0</td><td>0.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>115.112</td><td>0.062</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>115.127</td><td>0.077</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>115.136</td><td>0.086</td><td>0.0</td><td>0.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>115.142</td><td>0.092</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>115.151</td><td>0.101</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>480 min Summer</td><td>115.156</td><td>0.106</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>115.161</td><td>0.111</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>115.164</td><td>0.114</td><td>0.0</td><td>1.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>115.166</td><td>0.116</td><td>0.0</td><td>1.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>115.167</td><td>0.117</td><td>0.0</td><td>1.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>115.163</td><td>0.113</td><td>0.0</td><td>1.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>115.157</td><td>0.107</td><td>0.0</td><td>0.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>115.138</td><td>0.088</td><td>0.0</td><td>0.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>115.123</td><td>0.073</td><td>0.0</td><td>0.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>115.111</td><td>0.061</td><td>0.0</td><td>0.5</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>115.102</td><td>0.052</td><td>0.0</td><td>0.4</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>115.098</td><td>0.048</td><td>0.0</td><td>0.4</td><td>O K</td></tr><tr><td>15 min Winter</td><td>115.092</td><td>0.042</td><td>0.0</td><td>0.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>180</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>232</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>296</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>362</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>432</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>504</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>646</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>924</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1340</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1732</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2504</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>3224</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3888</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4576</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>5248</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	115.087	0.037	0.0	0.3	O K	30 min Summer	115.098	0.048	0.0	0.4	O K	60 min Summer	115.112	0.062	0.0	0.5	O K	120 min Summer	115.127	0.077	0.0	0.7	O K	180 min Summer	115.136	0.086	0.0	0.7	O K	240 min Summer	115.142	0.092	0.0	0.8	O K	360 min Summer	115.151	0.101	0.0	0.9	O K	480 min Summer	115.156	0.106	0.0	0.9	O K	600 min Summer	115.161	0.111	0.0	0.9	O K	720 min Summer	115.164	0.114	0.0	1.0	O K	960 min Summer	115.166	0.116	0.0	1.0	O K	1440 min Summer	115.167	0.117	0.0	1.0	O K	2160 min Summer	115.163	0.113	0.0	1.0	O K	2880 min Summer	115.157	0.107	0.0	0.9	O K	4320 min Summer	115.138	0.088	0.0	0.8	O K	5760 min Summer	115.123	0.073	0.0	0.6	O K	7200 min Summer	115.111	0.061	0.0	0.5	O K	8640 min Summer	115.102	0.052	0.0	0.4	O K	10080 min Summer	115.098	0.048	0.0	0.4	O K	15 min Winter	115.092	0.042	0.0	0.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	18	30 min Summer	16.602	0.0	33	60 min Summer	10.968	0.0	62	120 min Summer	7.246	0.0	122	180 min Summer	5.686	0.0	180	240 min Summer	4.787	0.0	232	360 min Summer	3.757	0.0	296	480 min Summer	3.163	0.0	362	600 min Summer	2.768	0.0	432	720 min Summer	2.482	0.0	504	960 min Summer	2.075	0.0	646	1440 min Summer	1.612	0.0	924	2160 min Summer	1.252	0.0	1340	2880 min Summer	1.046	0.0	1732	4320 min Summer	0.785	0.0	2504	5760 min Summer	0.640	0.0	3224	7200 min Summer	0.546	0.0	3888	8640 min Summer	0.480	0.0	4576	10080 min Summer	0.430	0.0	5248	15 min Winter	25.129	0.0	18
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600 min Summer	2.768	0.0	432																																																																																																																																																																																																																				
720 min Summer	2.482	0.0	504																																																																																																																																																																																																																				
960 min Summer	2.075	0.0	646																																																																																																																																																																																																																				
1440 min Summer	1.612	0.0	924																																																																																																																																																																																																																				
2160 min Summer	1.252	0.0	1340																																																																																																																																																																																																																				
2880 min Summer	1.046	0.0	1732																																																																																																																																																																																																																				
4320 min Summer	0.785	0.0	2504																																																																																																																																																																																																																				
5760 min Summer	0.640	0.0	3224																																																																																																																																																																																																																				
7200 min Summer	0.546	0.0	3888																																																																																																																																																																																																																				
8640 min Summer	0.480	0.0	4576																																																																																																																																																																																																																				
10080 min Summer	0.430	0.0	5248																																																																																																																																																																																																																				
15 min Winter	25.129	0.0	18																																																																																																																																																																																																																				
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Cellular soakaway			
Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	115.104	0.054	0.0	0.5	O K
60 min Winter	115.120	0.070	0.0	0.6	O K
120 min Winter	115.137	0.087	0.0	0.7	O K
180 min Winter	115.148	0.098	0.0	0.8	O K
240 min Winter	115.156	0.106	0.0	0.9	O K
360 min Winter	115.165	0.115	0.0	1.0	O K
480 min Winter	115.171	0.121	0.0	1.0	O K
600 min Winter	115.175	0.125	0.0	1.1	O K
720 min Winter	115.178	0.128	0.0	1.1	O K
960 min Winter	115.180	0.130	0.0	1.1	O K
1440 min Winter	115.177	0.127	0.0	1.1	O K
2160 min Winter	115.168	0.118	0.0	1.0	O K
2880 min Winter	115.156	0.106	0.0	0.9	O K
4320 min Winter	115.127	0.077	0.0	0.7	O K
5760 min Winter	115.106	0.056	0.0	0.5	O K
7200 min Winter	115.097	0.047	0.0	0.4	O K
8640 min Winter	115.092	0.042	0.0	0.4	O K
10080 min Winter	115.088	0.038	0.0	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	32		
60 min Winter	10.968	0.0	62		
120 min Winter	7.246	0.0	118		
180 min Winter	5.686	0.0	176		
240 min Winter	4.787	0.0	232		
360 min Winter	3.757	0.0	338		
480 min Winter	3.163	0.0	386		
600 min Winter	2.768	0.0	464		
720 min Winter	2.482	0.0	544		
960 min Winter	2.075	0.0	702		
1440 min Winter	1.612	0.0	1008		
2160 min Winter	1.252	0.0	1432		
2880 min Winter	1.046	0.0	1848		
4320 min Winter	0.785	0.0	2596		
5760 min Winter	0.640	0.0	3232		
7200 min Winter	0.546	0.0	3888		
8640 min Winter	0.480	0.0	4584		
10080 min Winter	0.430	0.0	5344		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway																																									
Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.007 <table> <tr> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> </tr> <tr> <td>0</td> <td>4 0.007</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.007
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Cellular soakaway	
Date 23/02/2023 11:42 File PLOT 5 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 116.450

Cellular Storage Structure

Invert Level (m) 115.050 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01700 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01700

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	0.801	0.0	18.6
0.800	9.0	18.6			

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 15 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>172.477</td><td>0.277</td><td>3.5</td><td>4.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>172.478</td><td>0.278</td><td>3.5</td><td>4.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>172.443</td><td>0.243</td><td>3.5</td><td>4.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>172.373</td><td>0.173</td><td>3.5</td><td>2.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>172.314</td><td>0.114</td><td>3.5</td><td>1.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>172.274</td><td>0.074</td><td>3.5</td><td>1.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>172.246</td><td>0.046</td><td>3.2</td><td>0.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>172.238</td><td>0.038</td><td>2.6</td><td>0.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>172.232</td><td>0.032</td><td>2.2</td><td>0.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>172.229</td><td>0.029</td><td>2.0</td><td>0.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>172.223</td><td>0.023</td><td>1.6</td><td>0.4</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>172.217</td><td>0.017</td><td>1.2</td><td>0.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>172.213</td><td>0.013</td><td>0.9</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>172.210</td><td>0.010</td><td>0.7</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>172.208</td><td>0.008</td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>172.206</td><td>0.006</td><td>0.4</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>172.205</td><td>0.005</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>172.204</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>172.204</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>172.521</td><td>0.321</td><td>3.5</td><td>5.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>26</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>42</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>74</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>104</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>132</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>186</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>246</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>308</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>366</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>488</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>720</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1072</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1444</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2156</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2888</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3728</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4248</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>4976</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	172.477	0.277	3.5	4.7	O K	30 min Summer	172.478	0.278	3.5	4.7	O K	60 min Summer	172.443	0.243	3.5	4.1	O K	120 min Summer	172.373	0.173	3.5	2.9	O K	180 min Summer	172.314	0.114	3.5	1.9	O K	240 min Summer	172.274	0.074	3.5	1.2	O K	360 min Summer	172.246	0.046	3.2	0.8	O K	480 min Summer	172.238	0.038	2.6	0.6	O K	600 min Summer	172.232	0.032	2.2	0.5	O K	720 min Summer	172.229	0.029	2.0	0.5	O K	960 min Summer	172.223	0.023	1.6	0.4	O K	1440 min Summer	172.217	0.017	1.2	0.3	O K	2160 min Summer	172.213	0.013	0.9	0.2	O K	2880 min Summer	172.210	0.010	0.7	0.2	O K	4320 min Summer	172.208	0.008	0.5	0.1	O K	5760 min Summer	172.206	0.006	0.4	0.1	O K	7200 min Summer	172.205	0.005	0.3	0.1	O K	8640 min Summer	172.204	0.004	0.3	0.1	O K	10080 min Summer	172.204	0.004	0.3	0.1	O K	15 min Winter	172.521	0.321	3.5	5.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	17	30 min Summer	101.161	0.0	26	60 min Summer	61.321	0.0	42	120 min Summer	37.171	0.0	74	180 min Summer	27.735	0.0	104	240 min Summer	22.532	0.0	132	360 min Summer	16.812	0.0	186	480 min Summer	13.658	0.0	246	600 min Summer	11.625	0.0	308	720 min Summer	10.191	0.0	366	960 min Summer	8.220	0.0	488	1440 min Summer	6.071	0.0	720	2160 min Summer	4.484	0.0	1072	2880 min Summer	3.617	0.0	1444	4320 min Summer	2.580	0.0	2156	5760 min Summer	2.030	0.0	2888	7200 min Summer	1.686	0.0	3728	8640 min Summer	1.448	0.0	4248	10080 min Summer	1.274	0.0	4976	15 min Winter	166.885	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving			
Date 10/02/2023 10:48 File PLOT 5 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	172.521	0.321	3.5	5.4	O K
60 min Winter	172.466	0.266	3.5	4.5	O K
120 min Winter	172.350	0.150	3.5	2.5	O K
180 min Winter	172.268	0.068	3.5	1.1	O K
240 min Winter	172.245	0.045	3.1	0.8	O K
360 min Winter	172.234	0.034	2.4	0.6	O K
480 min Winter	172.228	0.028	1.9	0.5	O K
600 min Winter	172.224	0.024	1.6	0.4	O K
720 min Winter	172.221	0.021	1.4	0.4	O K
960 min Winter	172.217	0.017	1.2	0.3	O K
1440 min Winter	172.213	0.013	0.9	0.2	O K
2160 min Winter	172.209	0.009	0.6	0.2	O K
2880 min Winter	172.208	0.008	0.5	0.1	O K
4320 min Winter	172.205	0.005	0.4	0.1	O K
5760 min Winter	172.204	0.004	0.3	0.1	O K
7200 min Winter	172.204	0.004	0.3	0.1	O K
8640 min Winter	172.203	0.003	0.2	0.1	O K
10080 min Winter	172.203	0.003	0.2	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	28		
60 min Winter	61.321	0.0	46		
120 min Winter	37.171	0.0	78		
180 min Winter	27.735	0.0	104		
240 min Winter	22.532	0.0	128		
360 min Winter	16.812	0.0	186		
480 min Winter	13.658	0.0	248		
600 min Winter	11.625	0.0	308		
720 min Winter	10.191	0.0	370		
960 min Winter	8.220	0.0	492		
1440 min Winter	6.071	0.0	748		
2160 min Winter	4.484	0.0	1084		
2880 min Winter	3.617	0.0	1492		
4320 min Winter	2.580	0.0	2096		
5760 min Winter	2.030	0.0	2904		
7200 min Winter	1.686	0.0	3648		
8640 min Winter	1.448	0.0	4208		
10080 min Winter	1.274	0.0	5128		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving	
Date 10/02/2023 10:48 File PLOT 5 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze		Source Control 2019.1
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Infrastruct CS Ltd		Page 4																								
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving																									
Date 10/02/2023 10:48 File PLOT 5 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
Innovyze	Source Control 2019.1																									
Model Details Storage is Online Cover Level (m) 172.850 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.44400</td><td>Width (m)</td><td>10.0</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>5.6</td></tr><tr><td>Max Percolation (l/s)</td><td>15.6</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>172.200</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	10.0	Membrane Percolation (mm/hr)	1000	Length (m)	5.6	Max Percolation (l/s)	15.6	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	172.200	Membrane Depth (m)	0
Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	10.0																							
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Porosity	0.30	Evaporation (mm/day)	3																							
Invert Level (m)	172.200	Membrane Depth (m)	0																							
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 33 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>166.293</td><td>0.193</td><td>1.1</td><td>3.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>166.310</td><td>0.210</td><td>1.1</td><td>3.6</td><td>O K</td></tr><tr><td>60 min Summer</td><td>166.307</td><td>0.207</td><td>1.1</td><td>3.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>166.287</td><td>0.187</td><td>1.1</td><td>3.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>166.263</td><td>0.163</td><td>1.1</td><td>2.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>166.240</td><td>0.140</td><td>1.1</td><td>2.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>166.201</td><td>0.101</td><td>1.1</td><td>1.7</td><td>O K</td></tr><tr><td>480 min Summer</td><td>166.173</td><td>0.073</td><td>1.1</td><td>1.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>166.155</td><td>0.055</td><td>1.1</td><td>0.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.147</td><td>0.047</td><td>1.1</td><td>0.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.139</td><td>0.039</td><td>0.9</td><td>0.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.130</td><td>0.030</td><td>0.7</td><td>0.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.122</td><td>0.022</td><td>0.5</td><td>0.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.118</td><td>0.018</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.113</td><td>0.013</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.110</td><td>0.010</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.109</td><td>0.009</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.107</td><td>0.007</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.107</td><td>0.007</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>166.321</td><td>0.221</td><td>1.1</td><td>3.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>30</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>48</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>80</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>114</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>146</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>206</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>262</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>318</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>374</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>494</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1464</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2856</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3608</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4368</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5032</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.293	0.193	1.1	3.3	O K	30 min Summer	166.310	0.210	1.1	3.6	O K	60 min Summer	166.307	0.207	1.1	3.5	O K	120 min Summer	166.287	0.187	1.1	3.2	O K	180 min Summer	166.263	0.163	1.1	2.8	O K	240 min Summer	166.240	0.140	1.1	2.4	O K	360 min Summer	166.201	0.101	1.1	1.7	O K	480 min Summer	166.173	0.073	1.1	1.2	O K	600 min Summer	166.155	0.055	1.1	0.9	O K	720 min Summer	166.147	0.047	1.1	0.8	O K	960 min Summer	166.139	0.039	0.9	0.7	O K	1440 min Summer	166.130	0.030	0.7	0.5	O K	2160 min Summer	166.122	0.022	0.5	0.4	O K	2880 min Summer	166.118	0.018	0.4	0.3	O K	4320 min Summer	166.113	0.013	0.3	0.2	O K	5760 min Summer	166.110	0.010	0.2	0.2	O K	7200 min Summer	166.109	0.009	0.2	0.1	O K	8640 min Summer	166.107	0.007	0.2	0.1	O K	10080 min Summer	166.107	0.007	0.2	0.1	O K	15 min Winter	166.321	0.221	1.1	3.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	19	30 min Summer	72.258	0.0	30	60 min Summer	43.800	0.0	48	120 min Summer	26.551	0.0	80	180 min Summer	19.811	0.0	114	240 min Summer	16.094	0.0	146	360 min Summer	12.009	0.0	206	480 min Summer	9.756	0.0	262	600 min Summer	8.304	0.0	318	720 min Summer	7.279	0.0	374	960 min Summer	5.871	0.0	494	1440 min Summer	4.337	0.0	736	2160 min Summer	3.203	0.0	1100	2880 min Summer	2.584	0.0	1464	4320 min Summer	1.843	0.0	2204	5760 min Summer	1.450	0.0	2856	7200 min Summer	1.204	0.0	3608	8640 min Summer	1.034	0.0	4368	10080 min Summer	0.910	0.0	5032	15 min Winter	119.204	0.0	19
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving			
Date 23/02/2023 11:37 File PLOT 5 FRONT A.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 100 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.342	0.242	1.1	4.1	O K
60 min Winter	166.338	0.238	1.1	4.1	O K
120 min Winter	166.304	0.204	1.1	3.5	O K
180 min Winter	166.265	0.165	1.1	2.8	O K
240 min Winter	166.228	0.128	1.1	2.2	O K
360 min Winter	166.171	0.071	1.1	1.2	O K
480 min Winter	166.148	0.048	1.1	0.8	O K
600 min Winter	166.141	0.041	0.9	0.7	O K
720 min Winter	166.136	0.036	0.8	0.6	O K
960 min Winter	166.129	0.029	0.7	0.5	O K
1440 min Winter	166.122	0.022	0.5	0.4	O K
2160 min Winter	166.116	0.016	0.4	0.3	O K
2880 min Winter	166.113	0.013	0.3	0.2	O K
4320 min Winter	166.109	0.009	0.2	0.2	O K
5760 min Winter	166.107	0.007	0.2	0.1	O K
7200 min Winter	166.106	0.006	0.1	0.1	O K
8640 min Winter	166.105	0.005	0.1	0.1	O K
10080 min Winter	166.105	0.005	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	72.258	0.0	31		
60 min Winter	43.800	0.0	50		
120 min Winter	26.551	0.0	88		
180 min Winter	19.811	0.0	122		
240 min Winter	16.094	0.0	154		
360 min Winter	12.009	0.0	210		
480 min Winter	9.756	0.0	254		
600 min Winter	8.304	0.0	316		
720 min Winter	7.279	0.0	378		
960 min Winter	5.871	0.0	494		
1440 min Winter	4.337	0.0	736		
2160 min Winter	3.203	0.0	1088		
2880 min Winter	2.584	0.0	1468		
4320 min Winter	1.843	0.0	2204		
5760 min Winter	1.450	0.0	2936		
7200 min Winter	1.204	0.0	3656		
8640 min Winter	1.034	0.0	4304		
10080 min Winter	0.910	0.0	5016		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving																			
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Innovyze	Source Control 2020.1.3																			
Model Details Storage is Online Cover Level (m) 167.100 Cellular Storage Structure Invert Level (m) 166.100 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.44400 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04900 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>18.0</td><td>18.0</td><td>0.401</td><td>0.0</td><td>24.8</td></tr><tr><td>0.400</td><td>18.0</td><td>24.8</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	18.0	18.0	0.401	0.0	24.8	0.400	18.0	24.8			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	18.0	18.0	0.401	0.0	24.8															
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Summer	166.227	0.127	1.1	2.2	O K	60 min Summer	166.225	0.125	1.1	2.1	O K	120 min Summer	166.208	0.108	1.1	1.9	O K	180 min Summer	166.191	0.091	1.1	1.5	O K	240 min Summer	166.175	0.075	1.1	1.3	O K	360 min Summer	166.153	0.053	1.1	0.9	O K	480 min Summer	166.145	0.045	1.0	0.8	O K	600 min Summer	166.140	0.040	0.9	0.7	O K	720 min Summer	166.136	0.036	0.8	0.6	O K	960 min Summer	166.130	0.030	0.7	0.5	O K	1440 min Summer	166.123	0.023	0.5	0.4	O K	2160 min Summer	166.117	0.017	0.4	0.3	O K	2880 min Summer	166.114	0.014	0.3	0.2	O K	4320 min Summer	166.110	0.010	0.2	0.2	O K	5760 min Summer	166.108	0.008	0.2	0.1	O K	7200 min Summer	166.107	0.007	0.2	0.1	O K	8640 min Summer	166.106	0.006	0.1	0.1	O K	10080 min Summer	166.105	0.005	0.1	0.1	O K	15 min Winter	166.234	0.134	1.1	2.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	18	30 min Summer	48.985	0.0	27	60 min Summer	30.377	0.0	44	120 min Summer	18.837	0.0	78	180 min Summer	14.244	0.0	108	240 min Summer	11.681	0.0	138	360 min Summer	8.833	0.0	194	480 min Summer	7.244	0.0	252	600 min Summer	6.211	0.0	312	720 min Summer	5.477	0.0	372	960 min Summer	4.460	0.0	494	1440 min Summer	3.338	0.0	736	2160 min Summer	2.499	0.0	1100	2880 min Summer	2.035	0.0	1456	4320 min Summer	1.471	0.0	2184	5760 min Summer	1.168	0.0	2856	7200 min Summer	0.977	0.0	3656	8640 min Summer	0.845	0.0	4408	10080 min Summer	0.746	0.0	5032	15 min Winter	78.992	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving			
Date 23/02/2023 11:38 File PLOT 5 FRONT A.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.245	0.145	1.1	2.5	O K
60 min Winter	166.239	0.139	1.1	2.4	O K
120 min Winter	166.209	0.109	1.1	1.9	O K
180 min Winter	166.179	0.079	1.1	1.4	O K
240 min Winter	166.157	0.057	1.1	1.0	O K
360 min Winter	166.142	0.042	0.9	0.7	O K
480 min Winter	166.135	0.035	0.8	0.6	O K
600 min Winter	166.131	0.031	0.7	0.5	O K
720 min Winter	166.127	0.027	0.6	0.5	O K
960 min Winter	166.122	0.022	0.5	0.4	O K
1440 min Winter	166.117	0.017	0.4	0.3	O K
2160 min Winter	166.113	0.013	0.3	0.2	O K
2880 min Winter	166.110	0.010	0.2	0.2	O K
4320 min Winter	166.108	0.008	0.2	0.1	O K
5760 min Winter	166.106	0.006	0.1	0.1	O K
7200 min Winter	166.105	0.005	0.1	0.1	O K
8640 min Winter	166.104	0.004	0.1	0.1	O K
10080 min Winter	166.104	0.004	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	29		
60 min Winter	30.377	0.0	48		
120 min Winter	18.837	0.0	82		
180 min Winter	14.244	0.0	114		
240 min Winter	11.681	0.0	140		
360 min Winter	8.833	0.0	196		
480 min Winter	7.244	0.0	256		
600 min Winter	6.211	0.0	314		
720 min Winter	5.477	0.0	374		
960 min Winter	4.460	0.0	494		
1440 min Winter	3.338	0.0	736		
2160 min Winter	2.499	0.0	1096		
2880 min Winter	2.035	0.0	1428		
4320 min Winter	1.471	0.0	2188		
5760 min Winter	1.168	0.0	2880		
7200 min Winter	0.977	0.0	3544		
8640 min Winter	0.845	0.0	4432		
10080 min Winter	0.746	0.0	5176		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving	
Date 23/02/2023 11:38 File PLOT 5 FRONT A.SRCX	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FEH
Return Period (years)	30
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.019

Time (mins)	Area	Time (mins)	Area
From:	To: (ha)	From:	To: (ha)
0	4 0.009	4	8 0.010

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving																			
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Model Details Storage is Online Cover Level (m) 167.100 Cellular Storage Structure Invert Level (m) 166.100 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.44400 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04900 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>18.0</td><td>18.0</td><td>0.401</td><td>0.0</td><td>24.8</td></tr><tr><td>0.400</td><td>18.0</td><td>24.8</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	18.0	18.0	0.401	0.0	24.8	0.400	18.0	24.8			
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Summer	166.139	0.039	0.9	0.7	O K	180 min Summer	166.135	0.035	0.8	0.6	O K	240 min Summer	166.131	0.031	0.7	0.5	O K	360 min Summer	166.127	0.027	0.6	0.5	O K	480 min Summer	166.123	0.023	0.5	0.4	O K	600 min Summer	166.121	0.021	0.5	0.4	O K	720 min Summer	166.119	0.019	0.4	0.3	O K	960 min Summer	166.116	0.016	0.4	0.3	O K	1440 min Summer	166.113	0.013	0.3	0.2	O K	2160 min Summer	166.110	0.010	0.2	0.2	O K	2880 min Summer	166.108	0.008	0.2	0.1	O K	4320 min Summer	166.106	0.006	0.1	0.1	O K	5760 min Summer	166.105	0.005	0.1	0.1	O K	7200 min Summer	166.104	0.004	0.1	0.1	O K	8640 min Summer	166.104	0.004	0.1	0.1	O K	10080 min Summer	166.104	0.004	0.1	0.1	O K	15 min Winter	166.145	0.045	1.0	0.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	16	30 min Summer	20.720	0.0	24	60 min Summer	13.513	0.0	40	120 min Summer	8.812	0.0	72	180 min Summer	6.863	0.0	102	240 min Summer	5.747	0.0	132	360 min Summer	4.476	0.0	192	480 min Summer	3.748	0.0	252	600 min Summer	3.266	0.0	314	720 min Summer	2.919	0.0	374	960 min Summer	2.427	0.0	494	1440 min Summer	1.871	0.0	736	2160 min Summer	1.442	0.0	1100	2880 min Summer	1.199	0.0	1468	4320 min Summer	0.893	0.0	2148	5760 min Summer	0.724	0.0	2856	7200 min Summer	0.616	0.0	3672	8640 min Summer	0.539	0.0	4248	10080 min Summer	0.482	0.0	5144	15 min Winter	31.772	0.0	16
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving			
Date 23/02/2023 11:38 File PLOT 5 FRONT A.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.147	0.047	1.0	0.8	O K
60 min Winter	166.144	0.044	1.0	0.7	O K
120 min Winter	166.136	0.036	0.8	0.6	O K
180 min Winter	166.130	0.030	0.7	0.5	O K
240 min Winter	166.127	0.027	0.6	0.5	O K
360 min Winter	166.122	0.022	0.5	0.4	O K
480 min Winter	166.118	0.018	0.4	0.3	O K
600 min Winter	166.116	0.016	0.4	0.3	O K
720 min Winter	166.115	0.015	0.3	0.2	O K
960 min Winter	166.112	0.012	0.3	0.2	O K
1440 min Winter	166.109	0.009	0.2	0.2	O K
2160 min Winter	166.107	0.007	0.2	0.1	O K
2880 min Winter	166.106	0.006	0.1	0.1	O K
4320 min Winter	166.105	0.005	0.1	0.1	O K
5760 min Winter	166.104	0.004	0.1	0.1	O K
7200 min Winter	166.103	0.003	0.1	0.1	O K
8640 min Winter	166.103	0.003	0.1	0.0	O K
10080 min Winter	166.103	0.003	0.1	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	25		
60 min Winter	13.513	0.0	42		
120 min Winter	8.812	0.0	74		
180 min Winter	6.863	0.0	104		
240 min Winter	5.747	0.0	134		
360 min Winter	4.476	0.0	194		
480 min Winter	3.748	0.0	256		
600 min Winter	3.266	0.0	312		
720 min Winter	2.919	0.0	378		
960 min Winter	2.427	0.0	494		
1440 min Winter	1.871	0.0	750		
2160 min Winter	1.442	0.0	1068		
2880 min Winter	1.199	0.0	1432		
4320 min Winter	0.893	0.0	2232		
5760 min Winter	0.724	0.0	2880		
7200 min Winter	0.616	0.0	3656		
8640 min Winter	0.539	0.0	4384		
10080 min Winter	0.482	0.0	5256		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving																			
Date 23/02/2023 11:38 File PLOT 5 FRONT A.SRCX	Designed by APL Checked by MBD																			
Innovyze		Source Control 2020.1.3																		
Model Details Storage is Online Cover Level (m) 167.100 Cellular Storage Structure Invert Level (m) 166.100 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.44400 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04900 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>18.0</td><td>18.0</td><td>0.401</td><td>0.0</td><td>24.8</td></tr><tr><td>0.400</td><td>18.0</td><td>24.8</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	18.0	18.0	0.401	0.0	24.8	0.400	18.0	24.8			
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K</td></tr><tr><td>600 min Summer</td><td>166.118</td><td>0.018</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>166.116</td><td>0.016</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>166.114</td><td>0.014</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>166.111</td><td>0.011</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>166.109</td><td>0.009</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>166.107</td><td>0.007</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>166.106</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>166.105</td><td>0.005</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>166.104</td><td>0.004</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>166.104</td><td>0.004</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>166.103</td><td>0.003</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>166.135</td><td>0.035</td><td>0.8</td><td>0.6</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>16</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>24</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>40</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>72</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>102</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>132</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>192</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>252</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>312</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>372</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>494</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1084</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2164</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>2904</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3648</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4344</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>4968</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	166.132	0.032	0.7	0.5	O K	30 min Summer	166.135	0.035	0.8	0.6	O K	60 min Summer	166.135	0.035	0.8	0.6	O K	120 min Summer	166.132	0.032	0.7	0.5	O K	180 min Summer	166.129	0.029	0.6	0.5	O K	240 min Summer	166.126	0.026	0.6	0.4	O K	360 min Summer	166.122	0.022	0.5	0.4	O K	480 min Summer	166.120	0.020	0.4	0.3	O K	600 min Summer	166.118	0.018	0.4	0.3	O K	720 min Summer	166.116	0.016	0.4	0.3	O K	960 min Summer	166.114	0.014	0.3	0.2	O K	1440 min Summer	166.111	0.011	0.3	0.2	O K	2160 min Summer	166.109	0.009	0.2	0.1	O K	2880 min Summer	166.107	0.007	0.2	0.1	O K	4320 min Summer	166.106	0.006	0.1	0.1	O K	5760 min Summer	166.105	0.005	0.1	0.1	O K	7200 min Summer	166.104	0.004	0.1	0.1	O K	8640 min Summer	166.104	0.004	0.1	0.1	O K	10080 min Summer	166.103	0.003	0.1	0.1	O K	15 min Winter	166.135	0.035	0.8	0.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	16	30 min Summer	16.602	0.0	24	60 min Summer	10.968	0.0	40	120 min Summer	7.246	0.0	72	180 min Summer	5.686	0.0	102	240 min Summer	4.787	0.0	132	360 min Summer	3.757	0.0	192	480 min Summer	3.163	0.0	252	600 min Summer	2.768	0.0	312	720 min Summer	2.482	0.0	372	960 min Summer	2.075	0.0	494	1440 min Summer	1.612	0.0	734	2160 min Summer	1.252	0.0	1084	2880 min Summer	1.046	0.0	1468	4320 min Summer	0.785	0.0	2164	5760 min Summer	0.640	0.0	2904	7200 min Summer	0.546	0.0	3648	8640 min Summer	0.480	0.0	4344	10080 min Summer	0.430	0.0	4968	15 min Winter	25.129	0.0	16
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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Infrastruct CS Ltd				Page 2	
The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 5 Front Permeable paving			
Date 23/02/2023 11:39 File PLOT 5 FRONT A.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	166.138	0.038		0.8 0.6	O K
60 min Winter	166.136	0.036		0.8 0.6	O K
120 min Winter	166.130	0.030		0.7 0.5	O K
180 min Winter	166.125	0.025		0.6 0.4	O K
240 min Winter	166.122	0.022		0.5 0.4	O K
360 min Winter	166.118	0.018		0.4 0.3	O K
480 min Winter	166.116	0.016		0.4 0.3	O K
600 min Winter	166.114	0.014		0.3 0.2	O K
720 min Winter	166.112	0.012		0.3 0.2	O K
960 min Winter	166.110	0.010		0.2 0.2	O K
1440 min Winter	166.108	0.008		0.2 0.1	O K
2160 min Winter	166.106	0.006		0.1 0.1	O K
2880 min Winter	166.105	0.005		0.1 0.1	O K
4320 min Winter	166.104	0.004		0.1 0.1	O K
5760 min Winter	166.103	0.003		0.1 0.1	O K
7200 min Winter	166.103	0.003		0.1 0.0	O K
8640 min Winter	166.103	0.003		0.1 0.0	O K
10080 min Winter	166.102	0.002		0.1 0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	25		
60 min Winter	10.968	0.0	42		
120 min Winter	7.246	0.0	74		
180 min Winter	5.686	0.0	104		
240 min Winter	4.787	0.0	134		
360 min Winter	3.757	0.0	194		
480 min Winter	3.163	0.0	254		
600 min Winter	2.768	0.0	312		
720 min Winter	2.482	0.0	376		
960 min Winter	2.075	0.0	500		
1440 min Winter	1.612	0.0	734		
2160 min Winter	1.252	0.0	1104		
2880 min Winter	1.046	0.0	1400		
4320 min Winter	0.785	0.0	2184		
5760 min Winter	0.640	0.0	2840		
7200 min Winter	0.546	0.0	3744		
8640 min Winter	0.480	0.0	4608		
10080 min Winter	0.430	0.0	5000		
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Infrastruct CS Ltd		Page 4																		
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 5 Front Permeable paving																			
Date 23/02/2023 11:39 File PLOT 5 FRONT A.SRCX	Designed by APL Checked by MBD																			
Innovyze	Source Control 2020.1.3																			
Model Details Storage is Online Cover Level (m) 167.100 Cellular Storage Structure Invert Level (m) 166.100 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.44400 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04900 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>18.0</td><td>18.0</td><td>0.401</td><td>0.0</td><td>24.8</td></tr><tr><td>0.400</td><td>18.0</td><td>24.8</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	18.0	18.0	0.401	0.0	24.8	0.400	18.0	24.8			
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0.000	18.0	18.0	0.401	0.0	24.8															
0.400	18.0	24.8																		
©1982-2020 Innovyze																				

Infrastruct CS Ltd				Page 1																																																																																																																																																																																																																			
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Innovyze		Source Control 2019.1																																																																																																																																																																																																																					
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 381 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.320</td><td>0.170</td><td>0.1</td><td>2.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.353</td><td>0.203</td><td>0.1</td><td>2.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.388</td><td>0.238</td><td>0.1</td><td>3.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.421</td><td>0.271</td><td>0.1</td><td>3.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.437</td><td>0.287</td><td>0.1</td><td>4.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.444</td><td>0.294</td><td>0.1</td><td>4.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.449</td><td>0.299</td><td>0.1</td><td>4.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.450</td><td>0.300</td><td>0.1</td><td>4.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.448</td><td>0.298</td><td>0.1</td><td>4.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.446</td><td>0.296</td><td>0.1</td><td>4.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.435</td><td>0.285</td><td>0.1</td><td>4.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.412</td><td>0.262</td><td>0.1</td><td>3.7</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.378</td><td>0.228</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.347</td><td>0.197</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.283</td><td>0.133</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.240</td><td>0.090</td><td>0.1</td><td>1.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.212</td><td>0.062</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.199</td><td>0.049</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.194</td><td>0.044</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.341</td><td>0.191</td><td>0.1</td><td>2.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>180</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>306</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>370</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>434</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>504</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>644</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>920</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1320</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1704</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2424</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>3120</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3752</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.320	0.170	0.1	2.4	O K	30 min Summer	167.353	0.203	0.1	2.9	O K	60 min Summer	167.388	0.238	0.1	3.4	O K	120 min Summer	167.421	0.271	0.1	3.9	O K	180 min Summer	167.437	0.287	0.1	4.1	O K	240 min Summer	167.444	0.294	0.1	4.2	O K	360 min Summer	167.449	0.299	0.1	4.3	O K	480 min Summer	167.450	0.300	0.1	4.3	O K	600 min Summer	167.448	0.298	0.1	4.3	O K	720 min Summer	167.446	0.296	0.1	4.2	O K	960 min Summer	167.435	0.285	0.1	4.1	O K	1440 min Summer	167.412	0.262	0.1	3.7	O K	2160 min Summer	167.378	0.228	0.1	3.2	O K	2880 min Summer	167.347	0.197	0.1	2.8	O K	4320 min Summer	167.283	0.133	0.1	1.9	O K	5760 min Summer	167.240	0.090	0.1	1.3	O K	7200 min Summer	167.212	0.062	0.1	0.9	O K	8640 min Summer	167.199	0.049	0.1	0.7	O K	10080 min Summer	167.194	0.044	0.1	0.6	O K	15 min Winter	167.341	0.191	0.1	2.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	19	30 min Summer	101.161	0.0	33	60 min Summer	61.321	0.0	62	120 min Summer	37.171	0.0	122	180 min Summer	27.735	0.0	180	240 min Summer	22.532	0.0	240	360 min Summer	16.812	0.0	306	480 min Summer	13.658	0.0	370	600 min Summer	11.625	0.0	434	720 min Summer	10.191	0.0	504	960 min Summer	8.220	0.0	644	1440 min Summer	6.071	0.0	920	2160 min Summer	4.484	0.0	1320	2880 min Summer	3.617	0.0	1704	4320 min Summer	2.580	0.0	2424	5760 min Summer	2.030	0.0	3120	7200 min Summer	1.686	0.0	3752	8640 min Summer	1.448	0.0	4408	10080 min Summer	1.274	0.0	5144	15 min Winter	166.885	0.0	18
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Infrastruct CS Ltd				Page 2	
The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Cellular soakaway			
Date 10/02/2023 09:40 File PLOT 4 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.378	0.228	0.1	3.3	O K
60 min Winter	167.418	0.268	0.1	3.8	O K
120 min Winter	167.458	0.308	0.1	4.4	O K
180 min Winter	167.478	0.328	0.1	4.7	O K
240 min Winter	167.488	0.338	0.1	4.8	O K
360 min Winter	167.495	0.345	0.1	4.9	O K
480 min Winter	167.494	0.344	0.1	4.9	O K
600 min Winter	167.492	0.342	0.1	4.9	O K
720 min Winter	167.488	0.338	0.1	4.8	O K
960 min Winter	167.472	0.322	0.1	4.6	O K
1440 min Winter	167.436	0.286	0.1	4.1	O K
2160 min Winter	167.383	0.233	0.1	3.3	O K
2880 min Winter	167.336	0.186	0.1	2.6	O K
4320 min Winter	167.249	0.099	0.1	1.4	O K
5760 min Winter	167.202	0.052	0.1	0.7	O K
7200 min Winter	167.193	0.043	0.1	0.6	O K
8640 min Winter	167.187	0.037	0.1	0.5	O K
10080 min Winter	167.182	0.032	0.1	0.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	33		
60 min Winter	61.321	0.0	62		
120 min Winter	37.171	0.0	120		
180 min Winter	27.735	0.0	176		
240 min Winter	22.532	0.0	232		
360 min Winter	16.812	0.0	340		
480 min Winter	13.658	0.0	392		
600 min Winter	11.625	0.0	464		
720 min Winter	10.191	0.0	542		
960 min Winter	8.220	0.0	696		
1440 min Winter	6.071	0.0	996		
2160 min Winter	4.484	0.0	1408		
2880 min Winter	3.617	0.0	1816		
4320 min Winter	2.580	0.0	2508		
5760 min Winter	2.030	0.0	3056		
7200 min Winter	1.686	0.0	3680		
8640 min Winter	1.448	0.0	4416		
10080 min Winter	1.274	0.0	5152		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 10/02/2023 09:40 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.008

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 10/02/2023 09:40 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Model Details

Storage is Online Cover Level (m) 168.150

Cellular Storage Structure

Invert Level (m) 167.150 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.04200 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04200

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	15.0	15.0	0.401	0.0	21.2
0.400	15.0	21.2			

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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 271 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.271</td><td>0.121</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.293</td><td>0.143</td><td>0.1</td><td>2.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.316</td><td>0.166</td><td>0.1</td><td>2.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.336</td><td>0.186</td><td>0.1</td><td>2.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.344</td><td>0.194</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.346</td><td>0.196</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.348</td><td>0.198</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.347</td><td>0.197</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.344</td><td>0.194</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.341</td><td>0.191</td><td>0.1</td><td>2.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.330</td><td>0.180</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.308</td><td>0.158</td><td>0.1</td><td>2.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.279</td><td>0.129</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.254</td><td>0.104</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.214</td><td>0.064</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.197</td><td>0.047</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.190</td><td>0.040</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.185</td><td>0.035</td><td>0.1</td><td>0.5</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.181</td><td>0.031</td><td>0.1</td><td>0.4</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.285</td><td>0.135</td><td>0.1</td><td>1.9</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>180</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>208</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>272</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>340</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>410</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>478</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>616</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>882</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1272</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1640</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2296</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2952</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3680</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.271	0.121	0.1	1.7	O K	30 min Summer	167.293	0.143	0.1	2.0	O K	60 min Summer	167.316	0.166	0.1	2.4	O K	120 min Summer	167.336	0.186	0.1	2.7	O K	180 min Summer	167.344	0.194	0.1	2.8	O K	240 min Summer	167.346	0.196	0.1	2.8	O K	360 min Summer	167.348	0.198	0.1	2.8	O K	480 min Summer	167.347	0.197	0.1	2.8	O K	600 min Summer	167.344	0.194	0.1	2.8	O K	720 min Summer	167.341	0.191	0.1	2.7	O K	960 min Summer	167.330	0.180	0.1	2.6	O K	1440 min Summer	167.308	0.158	0.1	2.3	O K	2160 min Summer	167.279	0.129	0.1	1.8	O K	2880 min Summer	167.254	0.104	0.1	1.5	O K	4320 min Summer	167.214	0.064	0.1	0.9	O K	5760 min Summer	167.197	0.047	0.1	0.7	O K	7200 min Summer	167.190	0.040	0.1	0.6	O K	8640 min Summer	167.185	0.035	0.1	0.5	O K	10080 min Summer	167.181	0.031	0.1	0.4	O K	15 min Winter	167.285	0.135	0.1	1.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	18	30 min Summer	72.258	0.0	33	60 min Summer	43.800	0.0	62	120 min Summer	26.551	0.0	122	180 min Summer	19.811	0.0	180	240 min Summer	16.094	0.0	208	360 min Summer	12.009	0.0	272	480 min Summer	9.756	0.0	340	600 min Summer	8.304	0.0	410	720 min Summer	7.279	0.0	478	960 min Summer	5.871	0.0	616	1440 min Summer	4.337	0.0	882	2160 min Summer	3.203	0.0	1272	2880 min Summer	2.584	0.0	1640	4320 min Summer	1.843	0.0	2296	5760 min Summer	1.450	0.0	2952	7200 min Summer	1.204	0.0	3680	8640 min Summer	1.034	0.0	4408	10080 min Summer	0.910	0.0	5144	15 min Winter	119.204	0.0	18
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60 min Summer	167.316	0.166	0.1	2.4	O K																																																																																																																																																																																																																		
120 min Summer	167.336	0.186	0.1	2.7	O K																																																																																																																																																																																																																		
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120 min Summer	26.551	0.0	122																																																																																																																																																																																																																				
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Cellular soakaway			
Date 23/02/2023 11:33 File PLOT 4 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 100 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.311	0.161	0.1	2.3	O K
60 min Winter	167.338	0.188	0.1	2.7	O K
120 min Winter	167.362	0.212	0.1	3.0	O K
180 min Winter	167.372	0.222	0.1	3.2	O K
240 min Winter	167.376	0.226	0.1	3.2	O K
360 min Winter	167.376	0.226	0.1	3.2	O K
480 min Winter	167.374	0.224	0.1	3.2	O K
600 min Winter	167.369	0.219	0.1	3.1	O K
720 min Winter	167.363	0.213	0.1	3.0	O K
960 min Winter	167.346	0.196	0.1	2.8	O K
1440 min Winter	167.312	0.162	0.1	2.3	O K
2160 min Winter	167.267	0.117	0.1	1.7	O K
2880 min Winter	167.232	0.082	0.1	1.2	O K
4320 min Winter	167.196	0.046	0.1	0.7	O K
5760 min Winter	167.186	0.036	0.1	0.5	O K
7200 min Winter	167.181	0.031	0.1	0.4	O K
8640 min Winter	167.176	0.026	0.0	0.4	O K
10080 min Winter	167.173	0.023	0.0	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	72.258	0.0	33		
60 min Winter	43.800	0.0	62		
120 min Winter	26.551	0.0	118		
180 min Winter	19.811	0.0	174		
240 min Winter	16.094	0.0	228		
360 min Winter	12.009	0.0	290		
480 min Winter	9.756	0.0	366		
600 min Winter	8.304	0.0	444		
720 min Winter	7.279	0.0	520		
960 min Winter	5.871	0.0	666		
1440 min Winter	4.337	0.0	952		
2160 min Winter	3.203	0.0	1340		
2880 min Winter	2.584	0.0	1696		
4320 min Winter	1.843	0.0	2252		
5760 min Winter	1.450	0.0	3000		
7200 min Winter	1.204	0.0	3728		
8640 min Winter	1.034	0.0	4416		
10080 min Winter	0.910	0.0	5144		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway																																							
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <thead> <tr> <th>Time (mins)</th> <th>Area (ha)</th> </tr> </thead> <tbody> <tr> <td>From: 0</td> <td>To: 4 0.008</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area (ha)	From: 0	To: 4 0.008
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 23/02/2023 11:33 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.150

Cellular Storage Structure

Invert Level (m) 167.150 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.04200 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04200

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	15.0	15.0	0.401	0.0	21.2
0.400	15.0	21.2			

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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 188 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.229</td><td>0.079</td><td>0.1</td><td>1.1</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.245</td><td>0.095</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.261</td><td>0.111</td><td>0.1</td><td>1.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.275</td><td>0.125</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.280</td><td>0.130</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.283</td><td>0.133</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.286</td><td>0.136</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.285</td><td>0.135</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.283</td><td>0.133</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.280</td><td>0.130</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.271</td><td>0.121</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.254</td><td>0.104</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.232</td><td>0.082</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.215</td><td>0.065</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.196</td><td>0.046</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.188</td><td>0.038</td><td>0.1</td><td>0.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.183</td><td>0.033</td><td>0.1</td><td>0.5</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.179</td><td>0.029</td><td>0.1</td><td>0.4</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.176</td><td>0.026</td><td>0.0</td><td>0.4</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.239</td><td>0.089</td><td>0.1</td><td>1.3</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>120</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>152</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>184</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>252</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>322</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>392</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>460</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>596</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>852</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1228</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1560</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2248</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>2992</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3680</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.229	0.079	0.1	1.1	O K	30 min Summer	167.245	0.095	0.1	1.4	O K	60 min Summer	167.261	0.111	0.1	1.6	O K	120 min Summer	167.275	0.125	0.1	1.8	O K	180 min Summer	167.280	0.130	0.1	1.9	O K	240 min Summer	167.283	0.133	0.1	1.9	O K	360 min Summer	167.286	0.136	0.1	1.9	O K	480 min Summer	167.285	0.135	0.1	1.9	O K	600 min Summer	167.283	0.133	0.1	1.9	O K	720 min Summer	167.280	0.130	0.1	1.8	O K	960 min Summer	167.271	0.121	0.1	1.7	O K	1440 min Summer	167.254	0.104	0.1	1.5	O K	2160 min Summer	167.232	0.082	0.1	1.2	O K	2880 min Summer	167.215	0.065	0.1	0.9	O K	4320 min Summer	167.196	0.046	0.1	0.7	O K	5760 min Summer	167.188	0.038	0.1	0.5	O K	7200 min Summer	167.183	0.033	0.1	0.5	O K	8640 min Summer	167.179	0.029	0.1	0.4	O K	10080 min Summer	167.176	0.026	0.0	0.4	O K	15 min Winter	167.239	0.089	0.1	1.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	18	30 min Summer	48.985	0.0	33	60 min Summer	30.377	0.0	62	120 min Summer	18.837	0.0	120	180 min Summer	14.244	0.0	152	240 min Summer	11.681	0.0	184	360 min Summer	8.833	0.0	252	480 min Summer	7.244	0.0	322	600 min Summer	6.211	0.0	392	720 min Summer	5.477	0.0	460	960 min Summer	4.460	0.0	596	1440 min Summer	3.338	0.0	852	2160 min Summer	2.499	0.0	1228	2880 min Summer	2.035	0.0	1560	4320 min Summer	1.471	0.0	2248	5760 min Summer	1.168	0.0	2992	7200 min Summer	0.977	0.0	3680	8640 min Summer	0.845	0.0	4408	10080 min Summer	0.746	0.0	5144	15 min Winter	78.992	0.0	18
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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120 min Summer	167.275	0.125	0.1	1.8	O K																																																																																																																																																																																																																		
180 min Summer	167.280	0.130	0.1	1.9	O K																																																																																																																																																																																																																		
240 min Summer	167.283	0.133	0.1	1.9	O K																																																																																																																																																																																																																		
360 min Summer	167.286	0.136	0.1	1.9	O K																																																																																																																																																																																																																		
480 min Summer	167.285	0.135	0.1	1.9	O K																																																																																																																																																																																																																		
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180 min Summer	14.244	0.0	152																																																																																																																																																																																																																				
240 min Summer	11.681	0.0	184																																																																																																																																																																																																																				
360 min Summer	8.833	0.0	252																																																																																																																																																																																																																				
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Cellular soakaway			
Date 23/02/2023 11:34 File PLOT 4 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.257	0.107		0.1 1.5	O K
60 min Winter	167.276	0.126		0.1 1.8	O K
120 min Winter	167.293	0.143		0.1 2.0	O K
180 min Winter	167.300	0.150		0.1 2.1	O K
240 min Winter	167.302	0.152		0.1 2.2	O K
360 min Winter	167.303	0.153		0.1 2.2	O K
480 min Winter	167.301	0.151		0.1 2.1	O K
600 min Winter	167.296	0.146		0.1 2.1	O K
720 min Winter	167.290	0.140		0.1 2.0	O K
960 min Winter	167.276	0.126		0.1 1.8	O K
1440 min Winter	167.249	0.099		0.1 1.4	O K
2160 min Winter	167.217	0.067		0.1 1.0	O K
2880 min Winter	167.199	0.049		0.1 0.7	O K
4320 min Winter	167.187	0.037		0.1 0.5	O K
5760 min Winter	167.179	0.029		0.1 0.4	O K
7200 min Winter	167.175	0.025		0.0 0.4	O K
8640 min Winter	167.172	0.022		0.0 0.3	O K
10080 min Winter	167.169	0.019		0.0 0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	32		
60 min Winter	30.377	0.0	60		
120 min Winter	18.837	0.0	118		
180 min Winter	14.244	0.0	170		
240 min Winter	11.681	0.0	196		
360 min Winter	8.833	0.0	272		
480 min Winter	7.244	0.0	350		
600 min Winter	6.211	0.0	426		
720 min Winter	5.477	0.0	500		
960 min Winter	4.460	0.0	644		
1440 min Winter	3.338	0.0	908		
2160 min Winter	2.499	0.0	1256		
2880 min Winter	2.035	0.0	1552		
4320 min Winter	1.471	0.0	2288		
5760 min Winter	1.168	0.0	3000		
7200 min Winter	0.977	0.0	3680		
8640 min Winter	0.845	0.0	4440		
10080 min Winter	0.746	0.0	5112		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 23/02/2023 11:34 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	30
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.008

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway																			
Date 23/02/2023 11:34 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																			
Innovyze		Source Control 2020.1.3																		
Model Details Storage is Online Cover Level (m) 168.150 Cellular Storage Structure Invert Level (m) 167.150 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.04200 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04200 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>15.0</td><td>15.0</td><td>0.401</td><td>0.0</td><td>21.2</td></tr><tr><td>0.400</td><td>15.0</td><td>21.2</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	15.0	15.0	0.401	0.0	21.2	0.400	15.0	21.2			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	15.0	15.0	0.401	0.0	21.2															
0.400	15.0	21.2																		
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Infrastruct CS Ltd				Page 1																																																																																																																																																																																																																			
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<u>Summary of Results for 2 year Return Period</u> Half Drain Time : 101 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.181</td><td>0.031</td><td>0.1</td><td>0.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.189</td><td>0.039</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.195</td><td>0.045</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.202</td><td>0.052</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.205</td><td>0.055</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.207</td><td>0.057</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.208</td><td>0.058</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.208</td><td>0.058</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.206</td><td>0.056</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.205</td><td>0.055</td><td>0.1</td><td>0.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.201</td><td>0.051</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.195</td><td>0.045</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.189</td><td>0.039</td><td>0.1</td><td>0.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.185</td><td>0.035</td><td>0.1</td><td>0.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.178</td><td>0.028</td><td>0.1</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.174</td><td>0.024</td><td>0.0</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.171</td><td>0.021</td><td>0.0</td><td>0.3</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.168</td><td>0.018</td><td>0.0</td><td>0.3</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.167</td><td>0.017</td><td>0.0</td><td>0.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.185</td><td>0.035</td><td>0.1</td><td>0.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>31.772</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>20.720</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>13.513</td><td>0.0</td><td>56</td></tr><tr><td>120 min Summer</td><td>8.812</td><td>0.0</td><td>88</td></tr><tr><td>180 min Summer</td><td>6.863</td><td>0.0</td><td>122</td></tr><tr><td>240 min Summer</td><td>5.747</td><td>0.0</td><td>158</td></tr><tr><td>360 min Summer</td><td>4.476</td><td>0.0</td><td>226</td></tr><tr><td>480 min Summer</td><td>3.748</td><td>0.0</td><td>294</td></tr><tr><td>600 min Summer</td><td>3.266</td><td>0.0</td><td>358</td></tr><tr><td>720 min Summer</td><td>2.919</td><td>0.0</td><td>422</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>546</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>794</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1152</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1528</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2248</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2944</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3680</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.181	0.031	0.1	0.4	O K	30 min Summer	167.189	0.039	0.1	0.6	O K	60 min Summer	167.195	0.045	0.1	0.6	O K	120 min Summer	167.202	0.052	0.1	0.7	O K	180 min Summer	167.205	0.055	0.1	0.8	O K	240 min Summer	167.207	0.057	0.1	0.8	O K	360 min Summer	167.208	0.058	0.1	0.8	O K	480 min Summer	167.208	0.058	0.1	0.8	O K	600 min Summer	167.206	0.056	0.1	0.8	O K	720 min Summer	167.205	0.055	0.1	0.8	O K	960 min Summer	167.201	0.051	0.1	0.7	O K	1440 min Summer	167.195	0.045	0.1	0.6	O K	2160 min Summer	167.189	0.039	0.1	0.6	O K	2880 min Summer	167.185	0.035	0.1	0.5	O K	4320 min Summer	167.178	0.028	0.1	0.4	O K	5760 min Summer	167.174	0.024	0.0	0.3	O K	7200 min Summer	167.171	0.021	0.0	0.3	O K	8640 min Summer	167.168	0.018	0.0	0.3	O K	10080 min Summer	167.167	0.017	0.0	0.2	O K	15 min Winter	167.185	0.035	0.1	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	18	30 min Summer	20.720	0.0	32	60 min Summer	13.513	0.0	56	120 min Summer	8.812	0.0	88	180 min Summer	6.863	0.0	122	240 min Summer	5.747	0.0	158	360 min Summer	4.476	0.0	226	480 min Summer	3.748	0.0	294	600 min Summer	3.266	0.0	358	720 min Summer	2.919	0.0	422	960 min Summer	2.427	0.0	546	1440 min Summer	1.871	0.0	794	2160 min Summer	1.442	0.0	1152	2880 min Summer	1.199	0.0	1528	4320 min Summer	0.893	0.0	2248	5760 min Summer	0.724	0.0	2944	7200 min Summer	0.616	0.0	3680	8640 min Summer	0.539	0.0	4408	10080 min Summer	0.482	0.0	5144	15 min Winter	31.772	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Cellular soakaway			
Date 23/02/2023 11:34 File PLOT 4 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.193	0.043	0.1	0.6	O K
60 min Winter	167.201	0.051	0.1	0.7	O K
120 min Winter	167.208	0.058	0.1	0.8	O K
180 min Winter	167.212	0.062	0.1	0.9	O K
240 min Winter	167.213	0.063	0.1	0.9	O K
360 min Winter	167.212	0.062	0.1	0.9	O K
480 min Winter	167.210	0.060	0.1	0.8	O K
600 min Winter	167.207	0.057	0.1	0.8	O K
720 min Winter	167.203	0.053	0.1	0.8	O K
960 min Winter	167.198	0.048	0.1	0.7	O K
1440 min Winter	167.191	0.041	0.1	0.6	O K
2160 min Winter	167.184	0.034	0.1	0.5	O K
2880 min Winter	167.179	0.029	0.1	0.4	O K
4320 min Winter	167.172	0.022	0.0	0.3	O K
5760 min Winter	167.168	0.018	0.0	0.3	O K
7200 min Winter	167.166	0.016	0.0	0.2	O K
8640 min Winter	167.164	0.014	0.0	0.2	O K
10080 min Winter	167.162	0.012	0.0	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	31		
60 min Winter	13.513	0.0	58		
120 min Winter	8.812	0.0	94		
180 min Winter	6.863	0.0	134		
240 min Winter	5.747	0.0	172		
360 min Winter	4.476	0.0	244		
480 min Winter	3.748	0.0	314		
600 min Winter	3.266	0.0	380		
720 min Winter	2.919	0.0	444		
960 min Winter	2.427	0.0	566		
1440 min Winter	1.871	0.0	820		
2160 min Winter	1.442	0.0	1188		
2880 min Winter	1.199	0.0	1556		
4320 min Winter	0.893	0.0	2252		
5760 min Winter	0.724	0.0	2992		
7200 min Winter	0.616	0.0	3672		
8640 min Winter	0.539	0.0	4408		
10080 min Winter	0.482	0.0	5144		
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Model Details Storage is Online Cover Level (m) 168.150 Cellular Storage Structure Invert Level (m) 167.150 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.04200 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.04200 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>15.0</td><td>15.0</td><td>0.401</td><td>0.0</td><td>21.2</td></tr><tr><td>0.400</td><td>15.0</td><td>21.2</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	15.0	15.0	0.401	0.0	21.2	0.400	15.0	21.2			
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Summer	167.192	0.042	0.1	0.6	O K	180 min Summer	167.195	0.045	0.1	0.6	O K	240 min Summer	167.197	0.047	0.1	0.7	O K	360 min Summer	167.198	0.048	0.1	0.7	O K	480 min Summer	167.198	0.048	0.1	0.7	O K	600 min Summer	167.197	0.047	0.1	0.7	O K	720 min Summer	167.196	0.046	0.1	0.7	O K	960 min Summer	167.193	0.043	0.1	0.6	O K	1440 min Summer	167.189	0.039	0.1	0.6	O K	2160 min Summer	167.184	0.034	0.1	0.5	O K	2880 min Summer	167.181	0.031	0.1	0.4	O K	4320 min Summer	167.175	0.025	0.0	0.4	O K	5760 min Summer	167.171	0.021	0.0	0.3	O K	7200 min Summer	167.168	0.018	0.0	0.3	O K	8640 min Summer	167.166	0.016	0.0	0.2	O K	10080 min Summer	167.165	0.015	0.0	0.2	O K	15 min Winter	167.178	0.028	0.1	0.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	18	30 min Summer	16.602	0.0	32	60 min Summer	10.968	0.0	56	120 min Summer	7.246	0.0	86	180 min Summer	5.686	0.0	120	240 min Summer	4.787	0.0	156	360 min Summer	3.757	0.0	222	480 min Summer	3.163	0.0	288	600 min Summer	2.768	0.0	354	720 min Summer	2.482	0.0	418	960 min Summer	2.075	0.0	542	1440 min Summer	1.612	0.0	792	2160 min Summer	1.252	0.0	1152	2880 min Summer	1.046	0.0	1528	4320 min Summer	0.785	0.0	2248	5760 min Summer	0.640	0.0	2992	7200 min Summer	0.546	0.0	3680	8640 min Summer	0.480	0.0	4408	10080 min Summer	0.430	0.0	5144	15 min Winter	25.129	0.0	18
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600 min Winter	2.768	0.0	372																																																																																																																																																																																																
720 min Winter	2.482	0.0	438																																																																																																																																																																																																
960 min Winter	2.075	0.0	566																																																																																																																																																																																																
1440 min Winter	1.612	0.0	820																																																																																																																																																																																																
2160 min Winter	1.252	0.0	1188																																																																																																																																																																																																
2880 min Winter	1.046	0.0	1556																																																																																																																																																																																																
4320 min Winter	0.785	0.0	2268																																																																																																																																																																																																
5760 min Winter	0.640	0.0	2944																																																																																																																																																																																																
7200 min Winter	0.546	0.0	3744																																																																																																																																																																																																
8640 min Winter	0.480	0.0	4408																																																																																																																																																																																																
10080 min Winter	0.430	0.0	5160																																																																																																																																																																																																
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Infrastruct CS Ltd		Page 3
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 23/02/2023 11:35 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	1
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.008

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Cellular soakaway	
Date 23/02/2023 11:35 File PLOT 4 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.150

Cellular Storage Structure

Invert Level (m) 167.150 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.04200 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.04200

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	15.0	15.0	0.401	0.0	21.2
0.400	15.0	21.2			

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Front Permeable paving																																																																																																																																																																																																																					
Date 10/02/2023 10:44 File PLOT 4 FRONT PERMEABLE....		Designed by DJ Checked by																																																																																																																																																																																																																					
Innovyze		Source Control 2019.1																																																																																																																																																																																																																					
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 7 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.041</td><td>0.141</td><td>3.4</td><td>2.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.031</td><td>0.131</td><td>3.4</td><td>2.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.998</td><td>0.098</td><td>3.4</td><td>1.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.955</td><td>0.055</td><td>3.4</td><td>0.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.942</td><td>0.042</td><td>2.9</td><td>0.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.935</td><td>0.035</td><td>2.4</td><td>0.6</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.927</td><td>0.027</td><td>1.8</td><td>0.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.923</td><td>0.023</td><td>1.5</td><td>0.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.919</td><td>0.019</td><td>1.3</td><td>0.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.917</td><td>0.017</td><td>1.2</td><td>0.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.914</td><td>0.014</td><td>0.9</td><td>0.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.910</td><td>0.010</td><td>0.7</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.908</td><td>0.008</td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.906</td><td>0.006</td><td>0.4</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.905</td><td>0.005</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.904</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.903</td><td>0.003</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.903</td><td>0.003</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.902</td><td>0.002</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.061</td><td>0.161</td><td>3.4</td><td>2.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>13</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>21</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>38</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>66</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>94</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>126</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>186</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>246</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>306</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>364</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>730</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1076</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2148</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2944</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3648</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4256</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5040</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>14</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.041	0.141	3.4	2.3	O K	30 min Summer	168.031	0.131	3.4	2.2	O K	60 min Summer	167.998	0.098	3.4	1.6	O K	120 min Summer	167.955	0.055	3.4	0.9	O K	180 min Summer	167.942	0.042	2.9	0.7	O K	240 min Summer	167.935	0.035	2.4	0.6	O K	360 min Summer	167.927	0.027	1.8	0.5	O K	480 min Summer	167.923	0.023	1.5	0.4	O K	600 min Summer	167.919	0.019	1.3	0.3	O K	720 min Summer	167.917	0.017	1.2	0.3	O K	960 min Summer	167.914	0.014	0.9	0.2	O K	1440 min Summer	167.910	0.010	0.7	0.2	O K	2160 min Summer	167.908	0.008	0.5	0.1	O K	2880 min Summer	167.906	0.006	0.4	0.1	O K	4320 min Summer	167.905	0.005	0.3	0.1	O K	5760 min Summer	167.904	0.004	0.3	0.1	O K	7200 min Summer	167.903	0.003	0.2	0.1	O K	8640 min Summer	167.903	0.003	0.2	0.0	O K	10080 min Summer	167.902	0.002	0.2	0.0	O K	15 min Winter	168.061	0.161	3.4	2.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	13	30 min Summer	101.161	0.0	21	60 min Summer	61.321	0.0	38	120 min Summer	37.171	0.0	66	180 min Summer	27.735	0.0	94	240 min Summer	22.532	0.0	126	360 min Summer	16.812	0.0	186	480 min Summer	13.658	0.0	246	600 min Summer	11.625	0.0	306	720 min Summer	10.191	0.0	364	960 min Summer	8.220	0.0	490	1440 min Summer	6.071	0.0	730	2160 min Summer	4.484	0.0	1076	2880 min Summer	3.617	0.0	1468	4320 min Summer	2.580	0.0	2148	5760 min Summer	2.030	0.0	2944	7200 min Summer	1.686	0.0	3648	8640 min Summer	1.448	0.0	4256	10080 min Summer	1.274	0.0	5040	15 min Winter	166.885	0.0	14
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 4 Front Permeable paving			
Date 10/02/2023 10:44 File PLOT 4 FRONT PERMEABLE....		Designed by DJ Checked by			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.042	0.142		3.4 2.3	O K
60 min Winter	167.989	0.089		3.4 1.5	O K
120 min Winter	167.943	0.043		2.9 0.7	O K
180 min Winter	167.933	0.033		2.3 0.5	O K
240 min Winter	167.927	0.027		1.8 0.4	O K
360 min Winter	167.920	0.020		1.4 0.3	O K
480 min Winter	167.917	0.017		1.1 0.3	O K
600 min Winter	167.914	0.014		1.0 0.2	O K
720 min Winter	167.912	0.012		0.8 0.2	O K
960 min Winter	167.910	0.010		0.7 0.2	O K
1440 min Winter	167.908	0.008		0.5 0.1	O K
2160 min Winter	167.906	0.006		0.4 0.1	O K
2880 min Winter	167.905	0.005		0.3 0.1	O K
4320 min Winter	167.903	0.003		0.2 0.1	O K
5760 min Winter	167.903	0.003		0.2 0.0	O K
7200 min Winter	167.902	0.002		0.2 0.0	O K
8640 min Winter	167.902	0.002		0.1 0.0	O K
10080 min Winter	167.902	0.002		0.1 0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	23		
60 min Winter	61.321	0.0	38		
120 min Winter	37.171	0.0	66		
180 min Winter	27.735	0.0	96		
240 min Winter	22.532	0.0	124		
360 min Winter	16.812	0.0	186		
480 min Winter	13.658	0.0	242		
600 min Winter	11.625	0.0	300		
720 min Winter	10.191	0.0	370		
960 min Winter	8.220	0.0	502		
1440 min Winter	6.071	0.0	726		
2160 min Winter	4.484	0.0	1052		
2880 min Winter	3.617	0.0	1496		
4320 min Winter	2.580	0.0	2140		
5760 min Winter	2.030	0.0	2736		
7200 min Winter	1.686	0.0	3576		
8640 min Winter	1.448	0.0	4224		
10080 min Winter	1.274	0.0	4528		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Front Permeable paving	
Date 10/02/2023 10:44 File PLOT 4 FRONT PERMEABLE....	Designed by DJ Checked by	
Innovyze		Source Control 2019.1

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Front Permeable paving																									
Date 10/02/2023 10:44 File PLOT 4 FRONT PERMEABLE....	Designed by DJ Checked by																									
Innovyze	Source Control 2019.1																									
Model Details Storage is Online Cover Level (m) 168.350 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.44400</td><td>Width (m)</td><td>5.5</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>15.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.900</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	15.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.900	Membrane Depth (m)	0
Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5																							
Membrane Percolation (mm/hr)	1000	Length (m)	10.0																							
Max Percolation (l/s)	15.3	Slope (1:X)	0.0																							
Safety Factor	2.0	Depression Storage (mm)	5																							
Porosity	0.30	Evaporation (mm/day)	3																							
Invert Level (m)	167.900	Membrane Depth (m)	0																							
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 6 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.985</td><td>0.085</td><td>3.4</td><td>1.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.976</td><td>0.076</td><td>3.4</td><td>1.3</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.953</td><td>0.053</td><td>3.4</td><td>0.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.938</td><td>0.038</td><td>2.6</td><td>0.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.930</td><td>0.030</td><td>2.1</td><td>0.5</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.925</td><td>0.025</td><td>1.7</td><td>0.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.920</td><td>0.020</td><td>1.3</td><td>0.3</td><td>O K</td></tr><tr><td>480 min 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Summer</td><td>8.304</td><td>0.0</td><td>306</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>362</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1072</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1444</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2960</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3480</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4352</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>4928</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>13</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.985	0.085	3.4	1.4	O K	30 min Summer	167.976	0.076	3.4	1.3	O K	60 min Summer	167.953	0.053	3.4	0.9	O K	120 min Summer	167.938	0.038	2.6	0.6	O K	180 min Summer	167.930	0.030	2.1	0.5	O K	240 min Summer	167.925	0.025	1.7	0.4	O K	360 min Summer	167.920	0.020	1.3	0.3	O K	480 min Summer	167.916	0.016	1.1	0.3	O K	600 min Summer	167.914	0.014	0.9	0.2	O K	720 min Summer	167.912	0.012	0.8	0.2	O K	960 min Summer	167.910	0.010	0.7	0.2	O K	1440 min Summer	167.907	0.007	0.5	0.1	O K	2160 min Summer	167.906	0.006	0.4	0.1	O K	2880 min Summer	167.905	0.005	0.3	0.1	O K	4320 min Summer	167.903	0.003	0.2	0.1	O K	5760 min Summer	167.903	0.003	0.2	0.0	O K	7200 min Summer	167.902	0.002	0.2	0.0	O K	8640 min Summer	167.902	0.002	0.1	0.0	O K	10080 min Summer	167.902	0.002	0.1	0.0	O K	15 min Winter	167.996	0.096	3.4	1.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	12	30 min Summer	72.258	0.0	20	60 min Summer	43.800	0.0	36	120 min Summer	26.551	0.0	64	180 min Summer	19.811	0.0	96	240 min Summer	16.094	0.0	126	360 min Summer	12.009	0.0	186	480 min Summer	9.756	0.0	244	600 min Summer	8.304	0.0	306	720 min Summer	7.279	0.0	362	960 min Summer	5.871	0.0	490	1440 min Summer	4.337	0.0	734	2160 min Summer	3.203	0.0	1072	2880 min Summer	2.584	0.0	1444	4320 min Summer	1.843	0.0	2192	5760 min Summer	1.450	0.0	2960	7200 min Summer	1.204	0.0	3480	8640 min Summer	1.034	0.0	4352	10080 min Summer	0.910	0.0	4928	15 min Winter	119.204	0.0	13
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2880 min Winter	167.903	0.003	0.2	0.1	O K																																																																																																																																																																																															
4320 min Winter	167.902	0.002	0.2	0.0	O K																																																																																																																																																																																															
5760 min Winter	167.902	0.002	0.1	0.0	O K																																																																																																																																																																																															
7200 min Winter	167.902	0.002	0.1	0.0	O K																																																																																																																																																																																															
8640 min Winter	167.901	0.001	0.1	0.0	O K																																																																																																																																																																																															
10080 min Winter	167.901	0.001	0.1	0.0	O K																																																																																																																																																																																															
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																	
30 min Winter	72.258	0.0	21																																																																																																																																																																																																	
60 min Winter	43.800	0.0	36																																																																																																																																																																																																	
120 min Winter	26.551	0.0	66																																																																																																																																																																																																	
180 min Winter	19.811	0.0	96																																																																																																																																																																																																	
240 min Winter	16.094	0.0	126																																																																																																																																																																																																	
360 min Winter	12.009	0.0	186																																																																																																																																																																																																	
480 min Winter	9.756	0.0	248																																																																																																																																																																																																	
600 min Winter	8.304	0.0	302																																																																																																																																																																																																	
720 min Winter	7.279	0.0	370																																																																																																																																																																																																	
960 min Winter	5.871	0.0	480																																																																																																																																																																																																	
1440 min Winter	4.337	0.0	702																																																																																																																																																																																																	
2160 min Winter	3.203	0.0	1060																																																																																																																																																																																																	
2880 min Winter	2.584	0.0	1416																																																																																																																																																																																																	
4320 min Winter	1.843	0.0	2172																																																																																																																																																																																																	
5760 min Winter	1.450	0.0	2984																																																																																																																																																																																																	
7200 min Winter	1.204	0.0	4016																																																																																																																																																																																																	
8640 min Winter	1.034	0.0	4296																																																																																																																																																																																																	
10080 min Winter	0.910	0.0	4992																																																																																																																																																																																																	
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Infrastruct CS Ltd		Page 3
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Front Permeable paving	
Date 23/02/2023 11:29 File PLOT 4 FRONT PERMEABLE....	Designed by DJ Checked by	
Innovyze		Source Control 2020.1.3

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 4 Front Permeable paving																									
Date 23/02/2023 11:29 File PLOT 4 FRONT PERMEABLE....	Designed by DJ Checked by																									
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Model Details Storage is Online Cover Level (m) 168.350 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.44400</td><td>Width (m)</td><td>5.5</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>15.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.900</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	15.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.900	Membrane Depth (m)	0
Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5																							
Membrane Percolation (mm/hr)	1000	Length (m)	10.0																							
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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 4 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.947</td><td>0.047</td><td>3.2</td><td>0.8</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.945</td><td>0.045</td><td>3.0</td><td>0.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.936</td><td>0.036</td><td>2.5</td><td>0.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.927</td><td>0.027</td><td>1.8</td><td>0.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.922</td><td>0.022</td><td>1.5</td><td>0.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.918</td><td>0.018</td><td>1.2</td><td>0.3</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.914</td><td>0.014</td><td>1.0</td><td>0.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.912</td><td>0.012</td><td>0.8</td><td>0.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.910</td><td>0.010</td><td>0.7</td><td>0.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.909</td><td>0.009</td><td>0.6</td><td>0.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.908</td><td>0.008</td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.906</td><td>0.006</td><td>0.4</td><td>0.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.904</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.904</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.903</td><td>0.003</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.902</td><td>0.002</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.902</td><td>0.002</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.902</td><td>0.002</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.901</td><td>0.001</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.951</td><td>0.051</td><td>3.4</td><td>0.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>12</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>19</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>34</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>64</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>94</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>126</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>186</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>246</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>306</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>368</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>486</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>732</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1092</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1432</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>2880</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4376</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5008</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>12</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.947	0.047	3.2	0.8	O K	30 min Summer	167.945	0.045	3.0	0.7	O K	60 min Summer	167.936	0.036	2.5	0.6	O K	120 min Summer	167.927	0.027	1.8	0.4	O K	180 min Summer	167.922	0.022	1.5	0.4	O K	240 min Summer	167.918	0.018	1.2	0.3	O K	360 min Summer	167.914	0.014	1.0	0.2	O K	480 min Summer	167.912	0.012	0.8	0.2	O K	600 min Summer	167.910	0.010	0.7	0.2	O K	720 min Summer	167.909	0.009	0.6	0.2	O K	960 min Summer	167.908	0.008	0.5	0.1	O K	1440 min Summer	167.906	0.006	0.4	0.1	O K	2160 min Summer	167.904	0.004	0.3	0.1	O K	2880 min Summer	167.904	0.004	0.3	0.1	O K	4320 min Summer	167.903	0.003	0.2	0.0	O K	5760 min Summer	167.902	0.002	0.2	0.0	O K	7200 min Summer	167.902	0.002	0.1	0.0	O K	8640 min Summer	167.902	0.002	0.1	0.0	O K	10080 min Summer	167.901	0.001	0.1	0.0	O K	15 min Winter	167.951	0.051	3.4	0.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	12	30 min Summer	48.985	0.0	19	60 min Summer	30.377	0.0	34	120 min Summer	18.837	0.0	64	180 min Summer	14.244	0.0	94	240 min Summer	11.681	0.0	126	360 min Summer	8.833	0.0	186	480 min Summer	7.244	0.0	246	600 min Summer	6.211	0.0	306	720 min Summer	5.477	0.0	368	960 min Summer	4.460	0.0	486	1440 min Summer	3.338	0.0	732	2160 min Summer	2.499	0.0	1092	2880 min Summer	2.035	0.0	1432	4320 min Summer	1.471	0.0	2192	5760 min Summer	1.168	0.0	2880	7200 min Summer	0.977	0.0	3616	8640 min Summer	0.845	0.0	4376	10080 min Summer	0.746	0.0	5008	15 min Winter	78.992	0.0	12
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<u>Summary of Results for 30 year Return Period</u> <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>30 min Winter</td><td>167.944</td><td>0.044</td><td></td><td>3.0</td><td>0.7</td><td>O K</td></tr><tr><td>60 min Winter</td><td>167.932</td><td>0.032</td><td></td><td>2.2</td><td>0.5</td><td>O K</td></tr><tr><td>120 min Winter</td><td>167.922</td><td>0.022</td><td></td><td>1.5</td><td>0.4</td><td>O K</td></tr><tr><td>180 min Winter</td><td>167.917</td><td>0.017</td><td></td><td>1.1</td><td>0.3</td><td>O K</td></tr><tr><td>240 min Winter</td><td>167.914</td><td>0.014</td><td></td><td>1.0</td><td>0.2</td><td>O K</td></tr><tr><td>360 min Winter</td><td>167.911</td><td>0.011</td><td></td><td>0.7</td><td>0.2</td><td>O K</td></tr><tr><td>480 min Winter</td><td>167.909</td><td>0.009</td><td></td><td>0.6</td><td>0.1</td><td>O K</td></tr><tr><td>600 min Winter</td><td>167.908</td><td>0.008</td><td></td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>720 min Winter</td><td>167.907</td><td>0.007</td><td></td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>960 min Winter</td><td>167.906</td><td>0.006</td><td></td><td>0.4</td><td>0.1</td><td>O K</td></tr><tr><td>1440 min Winter</td><td>167.904</td><td>0.004</td><td></td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>2160 min Winter</td><td>167.903</td><td>0.003</td><td></td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Winter</td><td>167.903</td><td>0.003</td><td></td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>4320 min Winter</td><td>167.902</td><td>0.002</td><td></td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>5760 min Winter</td><td>167.902</td><td>0.002</td><td></td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Winter</td><td>167.901</td><td>0.001</td><td></td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min Winter</td><td>167.901</td><td>0.001</td><td></td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Winter</td><td>167.901</td><td>0.001</td><td></td><td>0.1</td><td>0.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>30 min Winter</td><td>48.985</td><td>0.0</td><td>20</td></tr><tr><td>60 min Winter</td><td>30.377</td><td>0.0</td><td>36</td></tr><tr><td>120 min Winter</td><td>18.837</td><td>0.0</td><td>66</td></tr><tr><td>180 min Winter</td><td>14.244</td><td>0.0</td><td>96</td></tr><tr><td>240 min Winter</td><td>11.681</td><td>0.0</td><td>128</td></tr><tr><td>360 min Winter</td><td>8.833</td><td>0.0</td><td>184</td></tr><tr><td>480 min Winter</td><td>7.244</td><td>0.0</td><td>246</td></tr><tr><td>600 min Winter</td><td>6.211</td><td>0.0</td><td>302</td></tr><tr><td>720 min Winter</td><td>5.477</td><td>0.0</td><td>366</td></tr><tr><td>960 min Winter</td><td>4.460</td><td>0.0</td><td>478</td></tr><tr><td>1440 min Winter</td><td>3.338</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Winter</td><td>2.499</td><td>0.0</td><td>1068</td></tr><tr><td>2880 min Winter</td><td>2.035</td><td>0.0</td><td>1556</td></tr><tr><td>4320 min Winter</td><td>1.471</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Winter</td><td>1.168</td><td>0.0</td><td>2616</td></tr><tr><td>7200 min Winter</td><td>0.977</td><td>0.0</td><td>3576</td></tr><tr><td>8640 min Winter</td><td>0.845</td><td>0.0</td><td>4464</td></tr><tr><td>10080 min Winter</td><td>0.746</td><td>0.0</td><td>4888</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	30 min Winter	167.944	0.044		3.0	0.7	O K	60 min Winter	167.932	0.032		2.2	0.5	O K	120 min Winter	167.922	0.022		1.5	0.4	O K	180 min Winter	167.917	0.017		1.1	0.3	O K	240 min Winter	167.914	0.014		1.0	0.2	O K	360 min Winter	167.911	0.011		0.7	0.2	O K	480 min Winter	167.909	0.009		0.6	0.1	O K	600 min Winter	167.908	0.008		0.5	0.1	O K	720 min Winter	167.907	0.007		0.5	0.1	O K	960 min Winter	167.906	0.006		0.4	0.1	O K	1440 min Winter	167.904	0.004		0.3	0.1	O K	2160 min Winter	167.903	0.003		0.2	0.1	O K	2880 min Winter	167.903	0.003		0.2	0.0	O K	4320 min Winter	167.902	0.002		0.1	0.0	O K	5760 min Winter	167.902	0.002		0.1	0.0	O K	7200 min Winter	167.901	0.001		0.1	0.0	O K	8640 min Winter	167.901	0.001		0.1	0.0	O K	10080 min Winter	167.901	0.001		0.1	0.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	30 min Winter	48.985	0.0	20	60 min Winter	30.377	0.0	36	120 min Winter	18.837	0.0	66	180 min Winter	14.244	0.0	96	240 min Winter	11.681	0.0	128	360 min Winter	8.833	0.0	184	480 min Winter	7.244	0.0	246	600 min Winter	6.211	0.0	302	720 min Winter	5.477	0.0	366	960 min Winter	4.460	0.0	478	1440 min Winter	3.338	0.0	738	2160 min Winter	2.499	0.0	1068	2880 min Winter	2.035	0.0	1556	4320 min Winter	1.471	0.0	2204	5760 min Winter	1.168	0.0	2616	7200 min Winter	0.977	0.0	3576	8640 min Winter	0.845	0.0	4464	10080 min Winter	0.746	0.0	4888
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Summer</td><td>2.919</td><td>0.0</td><td>368</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>482</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>730</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1080</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1428</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2140</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2888</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3768</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5104</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>12</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.916	0.016	1.1	0.3	O K	30 min Summer	167.917	0.017	1.2	0.3	O K	60 min Summer	167.916	0.016	1.1	0.3	O K	120 min Summer	167.913	0.013	0.9	0.2	O K	180 min Summer	167.910	0.010	0.7	0.2	O K	240 min Summer	167.909	0.009	0.6	0.1	O K	360 min Summer	167.907	0.007	0.5	0.1	O K	480 min Summer	167.906	0.006	0.4	0.1	O K	600 min Summer	167.906	0.006	0.4	0.1	O K	720 min Summer	167.905	0.005	0.3	0.1	O K	960 min Summer	167.904	0.004	0.3	0.1	O K	1440 min Summer	167.903	0.003	0.2	0.1	O K	2160 min Summer	167.903	0.003	0.2	0.0	O K	2880 min Summer	167.902	0.002	0.2	0.0	O K	4320 min Summer	167.902	0.002	0.1	0.0	O K	5760 min Summer	167.901	0.001	0.1	0.0	O K	7200 min Summer	167.901	0.001	0.1	0.0	O K	8640 min Summer	167.901	0.001	0.1	0.0	O K	10080 min Summer	167.901	0.001	0.1	0.0	O K	15 min Winter	167.917	0.017	1.2	0.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	12	30 min Summer	20.720	0.0	20	60 min Summer	13.513	0.0	34	120 min Summer	8.812	0.0	64	180 min Summer	6.863	0.0	96	240 min Summer	5.747	0.0	126	360 min Summer	4.476	0.0	186	480 min Summer	3.748	0.0	244	600 min Summer	3.266	0.0	304	720 min Summer	2.919	0.0	368	960 min Summer	2.427	0.0	482	1440 min Summer	1.871	0.0	730	2160 min Summer	1.442	0.0	1080	2880 min Summer	1.199	0.0	1428	4320 min Summer	0.893	0.0	2140	5760 min Summer	0.724	0.0	2888	7200 min Summer	0.616	0.0	3768	8640 min Summer	0.539	0.0	4408	10080 min Summer	0.482	0.0	5104	15 min Winter	31.772	0.0	12
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120 min Winter	8.812	0.0	66																																																																																																																																																																																																																		
180 min Winter	6.863	0.0	94																																																																																																																																																																																																																		
240 min Winter	5.747	0.0	128																																																																																																																																																																																																																		
360 min Winter	4.476	0.0	188																																																																																																																																																																																																																		
480 min Winter	3.748	0.0	260																																																																																																																																																																																																																		
600 min Winter	3.266	0.0	316																																																																																																																																																																																																																		
720 min Winter	2.919	0.0	356																																																																																																																																																																																																																		
960 min Winter	2.427	0.0	480																																																																																																																																																																																																																		
1440 min Winter	1.871	0.0	702																																																																																																																																																																																																																		
2160 min Winter	1.442	0.0	1088																																																																																																																																																																																																																		
2880 min Winter	1.199	0.0	1580																																																																																																																																																																																																																		
4320 min Winter	0.893	0.0	2172																																																																																																																																																																																																																		
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Model Details Storage is Online Cover Level (m) 168.350 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.44400</td><td>Width (m)</td><td>5.5</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>15.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.900</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	15.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.900	Membrane Depth (m)	0
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K</td></tr><tr><td>600 min Summer</td><td>167.905</td><td>0.005</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.904</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.904</td><td>0.004</td><td>0.3</td><td>0.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.903</td><td>0.003</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.902</td><td>0.002</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.902</td><td>0.002</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.902</td><td>0.002</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.901</td><td>0.001</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.901</td><td>0.001</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.901</td><td>0.001</td><td>0.1</td><td>0.0</td><td>O 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Summer</td><td>2.482</td><td>0.0</td><td>360</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>482</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>728</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1072</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1416</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>3016</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3496</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4352</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>5096</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>13</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.911	0.011	0.7	0.2	O K	30 min Summer	167.913	0.013	0.9	0.2	O K	60 min Summer	167.912	0.012	0.8	0.2	O K	120 min Summer	167.910	0.010	0.7	0.2	O K	180 min Summer	167.909	0.009	0.6	0.1	O K	240 min Summer	167.908	0.008	0.5	0.1	O K	360 min Summer	167.906	0.006	0.4	0.1	O K	480 min Summer	167.905	0.005	0.4	0.1	O K	600 min Summer	167.905	0.005	0.3	0.1	O K	720 min Summer	167.904	0.004	0.3	0.1	O K	960 min Summer	167.904	0.004	0.3	0.1	O K	1440 min Summer	167.903	0.003	0.2	0.0	O K	2160 min Summer	167.902	0.002	0.2	0.0	O K	2880 min Summer	167.902	0.002	0.1	0.0	O K	4320 min Summer	167.902	0.002	0.1	0.0	O K	5760 min Summer	167.901	0.001	0.1	0.0	O K	7200 min Summer	167.901	0.001	0.1	0.0	O K	8640 min Summer	167.901	0.001	0.1	0.0	O K	10080 min Summer	167.901	0.001	0.1	0.0	O K	15 min Winter	167.912	0.012	0.8	0.2	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	12	30 min Summer	16.602	0.0	20	60 min Summer	10.968	0.0	36	120 min Summer	7.246	0.0	66	180 min Summer	5.686	0.0	94	240 min Summer	4.787	0.0	124	360 min Summer	3.757	0.0	184	480 min Summer	3.163	0.0	244	600 min Summer	2.768	0.0	306	720 min Summer	2.482	0.0	360	960 min Summer	2.075	0.0	482	1440 min Summer	1.612	0.0	728	2160 min Summer	1.252	0.0	1072	2880 min Summer	1.046	0.0	1416	4320 min Summer	0.785	0.0	2204	5760 min Summer	0.640	0.0	3016	7200 min Summer	0.546	0.0	3496	8640 min Summer	0.480	0.0	4352	10080 min Summer	0.430	0.0	5096	15 min Winter	25.129	0.0	13
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Model Details Storage is Online Cover Level (m) 168.350 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.44400</td><td>Width (m)</td><td>5.5</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>15.3</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>167.900</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.44400	Width (m)	5.5	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	15.3	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	167.900	Membrane Depth (m)	0
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Summer</td><td>167.941</td><td>0.191</td><td>0.5</td><td>1.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.907</td><td>0.157</td><td>0.5</td><td>1.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.878</td><td>0.128</td><td>0.5</td><td>0.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.834</td><td>0.084</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.797</td><td>0.047</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.785</td><td>0.035</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.779</td><td>0.029</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.771</td><td>0.021</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.766</td><td>0.016</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.764</td><td>0.014</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.762</td><td>0.012</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.760</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.109</td><td>0.359</td><td>0.6</td><td>2.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>166.885</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>101.161</td><td>0.0</td><td>30</td></tr><tr><td>60 min Summer</td><td>61.321</td><td>0.0</td><td>46</td></tr><tr><td>120 min Summer</td><td>37.171</td><td>0.0</td><td>80</td></tr><tr><td>180 min Summer</td><td>27.735</td><td>0.0</td><td>114</td></tr><tr><td>240 min Summer</td><td>22.532</td><td>0.0</td><td>148</td></tr><tr><td>360 min Summer</td><td>16.812</td><td>0.0</td><td>214</td></tr><tr><td>480 min Summer</td><td>13.658</td><td>0.0</td><td>276</td></tr><tr><td>600 min Summer</td><td>11.625</td><td>0.0</td><td>336</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>396</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>510</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1452</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2920</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4368</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>4984</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>17</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.066	0.316	0.6	2.1	O K	30 min Summer	168.092	0.342	0.6	2.3	O K	60 min Summer	168.096	0.346	0.6	2.3	O K	120 min Summer	168.078	0.328	0.6	2.2	O K	180 min Summer	168.053	0.303	0.6	2.0	O K	240 min Summer	168.028	0.278	0.5	1.9	O K	360 min Summer	167.981	0.231	0.5	1.5	O K	480 min Summer	167.941	0.191	0.5	1.3	O K	600 min Summer	167.907	0.157	0.5	1.0	O K	720 min Summer	167.878	0.128	0.5	0.9	O K	960 min Summer	167.834	0.084	0.4	0.6	O K	1440 min Summer	167.797	0.047	0.4	0.3	O K	2160 min Summer	167.785	0.035	0.3	0.2	O K	2880 min Summer	167.779	0.029	0.2	0.2	O K	4320 min Summer	167.771	0.021	0.2	0.1	O K	5760 min Summer	167.766	0.016	0.1	0.1	O K	7200 min Summer	167.764	0.014	0.1	0.1	O K	8640 min Summer	167.762	0.012	0.1	0.1	O K	10080 min Summer	167.760	0.010	0.1	0.1	O K	15 min Winter	168.109	0.359	0.6	2.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	17	30 min Summer	101.161	0.0	30	60 min Summer	61.321	0.0	46	120 min Summer	37.171	0.0	80	180 min Summer	27.735	0.0	114	240 min Summer	22.532	0.0	148	360 min Summer	16.812	0.0	214	480 min Summer	13.658	0.0	276	600 min Summer	11.625	0.0	336	720 min Summer	10.191	0.0	396	960 min Summer	8.220	0.0	510	1440 min Summer	6.071	0.0	736	2160 min Summer	4.484	0.0	1100	2880 min Summer	3.617	0.0	1452	4320 min Summer	2.580	0.0	2192	5760 min Summer	2.030	0.0	2920	7200 min Summer	1.686	0.0	3672	8640 min Summer	1.448	0.0	4368	10080 min Summer	1.274	0.0	4984	15 min Winter	166.885	0.0	17
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 7 Cellular soakaway			
Date 10/02/2023 10:42 File PLOT 3 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.142	0.392	0.6	2.6	O K
60 min Winter	168.146	0.396	0.6	2.6	O K
120 min Winter	168.117	0.367	0.6	2.4	O K
180 min Winter	168.077	0.327	0.6	2.2	O K
240 min Winter	168.037	0.287	0.5	1.9	O K
360 min Winter	167.966	0.216	0.5	1.4	O K
480 min Winter	167.909	0.159	0.5	1.1	O K
600 min Winter	167.862	0.112	0.4	0.7	O K
720 min Winter	167.827	0.077	0.4	0.5	O K
960 min Winter	167.797	0.047	0.4	0.3	O K
1440 min Winter	167.785	0.035	0.3	0.2	O K
2160 min Winter	167.776	0.026	0.2	0.2	O K
2880 min Winter	167.771	0.021	0.2	0.1	O K
4320 min Winter	167.765	0.015	0.1	0.1	O K
5760 min Winter	167.762	0.012	0.1	0.1	O K
7200 min Winter	167.760	0.010	0.1	0.1	O K
8640 min Winter	167.759	0.009	0.1	0.1	O K
10080 min Winter	167.758	0.008	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	30		
60 min Winter	61.321	0.0	48		
120 min Winter	37.171	0.0	88		
180 min Winter	27.735	0.0	124		
240 min Winter	22.532	0.0	158		
360 min Winter	16.812	0.0	226		
480 min Winter	13.658	0.0	288		
600 min Winter	11.625	0.0	348		
720 min Winter	10.191	0.0	400		
960 min Winter	8.220	0.0	492		
1440 min Winter	6.071	0.0	734		
2160 min Winter	4.484	0.0	1076		
2880 min Winter	3.617	0.0	1440		
4320 min Winter	2.580	0.0	2204		
5760 min Winter	2.030	0.0	2936		
7200 min Winter	1.686	0.0	3544		
8640 min Winter	1.448	0.0	4392		
10080 min Winter	1.274	0.0	5072		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																																									
Date 10/02/2023 10:42 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+40	Time (mins)	Area	From:	To: (ha)	0	4 0.008
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©1982-2019 Innovyze																																										

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway	
Date 10/02/2023 10:42 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Model Details

Storage is Online Cover Level (m) 168.750

Cellular Storage Structure

Invert Level (m) 167.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.39400 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.39400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.0	7.0	0.401	0.0	11.2
0.400	7.0	11.2			

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Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 31 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.967</td><td>0.217</td><td>0.5</td><td>1.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.979</td><td>0.229</td><td>0.5</td><td>1.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.977</td><td>0.227</td><td>0.5</td><td>1.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.957</td><td>0.207</td><td>0.5</td><td>1.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.933</td><td>0.183</td><td>0.5</td><td>1.2</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.911</td><td>0.161</td><td>0.5</td><td>1.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.873</td><td>0.123</td><td>0.5</td><td>0.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.843</td><td>0.093</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.821</td><td>0.071</td><td>0.4</td><td>0.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.807</td><td>0.057</td><td>0.4</td><td>0.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.795</td><td>0.045</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.784</td><td>0.034</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.775</td><td>0.025</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.771</td><td>0.021</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.765</td><td>0.015</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.762</td><td>0.012</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.760</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>8.304</td><td>0.0</td><td>322</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>376</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>492</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1464</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2188</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2864</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4328</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5064</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.967	0.217	0.5	1.4	O K	30 min Summer	167.979	0.229	0.5	1.5	O K	60 min Summer	167.977	0.227	0.5	1.5	O K	120 min Summer	167.957	0.207	0.5	1.4	O K	180 min Summer	167.933	0.183	0.5	1.2	O K	240 min Summer	167.911	0.161	0.5	1.1	O K	360 min Summer	167.873	0.123	0.5	0.8	O K	480 min Summer	167.843	0.093	0.4	0.6	O K	600 min Summer	167.821	0.071	0.4	0.5	O K	720 min Summer	167.807	0.057	0.4	0.4	O K	960 min Summer	167.795	0.045	0.4	0.3	O K	1440 min Summer	167.784	0.034	0.3	0.2	O K	2160 min Summer	167.775	0.025	0.2	0.2	O K	2880 min Summer	167.771	0.021	0.2	0.1	O K	4320 min Summer	167.765	0.015	0.1	0.1	O K	5760 min Summer	167.762	0.012	0.1	0.1	O K	7200 min Summer	167.760	0.010	0.1	0.1	O K	8640 min Summer	167.758	0.008	0.1	0.1	O K	10080 min Summer	167.757	0.007	0.1	0.0	O K	15 min Winter	167.996	0.246	0.5	1.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	16	30 min Summer	72.258	0.0	27	60 min Summer	43.800	0.0	44	120 min Summer	26.551	0.0	78	180 min Summer	19.811	0.0	112	240 min Summer	16.094	0.0	144	360 min Summer	12.009	0.0	206	480 min Summer	9.756	0.0	264	600 min Summer	8.304	0.0	322	720 min Summer	7.279	0.0	376	960 min Summer	5.871	0.0	492	1440 min Summer	4.337	0.0	736	2160 min Summer	3.203	0.0	1100	2880 min Summer	2.584	0.0	1464	4320 min Summer	1.843	0.0	2188	5760 min Summer	1.450	0.0	2864	7200 min Summer	1.204	0.0	3616	8640 min Summer	1.034	0.0	4328	10080 min Summer	0.910	0.0	5064	15 min Winter	119.204	0.0	16
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7200 min Winter	167.757	0.007		0.1 0.0	O K																																																																																																																																																																																														
8640 min Winter	167.756	0.006		0.1 0.0	O K																																																																																																																																																																																														
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Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																
30 min Winter	72.258	0.0	29																																																																																																																																																																																																
60 min Winter	43.800	0.0	46																																																																																																																																																																																																
120 min Winter	26.551	0.0	84																																																																																																																																																																																																
180 min Winter	19.811	0.0	120																																																																																																																																																																																																
240 min Winter	16.094	0.0	152																																																																																																																																																																																																
360 min Winter	12.009	0.0	214																																																																																																																																																																																																
480 min Winter	9.756	0.0	266																																																																																																																																																																																																
600 min Winter	8.304	0.0	312																																																																																																																																																																																																
720 min Winter	7.279	0.0	372																																																																																																																																																																																																
960 min Winter	5.871	0.0	494																																																																																																																																																																																																
1440 min Winter	4.337	0.0	736																																																																																																																																																																																																
2160 min Winter	3.203	0.0	1104																																																																																																																																																																																																
2880 min Winter	2.584	0.0	1468																																																																																																																																																																																																
4320 min Winter	1.843	0.0	2132																																																																																																																																																																																																
5760 min Winter	1.450	0.0	2928																																																																																																																																																																																																
7200 min Winter	1.204	0.0	3576																																																																																																																																																																																																
8640 min Winter	1.034	0.0	4256																																																																																																																																																																																																
10080 min Winter	0.910	0.0	5120																																																																																																																																																																																																
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From: To:	(ha)	0	4 0.008
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Date 23/02/2023 11:24 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.750

Cellular Storage Structure

Invert Level (m) 167.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.39400 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.39400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.0	7.0	0.401	0.0	11.2
0.400	7.0	11.2			

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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 20 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>167.884</td><td>0.134</td><td>0.5</td><td>0.9</td><td>O K</td></tr><tr><td>30 min Summer</td><td>167.893</td><td>0.143</td><td>0.5</td><td>0.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>167.892</td><td>0.142</td><td>0.5</td><td>0.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>167.875</td><td>0.125</td><td>0.5</td><td>0.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>167.857</td><td>0.107</td><td>0.4</td><td>0.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>167.841</td><td>0.091</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>360 min Summer</td><td>167.816</td><td>0.066</td><td>0.4</td><td>0.4</td><td>O K</td></tr><tr><td>480 min Summer</td><td>167.801</td><td>0.051</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>167.795</td><td>0.045</td><td>0.4</td><td>0.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.791</td><td>0.041</td><td>0.3</td><td>0.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.784</td><td>0.034</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.776</td><td>0.026</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.770</td><td>0.020</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.766</td><td>0.016</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.762</td><td>0.012</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.759</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.758</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.757</td><td>0.007</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.756</td><td>0.006</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.903</td><td>0.153</td><td>0.5</td><td>1.0</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>15</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>24</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>42</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>76</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>108</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>138</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>196</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>252</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>310</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>492</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1456</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2160</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3552</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4344</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.884	0.134	0.5	0.9	O K	30 min Summer	167.893	0.143	0.5	0.9	O K	60 min Summer	167.892	0.142	0.5	0.9	O K	120 min Summer	167.875	0.125	0.5	0.8	O K	180 min Summer	167.857	0.107	0.4	0.7	O K	240 min Summer	167.841	0.091	0.4	0.6	O K	360 min Summer	167.816	0.066	0.4	0.4	O K	480 min Summer	167.801	0.051	0.4	0.3	O K	600 min Summer	167.795	0.045	0.4	0.3	O K	720 min Summer	167.791	0.041	0.3	0.3	O K	960 min Summer	167.784	0.034	0.3	0.2	O K	1440 min Summer	167.776	0.026	0.2	0.2	O K	2160 min Summer	167.770	0.020	0.2	0.1	O K	2880 min Summer	167.766	0.016	0.1	0.1	O K	4320 min Summer	167.762	0.012	0.1	0.1	O K	5760 min Summer	167.759	0.009	0.1	0.1	O K	7200 min Summer	167.758	0.008	0.1	0.1	O K	8640 min Summer	167.757	0.007	0.1	0.0	O K	10080 min Summer	167.756	0.006	0.1	0.0	O K	15 min Winter	167.903	0.153	0.5	1.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	15	30 min Summer	48.985	0.0	24	60 min Summer	30.377	0.0	42	120 min Summer	18.837	0.0	76	180 min Summer	14.244	0.0	108	240 min Summer	11.681	0.0	138	360 min Summer	8.833	0.0	196	480 min Summer	7.244	0.0	252	600 min Summer	6.211	0.0	310	720 min Summer	5.477	0.0	370	960 min Summer	4.460	0.0	492	1440 min Summer	3.338	0.0	736	2160 min Summer	2.499	0.0	1100	2880 min Summer	2.035	0.0	1456	4320 min Summer	1.471	0.0	2160	5760 min Summer	1.168	0.0	2936	7200 min Summer	0.977	0.0	3552	8640 min Summer	0.845	0.0	4344	10080 min Summer	0.746	0.0	5144	15 min Winter	78.992	0.0	16
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Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.750

Cellular Storage Structure

Invert Level (m) 167.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.39400 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.39400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.0	7.0	0.401	0.0	11.2
0.400	7.0	11.2			

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Summer</td><td>2.919</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>492</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2180</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2840</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3648</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5024</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>14</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.797	0.047	0.4	0.3	O K	30 min Summer	167.800	0.050	0.4	0.3	O K	60 min Summer	167.799	0.049	0.4	0.3	O K	120 min Summer	167.794	0.044	0.4	0.3	O K	180 min Summer	167.789	0.039	0.3	0.3	O K	240 min Summer	167.785	0.035	0.3	0.2	O K	360 min Summer	167.780	0.030	0.2	0.2	O K	480 min Summer	167.776	0.026	0.2	0.2	O K	600 min Summer	167.774	0.024	0.2	0.2	O K	720 min Summer	167.772	0.022	0.2	0.1	O K	960 min Summer	167.768	0.018	0.2	0.1	O K	1440 min Summer	167.765	0.015	0.1	0.1	O K	2160 min Summer	167.761	0.011	0.1	0.1	O K	2880 min Summer	167.760	0.010	0.1	0.1	O K	4320 min Summer	167.757	0.007	0.1	0.0	O K	5760 min Summer	167.756	0.006	0.0	0.0	O K	7200 min Summer	167.755	0.005	0.0	0.0	O K	8640 min Summer	167.754	0.004	0.0	0.0	O K	10080 min Summer	167.754	0.004	0.0	0.0	O K	15 min Winter	167.802	0.052	0.4	0.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	31.772	0.0	13	30 min Summer	20.720	0.0	21	60 min Summer	13.513	0.0	38	120 min Summer	8.812	0.0	68	180 min Summer	6.863	0.0	100	240 min Summer	5.747	0.0	130	360 min Summer	4.476	0.0	190	480 min Summer	3.748	0.0	252	600 min Summer	3.266	0.0	310	720 min Summer	2.919	0.0	370	960 min Summer	2.427	0.0	492	1440 min Summer	1.871	0.0	734	2160 min Summer	1.442	0.0	1100	2880 min Summer	1.199	0.0	1468	4320 min Summer	0.893	0.0	2180	5760 min Summer	0.724	0.0	2840	7200 min Summer	0.616	0.0	3648	8640 min Summer	0.539	0.0	4400	10080 min Summer	0.482	0.0	5024	15 min Winter	31.772	0.0	14
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 7 Cellular soakaway				
Date 23/02/2023 11:26 File PLOT 3 REAR CELLULAR.SRCX		Designed by APL Checked by MBD				
Innovyze		Source Control 2020.1.3				
<u>Summary of Results for 2 year Return Period</u>						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
30 min Winter	167.804	0.054		0.4	0.4	O K
60 min Winter	167.800	0.050		0.4	0.3	O K
120 min Winter	167.791	0.041		0.3	0.3	O K
180 min Winter	167.785	0.035		0.3	0.2	O K
240 min Winter	167.780	0.030		0.2	0.2	O K
360 min Winter	167.774	0.024		0.2	0.2	O K
480 min Winter	167.771	0.021		0.2	0.1	O K
600 min Winter	167.768	0.018		0.2	0.1	O K
720 min Winter	167.767	0.017		0.1	0.1	O K
960 min Winter	167.764	0.014		0.1	0.1	O K
1440 min Winter	167.761	0.011		0.1	0.1	O K
2160 min Winter	167.758	0.008		0.1	0.1	O K
2880 min Winter	167.757	0.007		0.1	0.0	O K
4320 min Winter	167.755	0.005		0.0	0.0	O K
5760 min Winter	167.754	0.004		0.0	0.0	O K
7200 min Winter	167.754	0.004		0.0	0.0	O K
8640 min Winter	167.753	0.003		0.0	0.0	O K
10080 min Winter	167.753	0.003		0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	20.720	0.0	23			
60 min Winter	13.513	0.0	40			
120 min Winter	8.812	0.0	72			
180 min Winter	6.863	0.0	102			
240 min Winter	5.747	0.0	132			
360 min Winter	4.476	0.0	194			
480 min Winter	3.748	0.0	254			
600 min Winter	3.266	0.0	314			
720 min Winter	2.919	0.0	372			
960 min Winter	2.427	0.0	494			
1440 min Winter	1.871	0.0	732			
2160 min Winter	1.442	0.0	1100			
2880 min Winter	1.199	0.0	1464			
4320 min Winter	0.893	0.0	2160			
5760 min Winter	0.724	0.0	2992			
7200 min Winter	0.616	0.0	3584			
8640 min Winter	0.539	0.0	4296			
10080 min Winter	0.482	0.0	5144			
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																																									
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.008
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway	
Date 23/02/2023 11:26 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.750

Cellular Storage Structure

Invert Level (m) 167.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.39400 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.39400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.0	7.0	0.401	0.0	11.2
0.400	7.0	11.2			

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K</td></tr><tr><td>600 min Summer</td><td>167.770</td><td>0.020</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>167.768</td><td>0.018</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>167.766</td><td>0.016</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>167.763</td><td>0.013</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>167.760</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>167.758</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>167.756</td><td>0.006</td><td>0.1</td><td>0.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>167.755</td><td>0.005</td><td>0.0</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>167.755</td><td>0.005</td><td>0.0</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>167.754</td><td>0.004</td><td>0.0</td><td>0.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>167.754</td><td>0.004</td><td>0.0</td><td>0.0</td><td>O K</td></tr><tr><td>15 min Winter</td><td>167.791</td><td>0.041</td><td>0.3</td><td>0.3</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>25.129</td><td>0.0</td><td>13</td></tr><tr><td>30 min Summer</td><td>16.602</td><td>0.0</td><td>21</td></tr><tr><td>60 min Summer</td><td>10.968</td><td>0.0</td><td>38</td></tr><tr><td>120 min Summer</td><td>7.246</td><td>0.0</td><td>68</td></tr><tr><td>180 min Summer</td><td>5.686</td><td>0.0</td><td>100</td></tr><tr><td>240 min Summer</td><td>4.787</td><td>0.0</td><td>130</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.0</td><td>190</td></tr><tr><td>480 min Summer</td><td>3.163</td><td>0.0</td><td>250</td></tr><tr><td>600 min Summer</td><td>2.768</td><td>0.0</td><td>310</td></tr><tr><td>720 min Summer</td><td>2.482</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>2.075</td><td>0.0</td><td>492</td></tr><tr><td>1440 min Summer</td><td>1.612</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>1.252</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>1.046</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.785</td><td>0.0</td><td>2136</td></tr><tr><td>5760 min Summer</td><td>0.640</td><td>0.0</td><td>2864</td></tr><tr><td>7200 min Summer</td><td>0.546</td><td>0.0</td><td>3632</td></tr><tr><td>8640 min Summer</td><td>0.480</td><td>0.0</td><td>4376</td></tr><tr><td>10080 min Summer</td><td>0.430</td><td>0.0</td><td>4992</td></tr><tr><td>15 min Winter</td><td>25.129</td><td>0.0</td><td>14</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	167.787	0.037	0.3	0.2	O K	30 min Summer	167.790	0.040	0.3	0.3	O K	60 min Summer	167.790	0.040	0.3	0.3	O K	120 min Summer	167.786	0.036	0.3	0.2	O K	180 min Summer	167.782	0.032	0.3	0.2	O K	240 min Summer	167.780	0.030	0.2	0.2	O K	360 min Summer	167.775	0.025	0.2	0.2	O K	480 min Summer	167.772	0.022	0.2	0.1	O K	600 min Summer	167.770	0.020	0.2	0.1	O K	720 min Summer	167.768	0.018	0.2	0.1	O K	960 min Summer	167.766	0.016	0.1	0.1	O K	1440 min Summer	167.763	0.013	0.1	0.1	O K	2160 min Summer	167.760	0.010	0.1	0.1	O K	2880 min Summer	167.758	0.008	0.1	0.1	O K	4320 min Summer	167.756	0.006	0.1	0.0	O K	5760 min Summer	167.755	0.005	0.0	0.0	O K	7200 min Summer	167.755	0.005	0.0	0.0	O K	8640 min Summer	167.754	0.004	0.0	0.0	O K	10080 min Summer	167.754	0.004	0.0	0.0	O K	15 min Winter	167.791	0.041	0.3	0.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	25.129	0.0	13	30 min Summer	16.602	0.0	21	60 min Summer	10.968	0.0	38	120 min Summer	7.246	0.0	68	180 min Summer	5.686	0.0	100	240 min Summer	4.787	0.0	130	360 min Summer	3.757	0.0	190	480 min Summer	3.163	0.0	250	600 min Summer	2.768	0.0	310	720 min Summer	2.482	0.0	370	960 min Summer	2.075	0.0	492	1440 min Summer	1.612	0.0	734	2160 min Summer	1.252	0.0	1100	2880 min Summer	1.046	0.0	1468	4320 min Summer	0.785	0.0	2136	5760 min Summer	0.640	0.0	2864	7200 min Summer	0.546	0.0	3632	8640 min Summer	0.480	0.0	4376	10080 min Summer	0.430	0.0	4992	15 min Winter	25.129	0.0	14
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 7 Cellular soakaway			
Date 23/02/2023 11:27 File PLOT 3 REAR CELLULAR.SRCX		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	167.793	0.043		0.4 0.3	O K
60 min Winter	167.790	0.040		0.3 0.3	O K
120 min Winter	167.784	0.034		0.3 0.2	O K
180 min Winter	167.779	0.029		0.2 0.2	O K
240 min Winter	167.775	0.025		0.2 0.2	O K
360 min Winter	167.771	0.021		0.2 0.1	O K
480 min Winter	167.768	0.018		0.1 0.1	O K
600 min Winter	167.766	0.016		0.1 0.1	O K
720 min Winter	167.764	0.014		0.1 0.1	O K
960 min Winter	167.762	0.012		0.1 0.1	O K
1440 min Winter	167.759	0.009		0.1 0.1	O K
2160 min Winter	167.757	0.007		0.1 0.0	O K
2880 min Winter	167.756	0.006		0.1 0.0	O K
4320 min Winter	167.755	0.005		0.0 0.0	O K
5760 min Winter	167.754	0.004		0.0 0.0	O K
7200 min Winter	167.753	0.003		0.0 0.0	O K
8640 min Winter	167.753	0.003		0.0 0.0	O K
10080 min Winter	167.753	0.003		0.0 0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	22		
60 min Winter	10.968	0.0	40		
120 min Winter	7.246	0.0	72		
180 min Winter	5.686	0.0	102		
240 min Winter	4.787	0.0	132		
360 min Winter	3.757	0.0	196		
480 min Winter	3.163	0.0	252		
600 min Winter	2.768	0.0	312		
720 min Winter	2.482	0.0	374		
960 min Winter	2.075	0.0	494		
1440 min Winter	1.612	0.0	708		
2160 min Winter	1.252	0.0	1088		
2880 min Winter	1.046	0.0	1520		
4320 min Winter	0.785	0.0	2228		
5760 min Winter	0.640	0.0	2912		
7200 min Winter	0.546	0.0	3568		
8640 min Winter	0.480	0.0	4448		
10080 min Winter	0.430	0.0	4720		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway																																									
Date 23/02/2023 11:27 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>1</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.008 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.008</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	1	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.008
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 7 Cellular soakaway	
Date 23/02/2023 11:27 File PLOT 3 REAR CELLULAR.SRCX	Designed by APL Checked by MBD	
Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 168.750

Cellular Storage Structure

Invert Level (m) 167.750 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.39400 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.39400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.0	7.0	0.401	0.0	11.2
0.400	7.0	11.2			

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 3 Front Permeable paving																																																																																																																																																																																																																					
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Innovyze		Source Control 2019.1																																																																																																																																																																																																																					
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 106 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.495</td><td>0.245</td><td>0.4</td><td>3.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.536</td><td>0.286</td><td>0.4</td><td>3.8</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.567</td><td>0.317</td><td>0.4</td><td>4.2</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.577</td><td>0.327</td><td>0.4</td><td>4.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.574</td><td>0.324</td><td>0.4</td><td>4.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.566</td><td>0.316</td><td>0.4</td><td>4.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.544</td><td>0.294</td><td>0.4</td><td>3.9</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.520</td><td>0.270</td><td>0.4</td><td>3.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.496</td><td>0.246</td><td>0.4</td><td>3.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.473</td><td>0.223</td><td>0.4</td><td>2.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.426</td><td>0.176</td><td>0.4</td><td>2.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.355</td><td>0.105</td><td>0.4</td><td>1.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.303</td><td>0.053</td><td>0.4</td><td>0.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.292</td><td>0.042</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.281</td><td>0.031</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.274</td><td>0.024</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.270</td><td>0.020</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>11.625</td><td>0.0</td><td>368</td></tr><tr><td>720 min Summer</td><td>10.191</td><td>0.0</td><td>434</td></tr><tr><td>960 min Summer</td><td>8.220</td><td>0.0</td><td>558</td></tr><tr><td>1440 min Summer</td><td>6.071</td><td>0.0</td><td>792</td></tr><tr><td>2160 min Summer</td><td>4.484</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.580</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>2.030</td><td>0.0</td><td>2912</td></tr><tr><td>7200 min Summer</td><td>1.686</td><td>0.0</td><td>3640</td></tr><tr><td>8640 min Summer</td><td>1.448</td><td>0.0</td><td>4384</td></tr><tr><td>10080 min Summer</td><td>1.274</td><td>0.0</td><td>5016</td></tr><tr><td>15 min Winter</td><td>166.885</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.495	0.245	0.4	3.2	O K	30 min Summer	168.536	0.286	0.4	3.8	O K	60 min Summer	168.567	0.317	0.4	4.2	O K	120 min Summer	168.577	0.327	0.4	4.3	O K	180 min Summer	168.574	0.324	0.4	4.3	O K	240 min Summer	168.566	0.316	0.4	4.2	O K	360 min Summer	168.544	0.294	0.4	3.9	O K	480 min Summer	168.520	0.270	0.4	3.6	O K	600 min Summer	168.496	0.246	0.4	3.2	O K	720 min Summer	168.473	0.223	0.4	2.9	O K	960 min Summer	168.426	0.176	0.4	2.3	O K	1440 min Summer	168.355	0.105	0.4	1.4	O K	2160 min Summer	168.303	0.053	0.4	0.7	O K	2880 min Summer	168.292	0.042	0.3	0.6	O K	4320 min Summer	168.281	0.031	0.3	0.4	O K	5760 min Summer	168.274	0.024	0.2	0.3	O K	7200 min Summer	168.270	0.020	0.2	0.3	O K	8640 min Summer	168.267	0.017	0.1	0.2	O K	10080 min Summer	168.265	0.015	0.1	0.2	O K	15 min Winter	168.529	0.279	0.4	3.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	166.885	0.0	18	30 min Summer	101.161	0.0	32	60 min Summer	61.321	0.0	60	120 min Summer	37.171	0.0	100	180 min Summer	27.735	0.0	132	240 min Summer	22.532	0.0	166	360 min Summer	16.812	0.0	234	480 min Summer	13.658	0.0	304	600 min Summer	11.625	0.0	368	720 min Summer	10.191	0.0	434	960 min Summer	8.220	0.0	558	1440 min Summer	6.071	0.0	792	2160 min Summer	4.484	0.0	1104	2880 min Summer	3.617	0.0	1468	4320 min Summer	2.580	0.0	2192	5760 min Summer	2.030	0.0	2912	7200 min Summer	1.686	0.0	3640	8640 min Summer	1.448	0.0	4384	10080 min Summer	1.274	0.0	5016	15 min Winter	166.885	0.0	18
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN		Howle Hill Plot 3 Front Permeable paving			
Date 10/02/2023 10:39 File PLOT 3 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.576	0.326	0.4	4.3	O K
60 min Winter	168.616	0.366	0.4	4.8	O K
120 min Winter	168.631	0.381	0.4	5.0	Flood Risk
180 min Winter	168.624	0.374	0.4	4.9	Flood Risk
240 min Winter	168.611	0.361	0.4	4.8	O K
360 min Winter	168.576	0.326	0.4	4.3	O K
480 min Winter	168.537	0.287	0.4	3.8	O K
600 min Winter	168.497	0.247	0.4	3.3	O K
720 min Winter	168.460	0.210	0.4	2.8	O K
960 min Winter	168.389	0.139	0.4	1.8	O K
1440 min Winter	168.303	0.053	0.4	0.7	O K
2160 min Winter	168.288	0.038	0.3	0.5	O K
2880 min Winter	168.281	0.031	0.3	0.4	O K
4320 min Winter	168.272	0.022	0.2	0.3	O K
5760 min Winter	168.267	0.017	0.1	0.2	O K
7200 min Winter	168.265	0.015	0.1	0.2	O K
8640 min Winter	168.262	0.012	0.1	0.2	O K
10080 min Winter	168.261	0.011	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	101.161	0.0	32		
60 min Winter	61.321	0.0	60		
120 min Winter	37.171	0.0	114		
180 min Winter	27.735	0.0	142		
240 min Winter	22.532	0.0	180		
360 min Winter	16.812	0.0	256		
480 min Winter	13.658	0.0	328		
600 min Winter	11.625	0.0	398		
720 min Winter	10.191	0.0	462		
960 min Winter	8.220	0.0	580		
1440 min Winter	6.071	0.0	766		
2160 min Winter	4.484	0.0	1104		
2880 min Winter	3.617	0.0	1464		
4320 min Winter	2.580	0.0	2192		
5760 min Winter	2.030	0.0	2944		
7200 min Winter	1.686	0.0	3680		
8640 min Winter	1.448	0.0	4408		
10080 min Winter	1.274	0.0	5104		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving	
Date 10/02/2023 10:39 File PLOT 3 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze Source Control 2019.1		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 360500 221250 SO 60500 21250
C (1km)	-0.027
D1 (1km)	0.402
D2 (1km)	0.377
D3 (1km)	0.291
E (1km)	0.301
F (1km)	2.395
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

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

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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving																									
Date 10/02/2023 10:39 File PLOT 3 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
Innovyze	Source Control 2019.1																									
Model Details Storage is Online Cover Level (m) 168.750 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.4</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.250</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.4	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.250	Membrane Depth (m)	0
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 73 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.416</td><td>0.166</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.441</td><td>0.191</td><td>0.4</td><td>2.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.456</td><td>0.206</td><td>0.4</td><td>2.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.459</td><td>0.209</td><td>0.4</td><td>2.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.453</td><td>0.203</td><td>0.4</td><td>2.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.443</td><td>0.193</td><td>0.4</td><td>2.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.420</td><td>0.170</td><td>0.4</td><td>2.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.397</td><td>0.147</td><td>0.4</td><td>1.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.377</td><td>0.127</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.358</td><td>0.108</td><td>0.4</td><td>1.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.327</td><td>0.077</td><td>0.4</td><td>1.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.298</td><td>0.048</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.287</td><td>0.037</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.280</td><td>0.030</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.272</td><td>0.022</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.267</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.264</td><td>0.014</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.262</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>168.261</td><td>0.011</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.439</td><td>0.189</td><td>0.4</td><td>2.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>119.204</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>72.258</td><td>0.0</td><td>31</td></tr><tr><td>60 min Summer</td><td>43.800</td><td>0.0</td><td>56</td></tr><tr><td>120 min Summer</td><td>26.551</td><td>0.0</td><td>88</td></tr><tr><td>180 min Summer</td><td>19.811</td><td>0.0</td><td>122</td></tr><tr><td>240 min Summer</td><td>16.094</td><td>0.0</td><td>156</td></tr><tr><td>360 min Summer</td><td>12.009</td><td>0.0</td><td>224</td></tr><tr><td>480 min Summer</td><td>9.756</td><td>0.0</td><td>288</td></tr><tr><td>600 min Summer</td><td>8.304</td><td>0.0</td><td>350</td></tr><tr><td>720 min Summer</td><td>7.279</td><td>0.0</td><td>410</td></tr><tr><td>960 min Summer</td><td>5.871</td><td>0.0</td><td>522</td></tr><tr><td>1440 min Summer</td><td>4.337</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>3.203</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.584</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.843</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>1.450</td><td>0.0</td><td>2904</td></tr><tr><td>7200 min Summer</td><td>1.204</td><td>0.0</td><td>3584</td></tr><tr><td>8640 min Summer</td><td>1.034</td><td>0.0</td><td>4344</td></tr><tr><td>10080 min Summer</td><td>0.910</td><td>0.0</td><td>5136</td></tr><tr><td>15 min Winter</td><td>119.204</td><td>0.0</td><td>17</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.416	0.166	0.4	2.2	O K	30 min Summer	168.441	0.191	0.4	2.5	O K	60 min Summer	168.456	0.206	0.4	2.7	O K	120 min Summer	168.459	0.209	0.4	2.8	O K	180 min Summer	168.453	0.203	0.4	2.7	O K	240 min Summer	168.443	0.193	0.4	2.5	O K	360 min Summer	168.420	0.170	0.4	2.2	O K	480 min Summer	168.397	0.147	0.4	1.9	O K	600 min Summer	168.377	0.127	0.4	1.7	O K	720 min Summer	168.358	0.108	0.4	1.4	O K	960 min Summer	168.327	0.077	0.4	1.0	O K	1440 min Summer	168.298	0.048	0.4	0.6	O K	2160 min Summer	168.287	0.037	0.3	0.5	O K	2880 min Summer	168.280	0.030	0.2	0.4	O K	4320 min Summer	168.272	0.022	0.2	0.3	O K	5760 min Summer	168.267	0.017	0.1	0.2	O K	7200 min Summer	168.264	0.014	0.1	0.2	O K	8640 min Summer	168.262	0.012	0.1	0.2	O K	10080 min Summer	168.261	0.011	0.1	0.1	O K	15 min Winter	168.439	0.189	0.4	2.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	119.204	0.0	17	30 min Summer	72.258	0.0	31	60 min Summer	43.800	0.0	56	120 min Summer	26.551	0.0	88	180 min Summer	19.811	0.0	122	240 min Summer	16.094	0.0	156	360 min Summer	12.009	0.0	224	480 min Summer	9.756	0.0	288	600 min Summer	8.304	0.0	350	720 min Summer	7.279	0.0	410	960 min Summer	5.871	0.0	522	1440 min Summer	4.337	0.0	738	2160 min Summer	3.203	0.0	1104	2880 min Summer	2.584	0.0	1468	4320 min Summer	1.843	0.0	2200	5760 min Summer	1.450	0.0	2904	7200 min Summer	1.204	0.0	3584	8640 min Summer	1.034	0.0	4344	10080 min Summer	0.910	0.0	5136	15 min Winter	119.204	0.0	17
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7200 min Winter	168.260	0.010	0.1	0.1	O K																																																																																																																																																																																														
8640 min Winter	168.259	0.009	0.1	0.1	O K																																																																																																																																																																																														
10080 min Winter	168.258	0.008	0.1	0.1	O K																																																																																																																																																																																														
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																
30 min Winter	72.258	0.0	31																																																																																																																																																																																																
60 min Winter	43.800	0.0	58																																																																																																																																																																																																
120 min Winter	26.551	0.0	94																																																																																																																																																																																																
180 min Winter	19.811	0.0	132																																																																																																																																																																																																
240 min Winter	16.094	0.0	170																																																																																																																																																																																																
360 min Winter	12.009	0.0	240																																																																																																																																																																																																
480 min Winter	9.756	0.0	306																																																																																																																																																																																																
600 min Winter	8.304	0.0	366																																																																																																																																																																																																
720 min Winter	7.279	0.0	420																																																																																																																																																																																																
960 min Winter	5.871	0.0	502																																																																																																																																																																																																
1440 min Winter	4.337	0.0	748																																																																																																																																																																																																
2160 min Winter	3.203	0.0	1104																																																																																																																																																																																																
2880 min Winter	2.584	0.0	1468																																																																																																																																																																																																
4320 min Winter	1.843	0.0	2220																																																																																																																																																																																																
5760 min Winter	1.450	0.0	2944																																																																																																																																																																																																
7200 min Winter	1.204	0.0	3544																																																																																																																																																																																																
8640 min Winter	1.034	0.0	4440																																																																																																																																																																																																
10080 min Winter	0.910	0.0	5000																																																																																																																																																																																																
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving																																									
Date 23/02/2023 11:16 File PLOT 3 FRONT PERMEABLE....	Designed by APL Checked by MBD																																									
Innovyze		Source Control 2020.1.3																																								
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.012
Rainfall Model	FEH																																									
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving																									
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Innovyze	Source Control 2020.1.3																									
Model Details Storage is Online Cover Level (m) 168.750 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.4</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.250</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.4	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.250	Membrane Depth (m)	0
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Invert Level (m)	168.250	Membrane Depth (m)	0																							
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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 43 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>168.350</td><td>0.100</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>168.366</td><td>0.116</td><td>0.4</td><td>1.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>168.377</td><td>0.127</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>168.381</td><td>0.131</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>168.375</td><td>0.125</td><td>0.4</td><td>1.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>168.367</td><td>0.117</td><td>0.4</td><td>1.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>168.349</td><td>0.099</td><td>0.4</td><td>1.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>168.333</td><td>0.083</td><td>0.4</td><td>1.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>168.319</td><td>0.069</td><td>0.4</td><td>0.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.309</td><td>0.059</td><td>0.4</td><td>0.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.297</td><td>0.047</td><td>0.4</td><td>0.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.287</td><td>0.037</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.279</td><td>0.029</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.274</td><td>0.024</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.267</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.264</td><td>0.014</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.262</td><td>0.012</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.260</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>168.259</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>168.365</td><td>0.115</td><td>0.4</td><td>1.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>78.992</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>48.985</td><td>0.0</td><td>30</td></tr><tr><td>60 min Summer</td><td>30.377</td><td>0.0</td><td>46</td></tr><tr><td>120 min Summer</td><td>18.837</td><td>0.0</td><td>82</td></tr><tr><td>180 min Summer</td><td>14.244</td><td>0.0</td><td>116</td></tr><tr><td>240 min Summer</td><td>11.681</td><td>0.0</td><td>148</td></tr><tr><td>360 min Summer</td><td>8.833</td><td>0.0</td><td>214</td></tr><tr><td>480 min Summer</td><td>7.244</td><td>0.0</td><td>274</td></tr><tr><td>600 min Summer</td><td>6.211</td><td>0.0</td><td>332</td></tr><tr><td>720 min Summer</td><td>5.477</td><td>0.0</td><td>386</td></tr><tr><td>960 min Summer</td><td>4.460</td><td>0.0</td><td>500</td></tr><tr><td>1440 min Summer</td><td>3.338</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>2.499</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.035</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.471</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.168</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>0.977</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>0.845</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>0.746</td><td>0.0</td><td>4976</td></tr><tr><td>15 min Winter</td><td>78.992</td><td>0.0</td><td>17</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.350	0.100	0.4	1.3	O K	30 min Summer	168.366	0.116	0.4	1.5	O K	60 min Summer	168.377	0.127	0.4	1.7	O K	120 min Summer	168.381	0.131	0.4	1.7	O K	180 min Summer	168.375	0.125	0.4	1.7	O K	240 min Summer	168.367	0.117	0.4	1.5	O K	360 min Summer	168.349	0.099	0.4	1.3	O K	480 min Summer	168.333	0.083	0.4	1.1	O K	600 min Summer	168.319	0.069	0.4	0.9	O K	720 min Summer	168.309	0.059	0.4	0.8	O K	960 min Summer	168.297	0.047	0.4	0.6	O K	1440 min Summer	168.287	0.037	0.3	0.5	O K	2160 min Summer	168.279	0.029	0.2	0.4	O K	2880 min Summer	168.274	0.024	0.2	0.3	O K	4320 min Summer	168.267	0.017	0.1	0.2	O K	5760 min Summer	168.264	0.014	0.1	0.2	O K	7200 min Summer	168.262	0.012	0.1	0.2	O K	8640 min Summer	168.260	0.010	0.1	0.1	O K	10080 min Summer	168.259	0.009	0.1	0.1	O K	15 min Winter	168.365	0.115	0.4	1.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	78.992	0.0	17	30 min Summer	48.985	0.0	30	60 min Summer	30.377	0.0	46	120 min Summer	18.837	0.0	82	180 min Summer	14.244	0.0	116	240 min Summer	11.681	0.0	148	360 min Summer	8.833	0.0	214	480 min Summer	7.244	0.0	274	600 min Summer	6.211	0.0	332	720 min Summer	5.477	0.0	386	960 min Summer	4.460	0.0	500	1440 min Summer	3.338	0.0	738	2160 min Summer	2.499	0.0	1104	2880 min Summer	2.035	0.0	1468	4320 min Summer	1.471	0.0	2204	5760 min Summer	1.168	0.0	2936	7200 min Summer	0.977	0.0	3672	8640 min Summer	0.845	0.0	4408	10080 min Summer	0.746	0.0	4976	15 min Winter	78.992	0.0	17
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15 min Winter	168.365	0.115	0.4	1.5	O K																																																																																																																																																																																																																		
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Date 23/02/2023 11:14 File PLOT 3 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.385	0.135	0.4	1.8	O K
60 min Winter	168.396	0.146	0.4	1.9	O K
120 min Winter	168.395	0.145	0.4	1.9	O K
180 min Winter	168.384	0.134	0.4	1.8	O K
240 min Winter	168.369	0.119	0.4	1.6	O K
360 min Winter	168.340	0.090	0.4	1.2	O K
480 min Winter	168.315	0.065	0.4	0.9	O K
600 min Winter	168.300	0.050	0.4	0.7	O K
720 min Winter	168.295	0.045	0.4	0.6	O K
960 min Winter	168.287	0.037	0.3	0.5	O K
1440 min Winter	168.278	0.028	0.2	0.4	O K
2160 min Winter	168.271	0.021	0.2	0.3	O K
2880 min Winter	168.267	0.017	0.1	0.2	O K
4320 min Winter	168.263	0.013	0.1	0.2	O K
5760 min Winter	168.260	0.010	0.1	0.1	O K
7200 min Winter	168.258	0.008	0.1	0.1	O K
8640 min Winter	168.257	0.007	0.1	0.1	O K
10080 min Winter	168.256	0.006	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	48.985	0.0	30		
60 min Winter	30.377	0.0	50		
120 min Winter	18.837	0.0	88		
180 min Winter	14.244	0.0	126		
240 min Winter	11.681	0.0	160		
360 min Winter	8.833	0.0	224		
480 min Winter	7.244	0.0	280		
600 min Winter	6.211	0.0	326		
720 min Winter	5.477	0.0	384		
960 min Winter	4.460	0.0	502		
1440 min Winter	3.338	0.0	748		
2160 min Winter	2.499	0.0	1104		
2880 min Winter	2.035	0.0	1472		
4320 min Winter	1.471	0.0	2176		
5760 min Winter	1.168	0.0	2944		
7200 min Winter	0.977	0.0	3672		
8640 min Winter	0.845	0.0	4264		
10080 min Winter	0.746	0.0	5144		
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The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving	
Date 23/02/2023 11:14 File PLOT 3 FRONT PERMEABLE....	Designed by APL Checked by MBD	
Innovyze		Source Control 2020.1.3

Infrastruct CS Ltd		Page 4																								
The Stables High Cogges, Witney Oxfordshire, OX29 6UN	Howle Hill Plot 3 Front Permeable paving																									
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Innovyze	Source Control 2020.1.3																									
Model Details Storage is Online Cover Level (m) 168.750 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.4</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.250</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.4	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.250	Membrane Depth (m)	0
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K</td></tr><tr><td>600 min Summer</td><td>168.282</td><td>0.032</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>168.279</td><td>0.029</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>168.276</td><td>0.026</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>168.271</td><td>0.021</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>168.267</td><td>0.017</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>168.264</td><td>0.014</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>168.261</td><td>0.011</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>168.259</td><td>0.009</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>168.257</td><td>0.007</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>168.256</td><td>0.006</td><td>0.1</td><td>0.1</td><td>O 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Summer</td><td>2.919</td><td>0.0</td><td>378</td></tr><tr><td>960 min Summer</td><td>2.427</td><td>0.0</td><td>500</td></tr><tr><td>1440 min Summer</td><td>1.871</td><td>0.0</td><td>738</td></tr><tr><td>2160 min Summer</td><td>1.442</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>1.199</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.893</td><td>0.0</td><td>2192</td></tr><tr><td>5760 min Summer</td><td>0.724</td><td>0.0</td><td>2912</td></tr><tr><td>7200 min Summer</td><td>0.616</td><td>0.0</td><td>3648</td></tr><tr><td>8640 min Summer</td><td>0.539</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.482</td><td>0.0</td><td>5120</td></tr><tr><td>15 min Winter</td><td>31.772</td><td>0.0</td><td>16</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	168.280	0.030	0.2	0.4	O K	30 min Summer	168.287	0.037	0.3	0.5	O K	60 min Summer	168.293	0.043	0.4	0.6	O K	120 min 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Summer	3.266	0.0	320	720 min Summer	2.919	0.0	378	960 min Summer	2.427	0.0	500	1440 min Summer	1.871	0.0	738	2160 min Summer	1.442	0.0	1100	2880 min Summer	1.199	0.0	1468	4320 min Summer	0.893	0.0	2192	5760 min Summer	0.724	0.0	2912	7200 min Summer	0.616	0.0	3648	8640 min Summer	0.539	0.0	4400	10080 min Summer	0.482	0.0	5120	15 min Winter	31.772	0.0	16
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Date 23/02/2023 11:17 File PLOT 3 FRONT PERMEABLE....		Designed by APL Checked by MBD			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 2 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.292	0.042	0.3	0.6	O K
60 min Winter	168.297	0.047	0.4	0.6	O K
120 min Winter	168.297	0.047	0.4	0.6	O K
180 min Winter	168.293	0.043	0.4	0.6	O K
240 min Winter	168.290	0.040	0.3	0.5	O K
360 min Winter	168.284	0.034	0.3	0.4	O K
480 min Winter	168.280	0.030	0.2	0.4	O K
600 min Winter	168.276	0.026	0.2	0.3	O K
720 min Winter	168.274	0.024	0.2	0.3	O K
960 min Winter	168.270	0.020	0.2	0.3	O K
1440 min Winter	168.266	0.016	0.1	0.2	O K
2160 min Winter	168.262	0.012	0.1	0.2	O K
2880 min Winter	168.260	0.010	0.1	0.1	O K
4320 min Winter	168.258	0.008	0.1	0.1	O K
5760 min Winter	168.256	0.006	0.1	0.1	O K
7200 min Winter	168.255	0.005	0.0	0.1	O K
8640 min Winter	168.255	0.005	0.0	0.1	O K
10080 min Winter	168.254	0.004	0.0	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.720	0.0	25		
60 min Winter	13.513	0.0	44		
120 min Winter	8.812	0.0	78		
180 min Winter	6.863	0.0	110		
240 min Winter	5.747	0.0	140		
360 min Winter	4.476	0.0	202		
480 min Winter	3.748	0.0	262		
600 min Winter	3.266	0.0	326		
720 min Winter	2.919	0.0	386		
960 min Winter	2.427	0.0	502		
1440 min Winter	1.871	0.0	748		
2160 min Winter	1.442	0.0	1100		
2880 min Winter	1.199	0.0	1440		
4320 min Winter	0.893	0.0	2160		
5760 min Winter	0.724	0.0	2872		
7200 min Winter	0.616	0.0	3544		
8640 min Winter	0.539	0.0	4336		
10080 min Winter	0.482	0.0	4880		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 360500 221250 SO 60500 21250</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.402</td> </tr> <tr> <td>D2 (1km)</td> <td>0.377</td> </tr> <tr> <td>D3 (1km)</td> <td>0.291</td> </tr> <tr> <td>E (1km)</td> <td>0.301</td> </tr> <tr> <td>F (1km)</td> <td>2.395</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+0</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.012 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From:</td> <td>To: (ha)</td> </tr> <tr> <td>0</td> <td>4 0.012</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	1999	Site Location	GB 360500 221250 SO 60500 21250	C (1km)	-0.027	D1 (1km)	0.402	D2 (1km)	0.377	D3 (1km)	0.291	E (1km)	0.301	F (1km)	2.395	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+0	Time (mins)	Area	From:	To: (ha)	0	4 0.012
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Model Details Storage is Online Cover Level (m) 168.750 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.4</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.250</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.4	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.250	Membrane Depth (m)	0
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Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	168.282	0.032	0.3	0.4	O K
60 min Winter	168.287	0.037	0.3	0.5	O K
120 min Winter	168.288	0.038	0.3	0.5	O K
180 min Winter	168.286	0.036	0.3	0.5	O K
240 min Winter	168.283	0.033	0.3	0.4	O K
360 min Winter	168.278	0.028	0.2	0.4	O K
480 min Winter	168.275	0.025	0.2	0.3	O K
600 min Winter	168.272	0.022	0.2	0.3	O K
720 min Winter	168.270	0.020	0.2	0.3	O K
960 min Winter	168.267	0.017	0.1	0.2	O K
1440 min Winter	168.264	0.014	0.1	0.2	O K
2160 min Winter	168.261	0.011	0.1	0.1	O K
2880 min Winter	168.259	0.009	0.1	0.1	O K
4320 min Winter	168.257	0.007	0.1	0.1	O K
5760 min Winter	168.256	0.006	0.0	0.1	O K
7200 min Winter	168.255	0.005	0.0	0.1	O K
8640 min Winter	168.254	0.004	0.0	0.1	O K
10080 min Winter	168.254	0.004	0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	16.602	0.0	25		
60 min Winter	10.968	0.0	44		
120 min Winter	7.246	0.0	78		
180 min Winter	5.686	0.0	110		
240 min Winter	4.787	0.0	142		
360 min Winter	3.757	0.0	202		
480 min Winter	3.163	0.0	264		
600 min Winter	2.768	0.0	324		
720 min Winter	2.482	0.0	384		
960 min Winter	2.075	0.0	502		
1440 min Winter	1.612	0.0	732		
2160 min Winter	1.252	0.0	1100		
2880 min Winter	1.046	0.0	1476		
4320 min Winter	0.785	0.0	2156		
5760 min Winter	0.640	0.0	2936		
7200 min Winter	0.546	0.0	3640		
8640 min Winter	0.480	0.0	4432		
10080 min Winter	0.430	0.0	5192		
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Date 23/02/2023 11:17 File PLOT 3 FRONT PERMEABLE....	Designed by APL Checked by MBD																									
Innovyze	Source Control 2020.1.3																									
Model Details Storage is Online Cover Level (m) 168.750 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.06700</td><td>Width (m)</td><td>4.4</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>12.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>168.250</td><td>Membrane Depth (m)</td><td>0</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.06700	Width (m)	4.4	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	12.2	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	168.250	Membrane Depth (m)	0
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Appendix C - Maintenance Schedule

Item	Required Maintenance	Frequency
Pipe and chambers	CCTV camera survey, flush, descale, repair as necessary	5 Years or upon poor performance
Pervious pavements (Block Paving)	Brushing and vacuuming.	Three times/year at end of winter, mid-summer, after autumn leaf fall, or as required based on site-specific observations of clogging or manufacturers' recommendations.
	Stabilise and mow contributing and adjacent areas.	As required.
	Removal of weed.	As required.
	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required.
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required.
	Rehabilitation of surface and upper sub-structure.	As required (if infiltration performance is reduced as a result of significant clogging).
	Initial inspection.	Monthly for 3 months after installation
	Inspect for evidence of poor operation and/or weed growth. If required, take remedial action.	3-monthly, 48 h after large storms.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually.
	Monitor inspection chambers.	Annually.
Rainwater Harvesting	Inspection of the tank for debris and sediment buildup, inlets/outlets/withdrawal devices, overflow areas, pumps, filters	Annually (and following poor performance)
	Cleaning of tank, inlets, outlets, gutters, withdrawal devices and roof drain filters of silts and other debris	Annually (and following poor performance)
	Cleaning and/or replacement of any filters	Three monthly (or as required)
	Repair of overflow erosion damage or damage to tank.	As required
	Pump repairs	As required
	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (i.e. year one), replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment replace dead plants as required (where > 5% of coverage)	Annually (in autumn)
	Remove fallen leave and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required

Item	Required Maintenance	Frequency
	Mow grasses, prune shrubs and manage other planting as required – clippings should be removed and not allowed to accumulate	Six monthly or as required
	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled.	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	As required
Geocellular/ modular systems (Crates)	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Where rainfall infiltrates into blocks from above, check surface of filter for blockage by silt, algae or other matter. Remove and replace surface infiltration medium as necessary.	Monthly (and after large storms)
	Remove sediment from pre-treatment structures	Annually, or as required
	Repair/rehabilitation of inlets, outlet, overflows and vents	As required
	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms
	Check for evidence of deterioration, spalling and/or cracking of concrete	Annually.
	Check that sedimentation chamber is <50% full (or filled to <300 mm depth, whichever is the smaller). Check that filter bed has <15 mm surface sediment accumulation.	Annually.
Silt traps and catchpits	Check filter casing for material failure.	Annually.
	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Inspection of silt traps and catch pits to assess silt accumulation	Monthly (and after large storms)
	Removal of accumulated silt from silt trap and catch pit sumps	Annually, or as required
	Repair/rehabilitation of inlets, outlet, overflows and vents	As required
	Inspect/check all inlets, outlets, and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms