

CLIENT:	PROJECT:		JOB NO.:		CALC. REF. NO.:	
Convatec	PEP Wir	nd and Solar	BR10:	167	PAGE: 1	OF 2
CALCULATION	CALC. BY:		CHECKED BY:		APPROVED BY:	
	(NAME AND SIG	NATURE)	(NAME AND SIGNA	TURE)	(NAME AND SIGNAT	ſURE)
	н	Wilson				
Runoff Volume: Catchment 1					-	
		0/04/2024	DATE			
	DATE: 2	9/01/2024	DATE:		DATE:	
	747	frame FFU 2022 (
	1625	from FEH or via				
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; SI	PR from (SOIL = 0.1SOI	L1 + 0.3SOIL2 + 0.3	37SOIL3 + 0.47SOIL4 + 0	.53SOIL5)
Return Period (yrs)	100					
Duration (hrs)	6					
Note: For durations shorter th	an 0.5hours FEH	DDF should not l	be used.			
Runoff Calculations for Existin	ng Site				+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	
Permeable (ha) 0.2	28					
Impermeable (ha)						
Total (ba))					
	20 Existing	Existing	Existing Semi			
	Permeable	Impermeable	Permeable			
Storm duration (mins)	360	360	360			
Rainfall Return Period	100	100	100			
Rainfall Depth (mm)	74.7	74.7	74.7			
Site Area (ha)	0.28	0	0			
Site Area (km ²)	0.0028	0	0			
Total Rainfall Volume (m ³)	209.2	0.0	0			
PR _(RURAL)	55.98%	N/A	N/A			
% Runoff from paved areas	N/A	100%	85.00%	Total		
Volume of Runoff (m)	117.1	0.0	0.0	117.1		
Runoff Calculations for Propo	sed Developmer	nt i i i i i i i i i i i i i i i i i i i				
Importable (ha)	185					
Semi Impermeable (ha) 0.2	315					
Total (ha)	28					
	Proposed	Proposed	Proposed Semi			
	Permeable	Impermeable	Permeable			
Storm duration (mins)	360	360	360			
Rainfall Return Period	100	100	100			
Rainfall Depth (mm)	74.7	74.7	74.7			
Site Area (ha)	0	0.0485	0.2315			
Site Area (km ²)	0	0.000485	0.002315			
Total Rainfall Volume (m ³)	0.0	36.2	172.9305			
PR _(RURAL)	55.98%	N/A	N/A			
% Runoff from paved areas	N/A	100%	85%	Total		
Volume of Runoff (m ³)	0.0	36.2	147.0	183.2		



Runoff Calculations for Prop	osed Developme	nt <u>with Climate C</u>	hange		
Rainfall (mm)	74.7				
Return Period (yrs)	100				
Duration (hrs)	6				
100y Climate Change %	40%				
Rainfall + CC (mm)	104.58				
	Exisiting	Exisiting	Existing Semi		
	Permeable	Impermeable	Permeable		
	104.58	104.56	104.56		
Site Area (km ²)	0.0028	0	0		
Fotal Rainfall Volume (m ³)	292.8	0	0		
PR _(RURAL)	55.98%	N/A	N/A		
% Runoff (Urban/ImpA)	N/A	100%	85%	Total	
Volume of Runoff (m ³)	163.9	0.0	0.0	163.9	
	Proposed	Proposed	Proposed Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	104.58	104.58	104.58		
Site Area (km²)	0	0.000485	0.002315		
Total Rainfall Volume (m ³)	0.0	50.7	242.1027		
	55 98%	N/A	N/A		
% Runoff (Lirban/ImnA)	Ν/Δ	100%	85.00%	Total	
$\frac{1}{1}$	0.0	50.7	205.8	256.5	
		50.7	205.0	230.5	
SUMMARY					
Existing Runoff	117.1				
Post-Devel Runoff (present c	av) 183.2				
Difference	66.1				
Existing Runoff	117.1				
Post-Devel runoff + CC	256.5				
Difference	139.4				
Exisitng Runoff +CC	163.9				
Post-Devel +CC	256.5				
Difference	92.6				

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$



CLIENT:	PROJECT:		JOB NO.:		CALC. REF. NO.:	
Convatec	PEP Wir	nd and Solar	BR101	.67	PAGE: 1	OF 2
CALCULATION	CALC. BY:		CHECKED BY:		APPROVED BY:	
	(NAME AND SIG	NATURE)	(NAME AND SIGNA	TURE)	(NAME AND SIGNAT	ſURE)
	н	Wilson				
Runoff Volume: Catchment 2						
		0/04/2024	DATE			
	DATE: 2	9/01/2024	DATE:		DATE:	
Bainfall (mm)	74.7	from FFU 2022 (
	1625	from FEH or via				
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; SI	PR from (SOIL = 0.1SOI	L1 + 0.3SOIL2 + 0.3	37SOIL3 + 0.47SOIL4 + 0	.53SOIL5)
Return Period (yrs)	100					
Duration (hrs)	6					
Note: For durations shorter th	an 0.5hours FEH	DDF should not l	be used.			
Runoff Calculations for Existin	ng Site					
Permeable (ha) 0.2	.64					
Impermeable (ha)						
Semi Permeable (ha)						
	.04 Existing	Existing	Existing Semi			
	Permeable	Impermeable	Permeable			
Storm duration (mins)	360	360	360			
Rainfall Return Period	100	100	100			
Rainfall Depth (mm)	74.7	74.7	74.7			
Site Area (ha)	0.264	0	0			
Site Area (km ²)	0.00264	0	0			
Total Rainfall Volume (m ³)	197.2	0.0	0			
PR _(RURAL)	55.98%	N/A	N/A			
% Runoff from paved areas	N/A	100%	80.00%	Total		
Volume of Runoff (m ²)	110.4	0.0	0.0	110.4	•	
Runoff Calculations for Propo	sed Developmer					
Importable (ha)	185					
Semi Impermeable (ha) 0.2	155					
Total (ha) 0.2	64					
	Proposed	Proposed	Proposed Semi			
	Permeable	Impermeable	Permeable			
Storm duration (mins)	360	360	360			
Rainfall Return Period	100	100	100			
Rainfall Depth (mm)	74.7	74.7	74.7			
Site Area (ha)	0	0.0485	0.2155			
Site Area (km ²)	0	0.000485	0.002155			
Total Rainfall Volume (m ³)	0.0	36.2	160.9785			
PR _(RURAL)	55.98%	N/A	N/A			
% Runoff from paved areas	N/A	100%	80%	Total		
Volume of Runoff (m ³)	0.0	36.2	128.8	165.0		



			<u> </u>		
		it with chinate t			
Rainiali (mm)	/4./				
Return Period (yrs)	100				
Duration (nrs)	6				
100y Climate Change %	40%				
	104.58				
	Exisiting	Exisiting	Existing Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	104.58	104.58	104.58		
Site Area (km²)	0.00264	0	0		
Total Rainfall Volume (m ³)	276.1	0	0		
PR _(BUBAL)	55.98%	N/A	N/A		
% Runoff (Urban/ImpA)	N/A	100%	80%	Total	
Volume of Runoff (m ³)	154.6	0.0	0.0	154.6	
	Pronosed	Pronosed	Proposed Semi		
	Permeable	Imnermeahle	Permeahle		
Rainfall Denth (mm)	104 58	104 58	104 58		
Site Area (km ²)	0		0.002155		
$T_{a} = \frac{1}{2} \left(\frac{1}{2} \left(\frac{1}{2} \right) \left$	0	0.000485	225 2600		
Total Rainfall Volume (m.)	0.0	50.7	225.5099		
PR _(RURAL)	55.98%	N/A	N/A		
% Runoff (Urban/ImpA)	N/A	100%	80.00%	Total	
Volume of Runoff (m ³)	0.0	50.7	180.3	231.0	
SUMMARY					
Existing Runoff	110.4				
Post-Devel Runoff (present day	<i>י</i>) 165.0				
Difference	54.6				
Existing Runoff	110.4				
Post-Devel runoff + CC	231.0				
Difference	120.6				
Exisitng Runoff +CC	154.6				
Post-Devel +CC	231.0				
Difference	76.5				

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$



CLIENT:	PROJECT:		JOB NO.:	CALC. REF. NO.:
Convatec	PEP Wir	nd and Solar	BR10167	PAGE: 1 OF 2
CALCULATION	CALC. BY:		CHECKED BY:	APPROVED BY:
	(NAME AND SIG	NATURE)	(NAME AND SIGNATURE)	(NAME AND SIGNATURE)
	н	Wilson		
Runoff Volume: Catchment 1				
	DATE: 2	9/01/2024	DATE:	DATE:
Rainfall (mm)	74.7	from FEH 2022 [DDF modelling	
SAAR	1625	from FEH or via	UK SuDS Tools	
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; SI	PR from (SOIL = 0.1SOIL1 + 0.3SOI	IL2 + 0.37SOIL3 + 0.47SOIL4 + 0.53SOIL5)
Return Period (yrs)	100			
Duration (hrs)	6			
Note: For durations shorter that	an 0.5hours FEH	DDF should not l	pe used.	
	- 611-			
Runoff Calculations for Existin	g Site			
Impormable (ha)				
Semi Permeable (ha)				
Semi Permeable (na) 0	57			
	Fxisting	Fxisting	Existing Semi	
	Permeable	Impermeable	Permeable	
Storm duration (mins)	360	360	360	
Rainfall Return Period	100	100	100	
Rainfall Depth (mm)	74.7	74.7	74.7	
Site Area (ha)	0.457	0	0	
Site Area (km ²)	0.00457	0	0	
Total Rainfall Volume (m ³)	341.4	0.0	0	
PR _(RURAL)	55.98%	N/A	N/A	
% Runoff from paved areas	N/A	100%	81.00% Tota	al
Volume of Runoff (m ³)	191.1	0.0	0.0	191.1
		_		
Runoff Calculations for Propos	sed Developmer			
Permeable (ha) 0	75			
	05			
	57			
	Proposed	Proposod	Dropogod Comi	+++++++++++++++++++++++++++++++++++++++
	Permeshle	Impermeable	Proposed Semi	+++++++++++++++++++++++++++++++++++++++
Storm duration (mins)	360	360	360	
Rainfall Return Period	100	100	100	
Rainfall Depth (mm)	74.7	74.7	74.7	
Site Area (ha)	0	0.0675	0.3895	
Site Area (km ²)	0	0.000675	0.003895	
Total Rainfall Volume (m ³)	0.0	50.4	290.9565	
PBrown	55 98%	N/A	N/A	
 ' ''(RURAL) % Pupoff from powed process 	N/A	1000/	81% Tot	
Values (C) (C (3)	N/A	100%		ai
Volume of Runoff (m [°])	0.0	50.4	235./ 2	200.1



Kunoff Laborations for proposed Development wint Limite Lange Image of the second
Rainfail +CC Image: Constraint of the second s
Return Period (vrs) 100 Doration (hrs) 6 1
Duration (nrs) b c
100y Climate Change % 40% 1
Rainfail Petr Idea Idea <thidea< th=""> Idea <thidea< th=""> <thidea< th=""> Idea</thidea<></thidea<></thidea<>
Existing Existing Existing Existing Existing Existing Permeable Perm
Image Permeable Image Permeable Permea
Rainfall Depth (mm) 104.58 104.58 104.58 104.58 Site Area (km²) 0.00457 0 0 0 0 Total Rainfall Volume (m³) 477.9 0 0 0 0 0 % Runoff (Urban/ImpA) N/A 100% 81% Total 0
Site Area (km²) 0.00457 0
Total Rainfall Volume (m³) 477.9 0 <
PR _(RURAL) 55.98% N/A N/A N/A % Runoff (Urban/ImpA) N/A 100% 81% Total Yolume of Runoff (m ³) 267.5 0.0 0.0 267.5 0 Proposed
N/A 100% 81% Total Volume of Runoff (m ³) 267.5 0.0 0.0 267.5 Proposed Proposed Proposed Proposed Permeable Permeable Impermeable
Volume of Runoff (m ³) 267.5 0.0 0.0 257.5 1 Volume of Runoff (m ³) Proposed Premeable Proposed Impermeable Proposed Semi Permeable 1
Outme of Runof (III) Prove Proposed Proposed Proposed Proposed Permeable
Image: Stress of the
Permeable Impermeable Permeable Permeable Rainfall Depth (mm) 104.58 104.58 104.58 104.58 Site Area (km²) 0 0.000675 0.003895 1 1 Total Rainfall Volume (m³) 0.0 70.6 407.3391 1 1 % Runoff (Urban/ImpA) N/A N/A N/A N/A 1 1 % Runoff (Urban/ImpA) N/A 100% 81.00% Total 1 1 Volume of Runoff (m³) 0.0 70.6 329.9 400.5 1 1 SUMMARY Important in the interval of the
Rainfall Depth (mm) 104.58 104.58 104.58 104.58 Site Area (km ²) 0 0.000675 0.003895 1 1 Total Rainfall Volume (m ³) 0.0 70.6 407.3391 1 1 PR _{[RURAL)} 55.98% N/A N/A N/A 100% 81.00% Total Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 1 1 Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 1
Runnin Super (inity) 104.30 104.30 104.30 104.30 104.30 104.30 104.30 105.30 104.30 105.30 104.30 105.30 104.30 105.30 104.30 105.30 104.30 105.30 104.30 105.30 <td< td=""></td<>
Site Area (km) 0 0.0006/5 0.003333 1 1 1 Total Rainfall Volume (m ³) 0.0 70.6 407.3391 1 1 1 PR _(RURAL) 55.98% N/A N/A N/A N/A N/A 100% 81.00% Total 1 </td
Total Rainfall Volume (m ⁻) 0.0 70.6 407.3391 1 PR _(RURAL) 55.98% N/A N/A N/A 100% 81.00% Total 1 Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 1
PR _(RURAL) 55.98% N/A N/A N/A I
% Runoff (Urban/ImpA) N/A 100% 81.00% Total Volume of Runoff (m³) 0.0 70.6 329.9 400.5 400.5 Volume of Runoff (m³) 0.0 70.6 329.9 400.5 400.5 Volume of Runoff (m³) 0.0 70.6 329.9 400.5 400.5 Volume of Runoff (m³) 0.0 70.6 329.9 400.5 400.5 SUMMARY 100 100 100 100 100 100 SUMMARY 191.1 100 100 100 100 100 100 Post-Devel Runoff (present day) 286.1 100
Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 Volume of Runoff (m ³) 0.0 70.6 329.9 400.5 SUMMARY 0.0 0.0 0.0 0.0 0.0 Sumoff 191.1 191.1 0.0 0.0 0.0 Post-Devel Runoff (present day) 286.1 0.0 0.0 0.0 0.0 Difference 95.0 95.0 0.0 0.0 0.0 0.0 0.0 Existing Runoff 191.1 95.0 0.0
SUMMARY 191.1 101.1 <
SUMMARY 191.1 Post-Devel Runoff (present day) 286.1 Difference 95.0 Existing Runoff 191.1 Post-Devel runoff + CC 400.5 Difference 209.4 Existing Runoff + CC 400.5 Difference 209.4 Existing Runoff + CC 400.5 Difference 267.5 Post-Devel + CC 400.5 Difference 133.0
SUMMARY 191.1 191.1 1
SUMMARY 191.1 <
Existing Runoff 191.1 Post-Devel Runoff (present day) 286.1 Difference 95.0 Existing Runoff 191.1 Post-Devel runoff + CC 400.5 Difference 209.4 Existing Runoff + CC 267.5 Post-Devel + CC 400.5 Difference 267.5 Post-Devel + CC 400.5 Difference 133.0 Image: Comparison of the comparison of
Post-Devel Runoff (present day) 286.1 Difference 95.0 Existing Runoff 191.1 Post-Devel runoff + CC 400.5 Difference 209.4 Existing Runoff +CC 267.5 Post-Devel +CC 400.5 Difference 133.0 Difference 133.0 Image: Constraint of the constraint of
Difference 95.0 Existing Runoff 191.1 Post-Devel runoff + CC 400.5 Difference 209.4 Exisiting Runoff +CC 267.5 Post-Devel +CC 400.5 Difference 133.0
Existing Runoff 191.1 Image: constraint of the second
Post-Devel runoff + CC 400.5 Image: Comparison of the compa
Difference 209.4 Lisising Runoff +CC 267.5 Post-Devel +CC 400.5 Difference 133.0 Difference 133.0 Difference 133.0 Difference 133.0 Difference 133.0
Exisiting Runoff +CC 267.5 Post-Devel +CC 400.5 Difference 133.0 Image: Structure of the structure o
Difference 133.0 Image: Construction of the const
Difference 133.0 Image: Construction of the c

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$



CLIENT:	PROJECT:		JOB NO.:		CALC. REF. NO.:	
Convatec	PEP Wir	nd and Solar	BR101	.67	PAGE: 1	2 OF
CALCULATION	CALC. BY:		CHECKED BY:		APPROVED BY:	
	(NAME AND SIG	NATURE)	(NAME AND SIGNA	TURE)	(NAME AND SIGNAT	URE)
		Wilson		·		
Runoff Volume: Cachment 4		WIISOIT			<u></u>	
	DATE:		DATE:		DATE:	
Rainfall (mm)	74.7	from FEH 2022 I	DDF modelling			
SAAR	1625	from FEH or via	UK SuDS Tools			
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; SI	PR from (SOIL = 0.1SOIL	.1 + 0.3SOIL2 + 0.3	37SOIL3 + 0.47SOIL4 + 0.	53SOIL5)
Return Period (yrs)	100					
Duration (hrs)						
Note: For durations shorter t	an 0.5nours FEH		be usea.		+ + + + + + + + + + + + + + + + + + +	
Runoff Calculations for Evist	ing Site					
Permeable (ha)	894					
Impermeable (ha)	0					
Semi Permeable (ha)	0					
Total (ha) 1.	894					
	Existing	Existing	Existing Semi			
	Permeable	Impermeable	Permeable			
Storm duration (mins)	360	360	360			
Rainfall Return Period	100	100	100			
Rainfall Depth (mm)	74.7	74.7	74.7			
Site Area (ha)	1.894	0	0			
Site Area (km²)	0.01894	0	0			
Iotal Rainfall Volume (m ⁻)	1414.8	0.0	0			
<pre>Pupoff from pound props</pre>	JJ.98%	100%	N/A			
Volume of Runoff (m ³)	792 0	00%	0.00%	792.0		
	752.0	0.0				
Runoff Calculations for Prop	osed Developmer	nt				
Permeable (ha) 1.5	5105					
Impermeable (ha)	0					
Semi Impermeable (ha) 0.3	835					
Total (ha) 1.	894					
	Proposed	Proposed	Proposed Semi			
	Permeable	Impermeable	Permeable		$\left \begin{array}{c} \\ \\ \\ \end{array} \right \left \left \left \begin{array}{c} \\ \\ \\ \end{array} \right \left \left $	
Storm duration (mins)	360	360	360		+ + + + +	
Raintall Return Period	100	100	100		+ + + + +	
Site Area (ba)	/4./	/4./	/4./ 0 2025		+ + + + +	
Site Arec (IId)	1.5105	0	0.3035		+ + + + +	
Site Area (Km.)	0.015105	U	0.003035		+ + + + +	
I otal Rainfall Volume (m [°])	1128.3	0.0	286.4745		+ + + + +	
PR _(RURAL)	55.98%	N/A	N/A			
% Runoff from paved areas	N/A	100%	80%	Total		
Volume of Runoff (m ³)	631.6	0.0	229.2	860.8		



Rainfall (mm) 74.7 Image
Rainfail (mm) 74.7 100
Return Period (yrs) 100 6
Duration (nrs) 6 7 6 7 6 7 6 7 7
100y Climate Change % 40% 1
Rainfail + CC (mm) 104.58 Image: constraint of the second se
L L Exisiting Exisiting Exisiting Existing Existing Permeable Permeabl
Impermeable Permeable Permeable Permeable Rainfall Depth (mm) 104.58 104.58 104.58 104.58 Site Area (km²) 0.01894 0 0 1 1 Total Rainfall Volume (m³) 1980.7 0 0 1 1 1 PR _(RURAL) 55.98% N/A N/A N/A 100% 80% Total 1 1 Volume of Runoff (m³) 1108.8 0.0 0.0 1108.8 1
Rainfall Depth (mm) 104.58 104.58 104.58 0 0 Site Area (km ²) 0.01894 0 0 0 0 0 0 Total Rainfall Volume (m ³) 1980.7 0 </td
Site Area (km ²) 0.01894 0
Total Rainfall Volume (m ³) 1980.7 0
PR _(RURAL) 55.98% N/A N/A N/A % Runoff (Urban/ImpA) N/A 100% 80% Total Implementation Volume of Runoff (m ³) 1108.8 0.0 0.0 1108.8 Implementation Volume of Runoff (m ³) Proposed Prop
% Runoff (Urban/ImpA) N/A 100% 80% Total Image: constraint of the state of the st
Volume of Runoff (m³) 1108.8 0.0 0.0 1108.8 1 Image: Strain of the strai
Volume of Rulloff (III) 1.00.0 0.0 0.0 1.00.0 1
Image: state of the state
Proposed Proposed Proposed semile Proposed semil
Rainfall Depth (mm) 104.58 104.58 104.58 104.58 Site Area (km²) 0.015105 0 0.003835 Image: Control of the second secon
Name Dot Dot <thd< td=""></thd<>
Site Area (km) 0.015105 0 0.005855 0 0.005855 Total Rainfall Volume (m ³) 1579.7 0.0 401.0643 PR _(RURAL) 55.98% N/A N/A % Runoff (Urban/ImpA) N/A 100% 80.00% Total
Total Rainfall Volume (m [°]) 1579.7 0.0 401.0643 Image: Constraint of the state of
PR _(RURAL) 55.98% N/A N/A Image: Constraint of the second
% Runoff (Urban/ImpA) N/A 100% 80.00% Total
Volume of Runoff (m ³) 884.3 0.0 320.9 1205.1
SUMMARY
Existing Runoff 792.0
Post-Devel Runoff (present day) 860.8
Difference 68.8 68.8
Existing Runoff
Post-Devel runoff + CC 1205.1
Difference 413.1
Difference 413.1
Difference 413.1
Difference 413.1
Difference 413.1 413.1 Exisiting Runoff +CC 1108.8 1 1 Post-Devel +CC 1205.1 1 1 1 Difference 96.3 1 1 1 1
Difference 413.1 Exisiting Runoff +CC 1108.8 Post-Devel +CC 1205.1 Difference 96.3
Difference 413.1 413.1 413.1 Exisiting Runoff +CC 1108.8 1
Difference 413.1 413.1 Exisiting Runoff +CC 1108.8 1 1 1 Post-Devel +CC 1205.1 1 1 1 1 Difference 96.3 1 1 1 1 1 Image: Comparison of the comparison
Difference 413.1 413.1 Exisiting Runoff +CC 1108.8 1 1 1 Post-Devel +CC 1205.1 1205.1 1 1 1 1 1 Difference 96.3 1
Difference 413.1 413.1 108.8 Exisiting Runoff +CC 1108.8 1205.1 1
Difference 413.1 413.1 108.8
Difference 413.1
Difference 413.1 108.8 1108.8 1108.8 1205.1 1201.1 1201.1 1201.1

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$



CLIENT:	PROJECT:		JOB NO.:	(CALC. REF. NO.:
Convatec	PEP Wir	nd and Solar	BR10	167	
CALCULATION	CALC. BY:		CHECKED BY:	4	APPROVED BY:
	(NAME AND SIG	NATURE)	(NAME AND SIGNA	TURE) (NAME AND SIGNATURE)
	(,	(,	
Runoff Volume: Catchment 5	н	Wilson			
(Construction Compund 1)					
	DATE: 2	9/01/2024	DATE:		DATE:
Rainfall (mm)	62.96	from FEH 2022 I	DDF modelling		
SAAR	1625	from FEH or via	UK SuDS Tools		
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; SI	PR from (SOIL = 0.1SOI	L1 + 0.3SOIL2 + 0.37	SOIL3 + 0.47SOIL4 + 0.53SOIL5)
Return Period (yrs)	30				
Duration (hrs)	6				
Note: For durations shorter th	an 0.5hours FEH	DDF should not	be used.		
Runoff Calculations for Evisti	ng Site				
Permeable (ha) 0.4	033				
Impermeable (ha)	0				
Semi Permeable (ha)	0				
Total (ha) 0.4	033				
	Existing	Existing	Existing Semi		
	Permeable	Impermeable	Permeable		
Storm duration (mins)	360	360	360		
Rainfall Return Period	30	30	30		
Rainfall Depth (mm)	62.96	62.96	62.96		
Site Area (ha)	0.4033	0	0		
Site Area (km.)	0.004033	0	0		
	54.63%	0.0 N/A	N/A		
% Bunoff from payed areas	N/A	100%	82.00%	Total	
Volume of Runoff (m ³)	138.7	0.0	0.0	138.7	
Runoff Calculations for Propo	osed Developmer	nt			
Permeable (ha)	0				
Impermeable (ha)	0				
Semi Impermeable (ha) 0.4	033				
lotal (ha) 0.4	033	Dransad			
	Proposed	Proposed	Proposed Semi		
Storm duration (mins)	260	360	260		
Rainfall Return Period	300	300	300		
Rainfall Denth (mm)	62.96	62.96	62.96		
Site Area (ha)	0	0	0.4033		
Site Area (km ²)	0	0	0.004033		
Total Rainfall Volume (m ³)	0.0	0.0	253.91768		
	54.63%	N/A	N/A		
% Runoff from paved areas	N/A	100%	82%	Total	
Volume of Punoff (m ³)	0.0	0.0	208.2	208.2	
	0.0	0.0	200.2	200.2	



Runoff Calculations for Propos	ed Developmen	t with Climate C	nange		
Rainfall (mm)	62.96				
Return Period (yrs)	30				
Duration (hrs)	6				
100y Climate Change %	40%				
Rainfall + CC (mm)	88.14				
	Exisiting	Exisiting	Existing Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	88.14	88.14	88.14		
Site Area (km²)	0.004033	0	0		
Total Rainfall Volume (m ³)	355.5	0	0		
PR _(RURAL)	54.63%	N/A	N/A		
% Runoff (Urban/ImpA)	N/A	100%	82%	Total	
Volume of Runoff (m ³)	194.2	0.0	0.0	194.2	
	Proposed	Proposed	Proposed Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	88.14	88.14	88.14		
Site Area (km ²)	0	0	0.004033		
Total Rainfall Volume (m ³)	0.0	0.0	355.484752		
	54.63%	N/A	Ν/Δ		
(RURAL)	J4.0370	100%	82.00%	Total	
	N/A	100%	82.00%		
Volume of Runoff (m [°])	0.0	0.0	291.5	291.5	
	120 7				
	138.7				
Post-Devel Runoff (present day	208.2				
Difference	69.5				
Existing Runott	138.7				
Post-Devel runott + CC	291.5				
Difference	152.8				
Exisitng Runoff +CC	194.2				
Post-Devel +CC	291.5				
Difference	97.3				

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$



CLIENT:	PROJECT:		JOB NO.:		CALC. REF. NO.:
Convatec	PEP Wir	nd and Solar	BR10:	167	PAGE: 1 OF 2
CALCULATION	CALC. BY:		CHECKED BY:		APPROVED BY:
	(NAME AND SIG	NATURE)	(NAME AND SIGNA	TURE)	(NAME AND SIGNATURE)
Runoff Volume: Catchment 6	н	Wilson			
(Construction Computed 2)					
	DATE: 2	9/01/2024	DATE:		DATE:
Rainfall (mm)	62.96	from FEH 2022 I	DDF modelling		
SAAR	1625	from FEH or via	UK SuDS Tools		
SPRHOST or SPR (%)	49.84 SPR	HOST from FEH data; S	PR from (SOIL = 0.1SOI	L1 + 0.3SOIL2 + 0.37	7SOIL3 + 0.47SOIL4 + 0.53SOIL5)
Return Period (yrs)	30				
Note: For durations shorter th					
Note. For durations shorter th					
Runoff Calculations for Evisti	ng Site				
Permeable (ha) 0.3	752				
Impermeable (ha)	0				
Semi Permeable (ha)	0				
Total (ha) 0.3	752				
	Existing	Existing	Existing Semi		
	Permeable	Impermeable	Permeable		
Storm duration (mins)	360	360	360		
Rainfall Return Period	30	30	30		
Rainfall Depth (mm)	62.96	62.96	62.96		
Site Area (ha)	0.3752	0	0		
Site Area (km²)	0.003752	0	0		
Total Rainfall Volume (m [°])	236.2	0.0	0		
PR _(RURAL)	54.03%	IN/A	N/A		
% Runoff from paved areas	N/A	100%	79.00%	1 Otal	
	129.0	0.0	0.0	129.0	
Runoff Calculations for Prope	osed Developmer	nt			
Permeable (ha)	0				
Impermeable (ha)	0				
Semi Impermeable (ha) 0.3	752				
Total (ha) 0.3	752				
$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	Proposed	Proposed	Proposed Semi		
	Permeable	Impermeable	Permeable		
Storm duration (mins)	360	360	360		
Rainfall Return Period	30	30	30		
Sito Aroa (ba)	ο <u></u> <u> </u>	02.90	02.90		
	0	0	0.0752		
Site Area (Km.)	0	U	236 22592		
	54 62%	0.0 N/A	N/A		
Pupoff from pound areas	54.05%	100%	70%	Total	
% Runoit from paved areas	IN/A	100%	19%		
Volume of Runoff (m [°])	0.0	0.0	186.6	186.6	



	ed Developmen	t with Climate C	.nange		
	62.96				
Return Period (yrs)	30				
Duration (hrs)	6				
100y Climate Change %	40%				
Rainfall + CC (mm)	88.14				
	Exisiting	Exisiting	Existing Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	88.14	88.14	88.14		
Site Area (km²)	0.003752	0	0		
Total Rainfall Volume (m ³)	330.7	0	0		
PR _(RURAL)	54.63%	N/A	N/A		
% Runoff (Urban/ImpA)	N/A	100%	79%	Total	
Volume of Runoff (m ³)	180.7	0.0	0.0	180.7	
	Proposed	Proposed	Proposed Semi		
	Permeable	Impermeable	Permeable		
Rainfall Depth (mm)	88.14	88.14	88.14		
Site Area (km ²)	0	0	0.003752		
Total Rainfall Volume (m ³)	0.0	0.0	330.716288		
	54.63%	N/A	Ν/Δ		
(RURAL)	54.0370	100%	70.00%	Total	
	N/A	100%	79.00%		
Volume of Runoff (m [°])	0.0	0.0	261.3	261.3	
	120.0				
Existing Runoff	129.0				
Post-Devel Runoff (present day) 186.6				
	57.6				
Existing Runott	129.0				+ + + + + + + +
Post-Devel runott + CC	261.3				+ + + + + + +
	132.2				
Exisiting Runott +CC	180.7				+ + + + + + +
Post-Devel +CC	261.3				+ + + + + + +
Difference	80.6				
					+ $+$ $+$ $+$ $+$ $+$
					+ $+$ $+$ $+$ $+$ $+$
					+ $+$ $+$ $+$ $+$ $+$
					+ + + + + + +
					+ $+$ $+$ $+$ $+$ $+$

$$\operatorname{Vol}_{xx} = 10.\operatorname{RD.A}\left[\frac{\operatorname{PIMP}}{100}(\alpha 0.8) + \left(1 - \frac{\operatorname{PIMP}}{100}\right)(\beta.\operatorname{SOIL}) - \operatorname{SOIL}\right]$$