

30

File: PERMEABLE PAVING OVERFLOW CAR PARK.pfd Network: PERMEABLE PAVING OFFICE BUILDING.sws

Megan Au 24/02/2022 Page 1 Former Syngenta Works, Hampstead Lane,

0

Yalding, Kent [Office Building]

Design Settings

Rainfall Methodology	FEH-13	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	0.000	
Return Period (years)	2	Maximum Rainfall (mm/hr)	200.0	Include Intermediate Ground	\checkmark	
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	\checkmark	
CV	0.750	Connection Type	Level Soffits			
Time of Entry (mins)	5.00	Minimum Backdrop Height (m)	0.000			

Nodes

Name		T of E (mins)	Cover Level	Depth (m)
			(m)	
PP3	0.127	5.00	11.520	0.290
PP4			11.520	0.313

Simulation Settings

	Rainfall Method Summ	07	Analysis Skip Stead	•	Additional Stor	rage (m³/ha) 0.0 arge Rate(s) x	
		er CV 0.840	Drain Down Time	,		irge Volume x	
	15 30	60 120	Storm D 180 240	ourations 360 480	600 720 9	960 1440	
Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0	100	20	0	0

0

Node PP4 Online Head/Flow Control

100

40

Flap Valve x Replaces Downstream Link ✓ Invert Level (m) 11.207



File: PERMEABLE PAVING OVERFLOW CAR PARK.pfd Network: PERMEABLE PAVING OFFICE BUILDING.sw! Megan Au

Page 2

Former Syngenta Works, Hampstead Lane, Yalding, Kent [Office Building]

Head Flow Head Flow (m) (I/s) (m) (I/s) 0.001 0.000 1.000 0.000

24/02/2022

Node PP3 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.40000	Porosity	0.30	Width (m)	58.450	Depth (m)	0.190
Side Inf Coefficient (m/hr)	0.40000	Invert Level (m)	11.230	Length (m)	22.000	Inf Depth (m)	0.190
Safety Factor	2.0	Time to half empty (mins)		Slone (1·X)	1000.0		



File: PERMEABLE PAVING OVERFLOW CAR PARK.pfd
Network: PERMEABLE PAVING OFFICE BUILDING.sw:

Megan Au 24/02/2022 Page 3
Former Syngenta Works, Hampstead Lane,
Yalding, Kent [Office Building]

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US		Level	•		Node Vol (m³)	Flood	Status
15 minute winter		,	(m) 11.241		• • • •	1.1511		ОК
30 minute winter	PP4	35	11 214	0.007	0.0	0 0000	0 0000	OK

Link Event	US	Link	DS	Outflow	Velocity	Flow/Cap	Link	Discharge
(Upstream Depth)	Node		Node	(I/s)	(m/s)		Vol (m³)	Vol (m³)
15 minute winter	PP3	1.000	PP4	0.0	0.091	0.005	0.0081	
15 minute winter	PP3	Infiltration		16.4				
30 minute winter	PP4	Head/Flow		0.0				0.0



File: PERMEABLE PAVING OVERFLOW CAR PARK.pfd Network: PERMEABLE PAVING OFFICE BUILDING.sw:

Megan Au 24/02/2022 Page 4
Former Syngenta Works, Hampstead Lane,
Yalding, Kent [Office Building]

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US	Peak	Level		_	Node	Flood	Status
	Node	(mins)	(m)	(m)	(I/s)	Vol (m³)	(m³)	
15 minute winter	PP3	12	11.256	0.026	51.3	5.8402	0.0000	OK
30 minute winter	PP4	23	11.254	0.047	0.3	0.000	0.0000	OK

Link Event	US	Link	DS	Outflow	Velocity	Flow/Cap	Link	Discharge
(Upstream Depth)	Node		Node	(I/s)	(m/s)		Vol (m³)	Vol (m³)
15 minute winter	PP3	1.000	PP4	0.4	0.181	0.066	0.0712	
15 minute winter	PP3	Infiltration		37.5				
30 minute winter	PP4	Head/Flow		0.0				0.0



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Network: PERMEABLE PAVING OFFICE BUILDING.sw:

Megan Au 24/02/2022 Page 5
Former Syngenta Works, Hampstead Lane,
Yalding, Kent [Office Building]

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US Node		Level (m)			Node Vol (m³)		Status
15 minute winter		,	` '	` '			` '	ОК
15 minute winter	РРΔ	13	11 273	0.066	0.8	0.0000	0.000	OK

Link Event	US	Link	DS	Outflow	Velocity	Flow/Cap	Link	Discharge
(Upstream Depth)	Node		Node	(I/s)	(m/s)		Vol (m³)	Vol (m³)
15 minute winter	PP3	1.000	PP4	0.8	0.220	0.144	0.1253	
15 minute winter	PP3	Infiltration		54.8				
15 minute winter	PP4	Head/Flow		0.0				0.0



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Megan Au 24/02/2022 Page 6
Former Syngenta Works, Hampstead Lane,
Yalding, Kent [Office Building]

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.06%

Node Event	US	Peak	Level	Depth	Inflow	Node	Flood	Status
	Node	(mins)	(m)	(m)	(I/s)	Vol (m³)	(m³)	
15 minute winter	PP3	12	11.274	0.044	91.8	12.7503	0.0000	OK
15 minute winter	PP4	13	11.282	0.075	0.9	0.0000	0.0000	OK

Link Event	US	Link	DS	Outflow	Velocity	Flow/Cap	Link	Discharge
(Upstream Depth)	Node		Node	(I/s)	(m/s)		Vol (m³)	Vol (m³)
15 minute winter	PP3	1.000	PP4	0.9	0.225	0.169	0.1507	
15 minute winter	PP3	Infiltration		63.2				
15 minute winter	PP4	Head/Flow		0.0				0.0