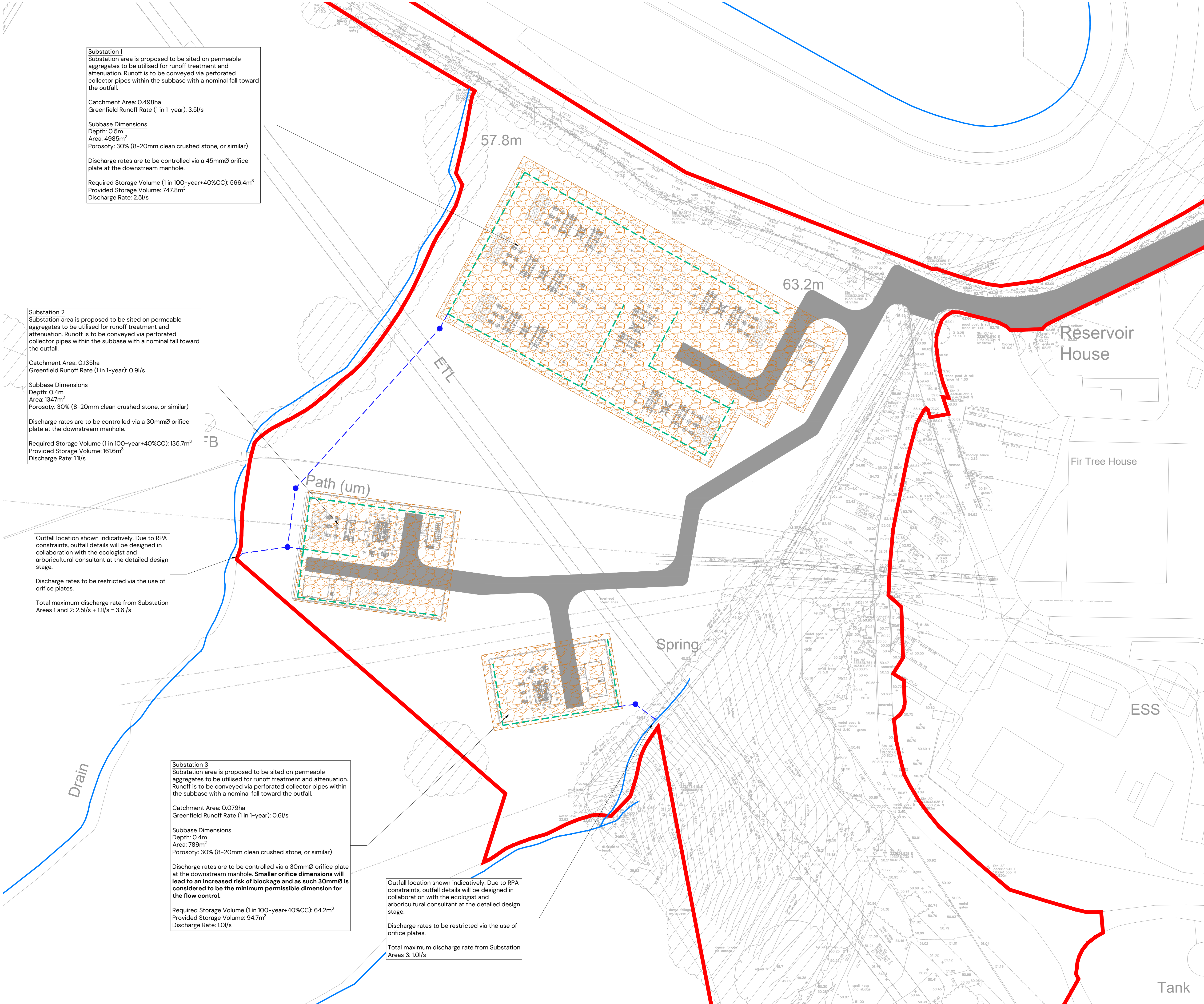
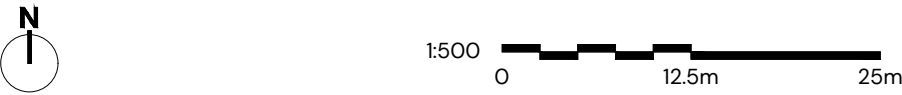




Appendix J – Surface Water Drainage Strategy



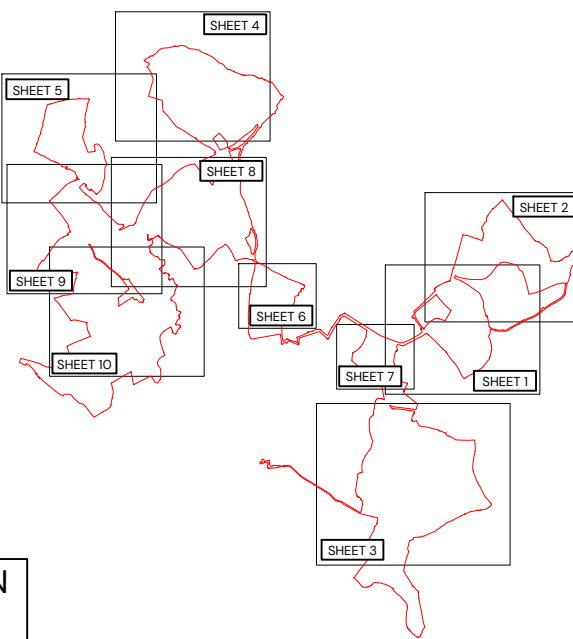
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 - Swale positions have been shown indicatively only and are subject to change at the next stage of design.
 - Check dam positions should be informed based on existing topographic levels in order to provide maximum storage efficiency. As a conservative estimate, storage volumes of the proposed swales have been estimated to be 70% efficient.
 - Calculated storage volumes have been informed via CausewayFlow Quick Storage Estimates, with the largest volume of the provided range used as a conservative estimate.
 - Sensitivity checks to ensure that both a 1 in 100-year+40%CC allowance rainfall event and subsequent 1 in 10-year storm could be managed by the proposed strategy.
 - A site visit/walkover was conducted in January 2026 in order to confirm the presence of the watercourses shown to provide the outfall locations.

Maintenance
Operation and Maintenance details associated with the proposed SuDS features are included in the standalone O&M Manual document. Where SuDS are located adjacent to the proposed access tracks, maintenance access can be provided from the track. Swales at the solar array parcel perimeter could be accessed from the adjacent landscaping or array areas, it should be noted that the swales have been designed with 1 in 3 side slopes given that this is a permissible gradient in order to gain access and carry out maintenance activities. This strategy should be read in conjunction with the O&M Manual.

- Site Layout Key:**
- Application Boundary
 - Perimeter Fence
- Drainage Strategy Key:**
- Proposed Swales
 - Overland Flow Route
 - Proposed Flow Control Chamber
 - Gravel Subbase Storage
 - Proposed Perforated Collector Pipe
 - Proposed Pipe
 - Proposed Headwall
 - Existing Watercourse Route (based on OS mapping)



KEY PLAN
NTS

P02	02.06.2026	REVISED SITE LAYOUT	OM	CT	CT
P01	08.05.2026	FIRST ISSUE	OM	CT	CT
REV	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED

Candwr Solar Farm Surface Water Drainage Strategy

Land at Court Farm, Ponthir
Monmouthshire – Sheet 7

CLIENT:
Candwr Solar Farm Ltd.

DATE:
08.05.2026

SCALE:
1:500@A1

DRAWN BY: OM
CHECKED BY: CT
APPROVED BY: CT

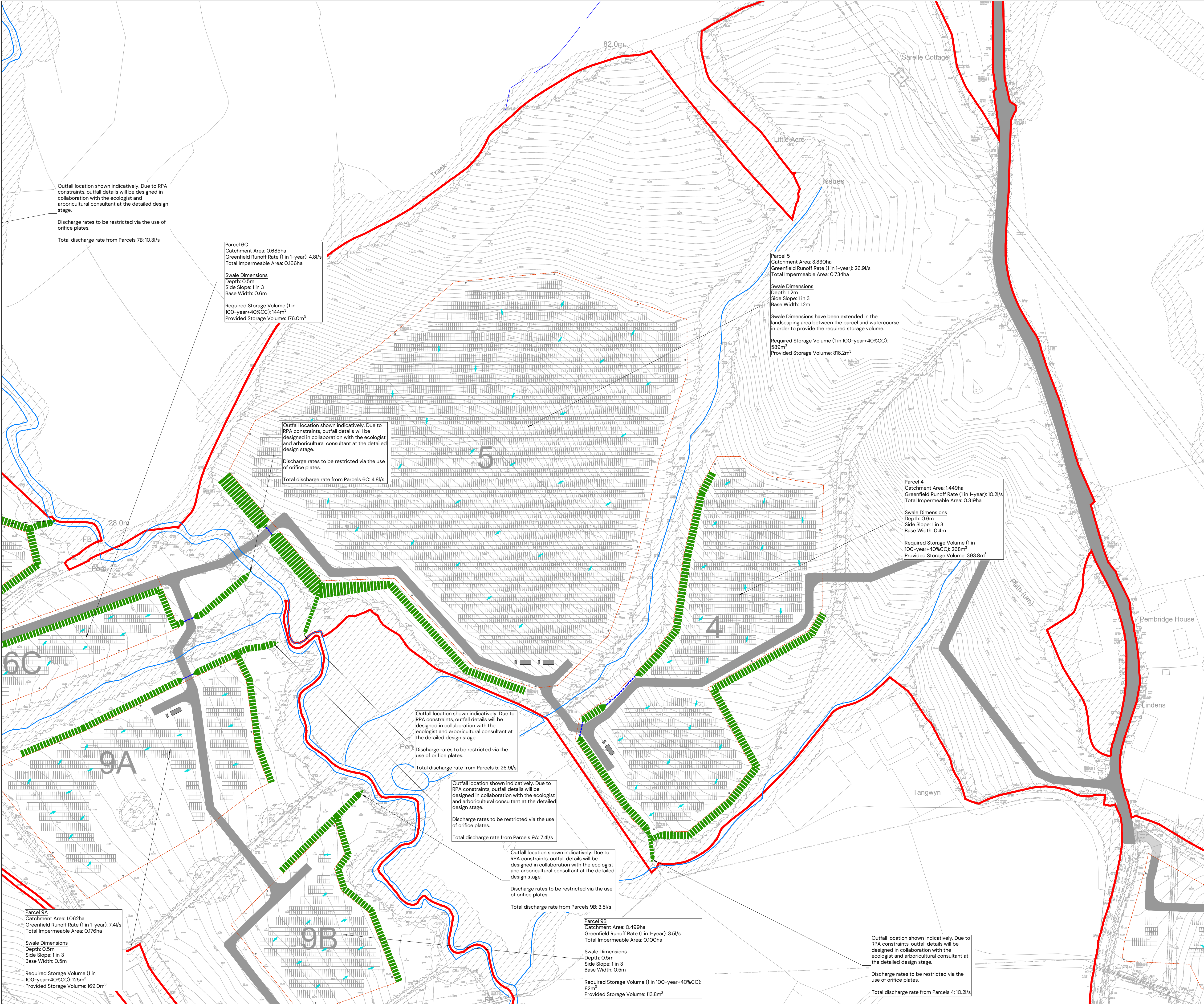
DRAWING NUMBER:
P24-2075-PEG-XX-XX-DR-C-0507-P2

PG OFFICE / TEAM:
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PEGASUS REF No:
P24-2075

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N

1:1000
0 25m 50m

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KEY PLAN NTS

P02	02.06.2026	REVISED SITE LAYOUT	OM	CT	CT
P01	08.05.2026	FIRST ISSUE	OM	CT	CT
REV	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED

**Candwr Solar Farm
Surface Water Drainage Strategy**

**Land at Court Farm, Ponthir
Monmouthshire – Sheet 8**

CLIENT:
Candwr Solar Farm Ltd.

DATE:
08.05.2026

SCALE:
1:1000@A1

DRAWN BY: OM
CHECKED BY: CT
APPROVED BY: CT

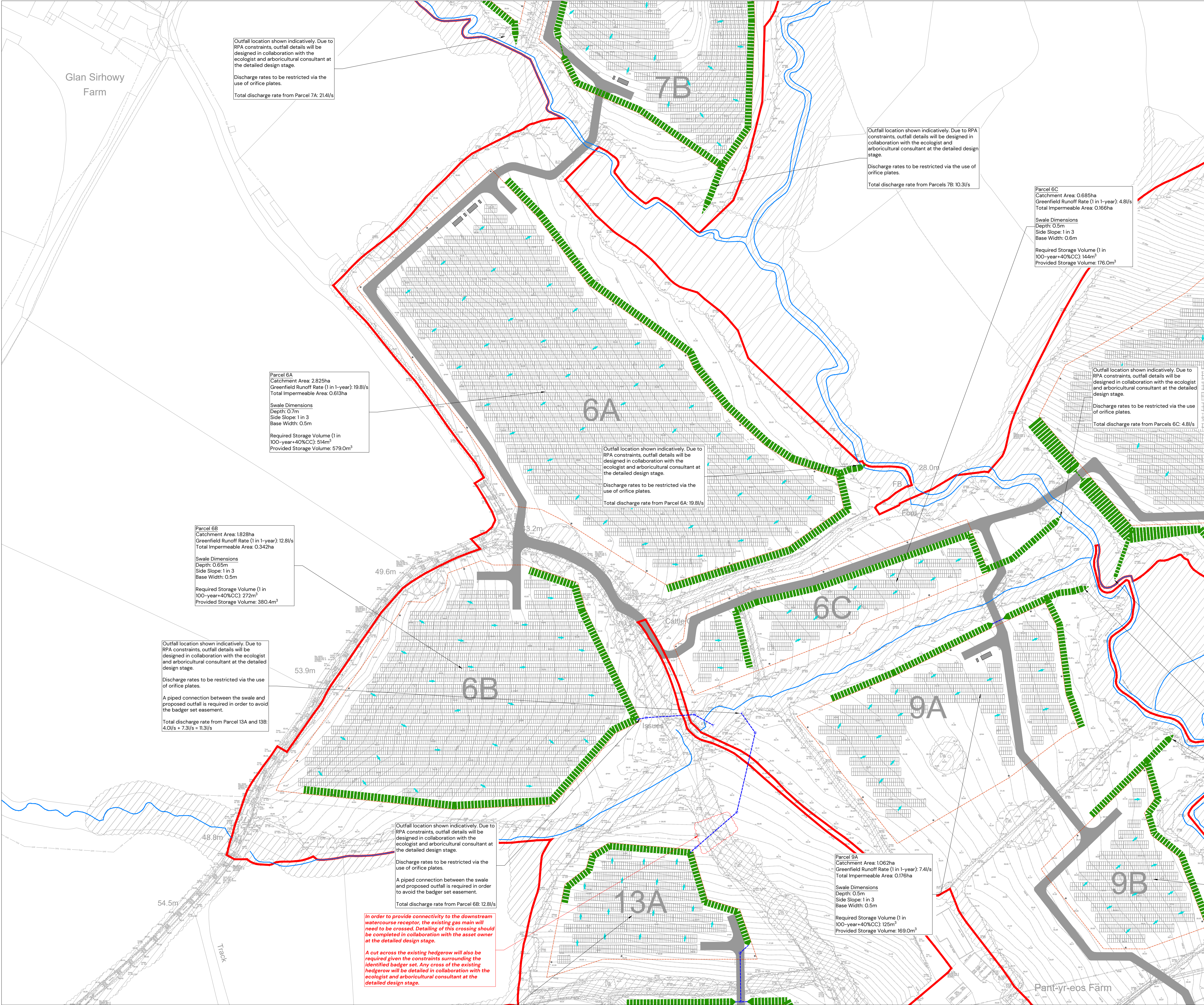
DRAWING NUMBER:
P24-2075-PEG-XX-XX-DR-C-0508-P2

PG OFFICE / TEAM:
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PEGASUS REF No:
P24-2075

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KEY PLAN

NTS

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P01	08.05.2026	FIRST ISSUE	OM	CT	CT

Candwr Solar Farm
Surface Water Drainage Strategy

Land at Court Farm, Ponthir
Monmouthshire – Sheet 9

CLIENT:
Candwr Solar Farm Ltd.

DATE:
08.05.2026

SCALE:
1:1000@A1

DRAWN BY: OM
CHECKED BY: CT
APPROVED BY: CT

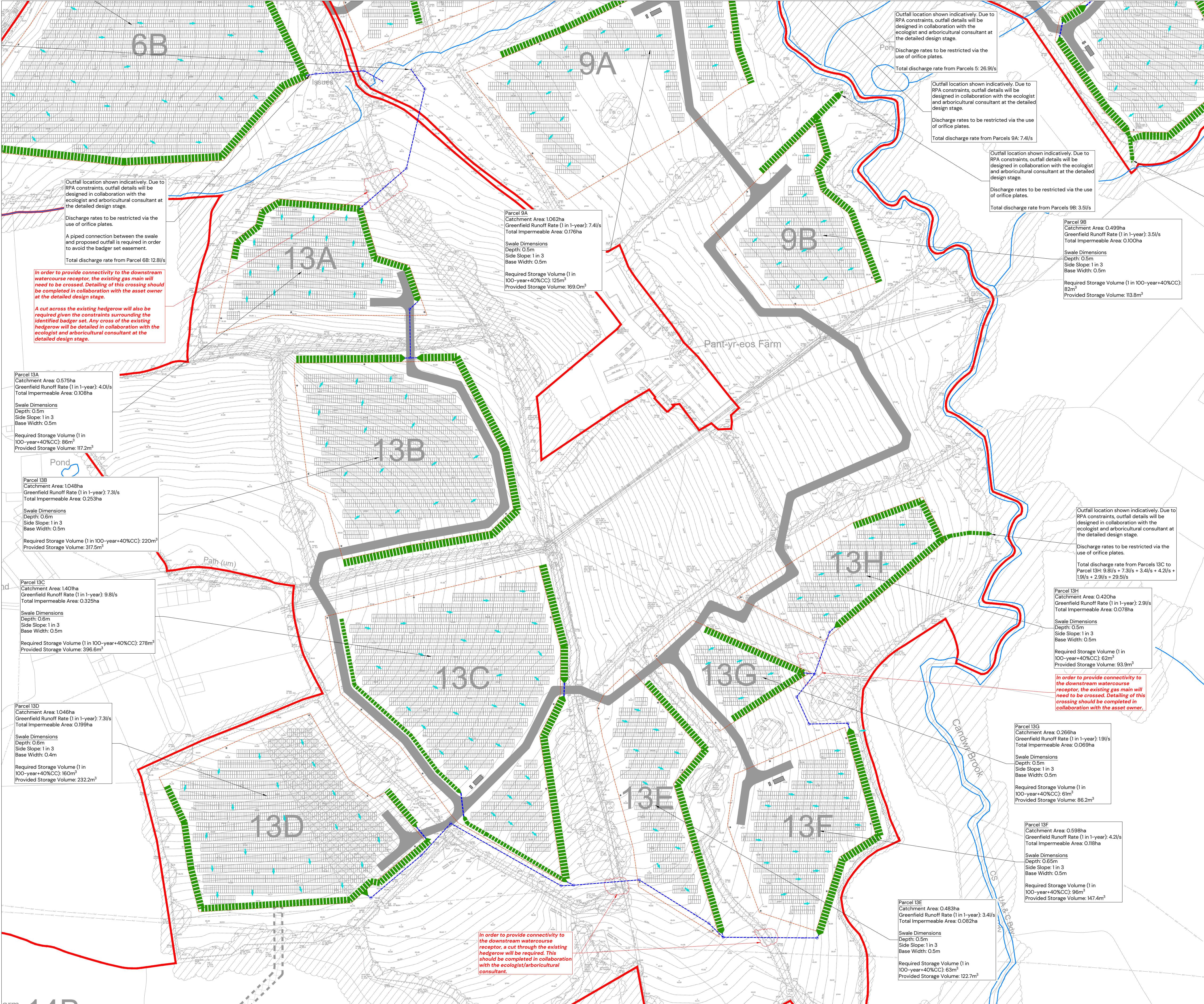
DRAWING NUMBER:
P24-2075-PEG-XX-XX-DR-C-0509-P2

PG OFFICE / TEAM:
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PEGASUS REF No:
P24-2075

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KEY PLAN
NTS

P02	02.06.2026	REVISED SITE LAYOUT	OM	CT	CT
P01	08.05.2026	FIRST ISSUE	OM	CT	CT
REV	DATE	DESCRIPTION	REVISED	CHECKED	APPROVED

Candwr Solar Farm Surface Water Drainage Strategy

Land at Court Farm, Ponthir Monmouthshire – Sheet 10

CLIENT:
Candwr Solar Farm Ltd.

DATE:
08.05.2026

SCALE:
1:1000@A1

DRAWN BY: OM
CHECKED BY: CT
APPROVED BY: CT

DRAWING NUMBER:
P24-2075-PEG-XX-XX-DR-C-0510-P2

PG OFFICE / TEAM:
BRS-IN

PEGASUS REF No:
P24-2075

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Appendix K – Drainage Calculations

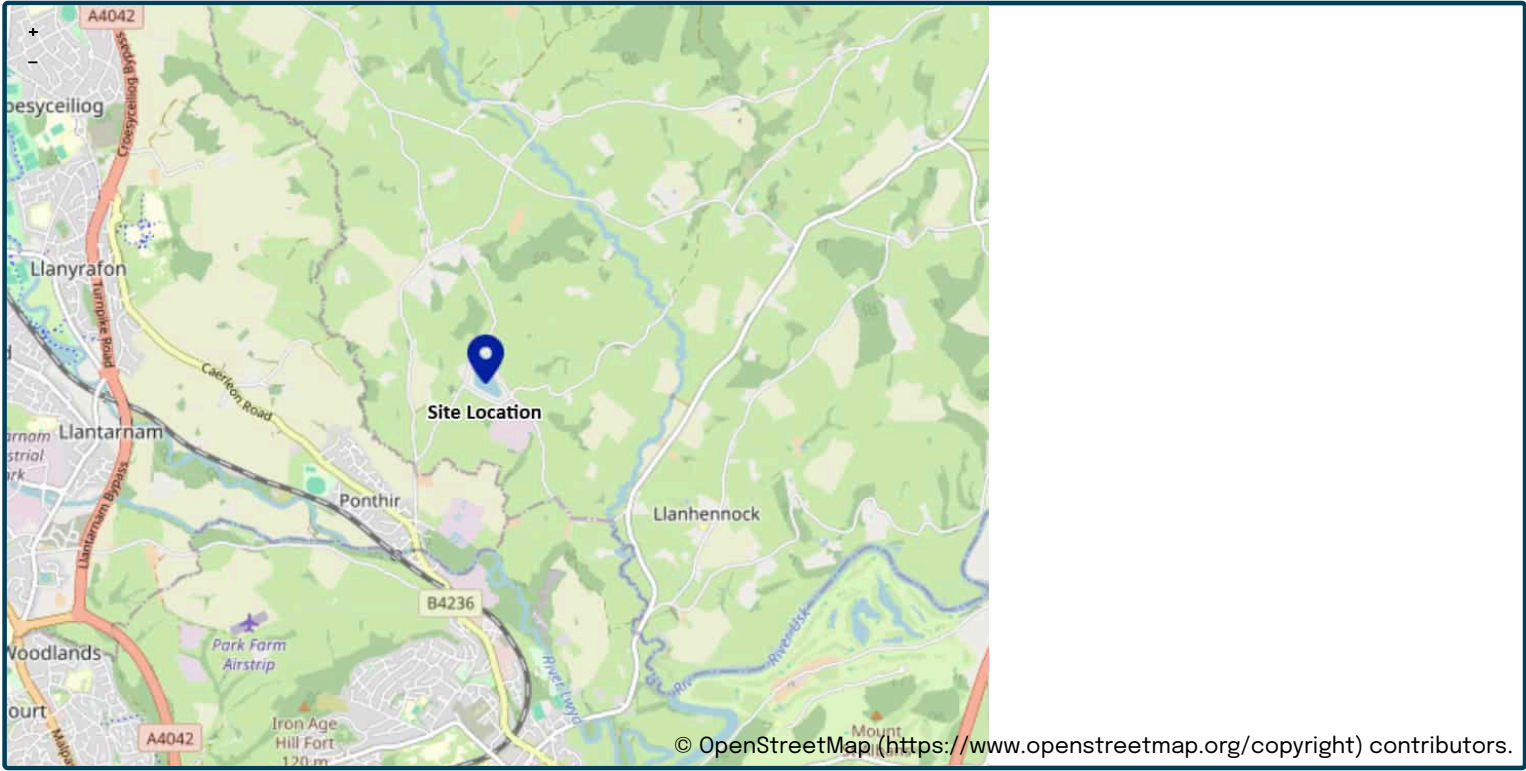
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	11/03/2026
Calculated by	OM
Reference	P24-2075
Model version	2.2.3

Location

Site name	Court Farm
Site location	Court Farm, Ponthir



Site easting (British National Grid)	333571
Site northing (British National Grid)	193479

Site details

Total site area (ha)	50	ha
----------------------	---------------------------------	----

Greenfield runoff

Method

Method	FEH statistical (2025)
--------	-----------------------------------

FEH statistical (2025)

	<u>My value</u>	<u>Map value</u>
SAAR9120 (mm)	1157 mm	
BFIHOST19scaled	0.492	
QMed-QBar conversion	1.075	1.075
QMed (l/s)	370.6 l/s	
QBar (FEH statistical 2025) (l/s)	398.3 l/s	

Growth curve factors

	<u>My value</u>	<u>Map value</u>
Hydrological region	9	9
1 year growth factor	0.88	
2 year growth factor	0.93	
10 year growth factor	1.42	
30 year growth factor	1.78	
100 year growth factor	2.18	
200 year growth factor	2.46	

Results

Method	FEH statistical (2025)
Flow rate 1 year (l/s)	350.5 l/s
Flow rate 2 year (l/s)	370.6 l/s
Flow rate 10 years (l/s)	565.7 l/s
Flow rate 30 years (l/s)	709.1 l/s
Flow rate 100 years (l/s)	868.4 l/s
Flow rate 200 years (l/s)	979.9 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent ‘zero’ figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.3) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	1.200
Return Period (years)	2	Maximum Rainfall (mm/hr)	999.0	Include Intermediate Ground	x
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	x
CV	1.000	Connection Type	Level Soffits		
Time of Entry (mins)	5.00	Minimum Backdrop Height (m)	1.000		

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Depth (m)
Substation 1	0.498	5.00	0.0	0.500
Substation 2	0.135	5.00	0.0	0.400
Substation 3	0.079	5.00	0.0	0.400

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	1.000	Drain Down Time (mins)	1440	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Normal	Additional Storage (m³/ha)	0.0	Check Discharge Volume	x
Summer CV	1.000	Skip Steady State	x	Starting Level (m)			

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
100	30	0	0	100	40	0	0

Node Substation 1 Online Orifice Control

Flap Valve	x	Invert Level (m)	99.500	Design Flow (l/s)	3.5	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Depth (m)	0.500	Diameter (m)	0.045		

Node Substation 2 Online Orifice Control

Flap Valve	x	Invert Level (m)	99.600	Design Flow (l/s)	0.9	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Depth (m)	0.500	Diameter (m)	0.030		

Node Substation 3 Online Orifice Control

Flap Valve	x	Invert Level (m)	99.600	Design Flow (l/s)	0.6	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Depth (m)	0.500	Diameter (m)	0.030		

Node Substation 1 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Width (m)	75.986	Depth (m)
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	99.500	Length (m)	75.986	Inf Depth (m)
Safety Factor	2.0	Time to half empty (mins)		Slope (1:X)	1000.0	

Node Substation 2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Width (m)	36.715	Depth (m)
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	99.600	Length (m)	36.715	Inf Depth (m)
Safety Factor	2.0	Time to half empty (mins)		Slope (1:X)	1000.0	

Node Substation 3 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Width (m)	28.093	Depth (m)
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	99.600	Length (m)	28.093	Inf Depth (m)
Safety Factor	2.0	Time to half empty (mins)	1530	Slope (1:X)	1000.0	

Results for 100 year +30% CC Critical Storm Duration. Lowest mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	Substation 1	1380	99.839	0.339	19.0	520.7982	0.0000	OK
960 minute winter	Substation 2	900	99.928	0.328	7.1	125.0291	0.0000	OK
600 minute winter	Substation 3	555	99.886	0.286	6.0	64.1869	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
1440 minute winter	Substation 1	Orifice	2.4	320.9
960 minute winter	Substation 2	Orifice	1.1	113.5
600 minute winter	Substation 3	Orifice	1.0	78.8

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	Substation 1	1380	99.865	0.365	20.5	566.4459	0.0000	OK
960 minute winter	Substation 2	915	99.954	0.354	7.7	135.7363	0.0000	OK
720 minute winter	Substation 3	600	99.909	0.309	5.6	69.6696	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
1440 minute winter	Substation 1	Orifice	2.5	334.6
960 minute winter	Substation 2	Orifice	1.1	118.9
720 minute winter	Substation 3	Orifice	1.0	87.9

Quick Storage Estimate Input Criteria

Rainfall Methodology	Load	FEH-22	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Storm Durations (mins)
Rainfall Events		Singular					
FEH filename		\\10.1.1.1\Data\Projects\C					☒ 15
Summer CV	☒	1.000					☒ 30
Winter CV	☒	1.000					☒ 60
Analysis Speed		Normal					☒ 120
Skip Steady State	☐						☒ 180
Drain Down Time (mins)		1440					☒ 240
Additional Storage (m³/ha)		0.0					☒ 360
Starting Level (m) (leave blank for none)							☒ 480
☐ Check Discharge Rate(s)		Calc					☒ 600
							☒ 720
							☒ 960
							☒ 1440
							☒ 2160
							☒ 2880
							☒ 4320
							☒ 5760
							☒ 7200
							☒ 8640
							☒ 10080
☐ Check Discharge Volume		Calc					
100 year 360 minute (m³)							
Storage Estimate		Calc					

Catchment 1A

Catchment Details						
Total Catchment Area (m²)	Solar Panel Area (m²)	Access Road Area (m²)	Building Impermeable Area (m²)	Total Impermeable Area (m²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
3014.740	1917.489	193.164	0.000	576.661	0.058	2.1
Storage Details						
Swale Length (m)	Swale Volume (m³/3)	Total Volume Provided (m³)	Required Volume from QSE (m³)	Difference in Volume (m³)		
107.9	1	75.53	37	38.53		
Upper End Allowance Check (40%)			41	34.53		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			54	21.53		

Storage Estimate

Return Period (years): 100

Climate Change (%): 30

Impermeable Area (ha): 0.058

Peak Discharge (l/s): 2.100

Infiltration Coefficient (m/hr)
(leave blank if no infiltration): 0.00000

Required Storage (m³):

from 23

to 37

With infiltration (m³):

from 23

to 37

Storage Estimate

Return Period (years): 100

Climate Change (%): 40

Impermeable Area (ha): 0.058

Peak Discharge (l/s): 2.100

Infiltration Coefficient (m/hr)
(leave blank if no infiltration): 0.00000

Required Storage (m³):

from 26

to 41

With infiltration (m³):

from 26

to 41

Storage Estimate

Return Period (years): 10

Climate Change (%): 0

Impermeable Area (ha): 0.058

Peak Discharge (l/s): 2.100

Infiltration Coefficient (m/hr)
(leave blank if no infiltration): 0.00000

Required Storage (m³):

from 7

to 13

With infiltration (m³):

from 7

to 13

Catchment 1B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
7978.150	6258.947	413.375	0.000	1665.165	0.167	5.6
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
160.70	1.60	179.98	110.00	69.98		
Upper End Allowance Check (40%)			122	57.98		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			162	17.984		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.167	Update
Peak Discharge (l/s)	5.600	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	69	
to	110	
With infiltration (m ³)		
from	69	
to	110	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.167	Update
Peak Discharge (l/s)	5.600	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	76	
to	122	
With infiltration (m ³)		
from	76	
to	122	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.167	Update
Peak Discharge (l/s)	5.600	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	21	
to	40	
With infiltration (m ³)		
from	21	
to	40	

Catchment 1C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5324.227	3364.372	883.308	0.000	1556.182	0.156	3.7
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
150.7	1.82	191.9918	118	73.9918		
Upper End Allowance Check (40%)			131	60.9918		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			174	17.9918		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.156	Update
Peak Discharge (l/s)	3.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	74	
to	118	
With infiltration (m ³)		
from	74	
to	118	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.156	Update
Peak Discharge (l/s)	3.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	81	
to	131	
With infiltration (m ³)		
from	81	
to	131	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.156	Update
Peak Discharge (l/s)	3.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	24	
to	43	
With infiltration (m ³)		
from	24	
to	43	

Catchment 1D

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5998.428	4122.075	483.218	14.757	1322.390	0.132	4.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
118.5	1.6	132.72	89	43.72		
Upper End Allowance Check (40%)			99	33.72		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			131	1.72		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Catchment 1E

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
4119.572	2964.868	216.017	0.000	808.991	0.081	2.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
135	1	94.5	52	42.5		
Upper End Allowance Check (40%)			58	36.5		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			77	17.5		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Catchment 1F

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5797.768	4712.143	96.303	0.000	1038.732	0.104	4.1
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
136.365	1	95.4555	64	31.4555		
Upper End Allowance Check (40%)			71	24.4555		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			94	1.4555		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 2A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
15960.096	13842.821	217.277	0.000	2985.841	0.299	11.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
248.2	1.6	277.984	184	93.984		
Upper End Allowance Check (40%)			209	68.984		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			276	1.984		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 2B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
7367.071	5687.674	238.091	14.757	1390.382	0.139	5.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
121.2966	1.82	154.5318684	87	67.5318684		
Upper End Allowance Check (40%)			97	57.5318684		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			128	26.5318684		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Catchment 2C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
6512.119	4403.012	696.377	0.000	1576.980	0.158	4.6
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
186.917	1.38	180.561822	110	70.561822		
Upper End Allowance Check (40%)			122	58.561822		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			162	18.561822		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from

to

With infiltration (m³)

from

to

Catchment 2D

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
8978.192	6594.512	773.966	0.000	2092.868	0.209	6.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
190.2544	1.82	259.697256	162	97.697256		
Upper End Allowance Check (40%)			179	80.697256		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			246	13.697256		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 11

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
9007.585	6985.486	309.727	0.000	1706.824	0.171	6.7
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
170.0481	1.6	190.453872	121	69.453872		
Upper End Allowance Check (40%)			134	56.453872		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			182	8.453872		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 8A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5633.279	3758.998	314.881	0.000	1066.681	0.107	4.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
95.6497	1.82	121.8577178	76	45.8577178		
Upper End Allowance Check (40%)			84	37.8577178		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			114	7.8577178		

Storage Estimate

Return Period (years)

100

OK

Climate Change (%)

30

Cancel

Impermeable Area (ha)

0.107

Update

Peak Discharge (l/s)

4.200

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

43

to

76

With infiltration (m³)

from

43

to

76

Storage Estimate

Return Period (years)

100

OK

Climate Change (%)

40

Cancel

Impermeable Area (ha)

0.107

Update

Peak Discharge (l/s)

4.200

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

49

to

84

With infiltration (m³)

from

49

to

84

Storage Estimate

Return Period (years)

10

OK

Climate Change (%)

0

Cancel

Impermeable Area (ha)

0.107

Update

Peak Discharge (l/s)

4.200

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

14

to

30

With infiltration (m³)

from

14

to

30

Catchment 8B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
50289.419	44895.974	1217.733	14.757	10211.684	1.021	35.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)	Cumulative 1 in 10-year event cannot be accomodated, however there is still ample redundancy within the provided storage volume in order to accomodate smaller concurrent rainfall events.	
476.7967	1.82	845.8373458	757	88.8373458		
Upper End Allowance Check (40%)			837	8.8373458		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			1141	-295.1626542		

Storage Estimate

Return Period (years)

100

OK

Climate Change (%)

30

Cancel

Impermeable Area (ha)

1.021

Update

Peak Discharge (l/s)

35.300

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

443

to

757

With infiltration (m³)

from

443

to

757

Storage Estimate

Return Period (years)

100

OK

Climate Change (%)

40

Cancel

Impermeable Area (ha)

1.021

Update

Peak Discharge (l/s)

35.300

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

494

to

837

With infiltration (m³)

from

495

to

837

Storage Estimate

Return Period (years)

10

OK

Climate Change (%)

0

Cancel

Impermeable Area (ha)

1.021

Update

Peak Discharge (l/s)

35.300

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

0.00000

Calc

Required Storage (m³)

Calc

from

152

to

304

With infiltration (m³)

from

152

to

304

Catchment 8C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
4990.520	3492.695	203.960	14.757	917.255	0.092	3.5
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
188.5528	1	131.98696	66	65.98696		
Upper End Allowance Check (40%)			73	58.98696		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			99	32.98696		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 12A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
2740.700	1654.915	156.347	0.000	487.330	0.049	1.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
104.4477	1	73.11339	35	38.11339		
Upper End Allowance Check (40%)			39	34.11339		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			53	20.11339		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 12B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
11602.826	9462.790	232.410	0.000	2124.968	0.212	8.1
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
229.9046	1.6	257.493152	151	106.493152		
Upper End Allowance Check (40%)			168	89.493152		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			228	29.493152		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 12C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
3504.501	2263.141	282.016	0.000	734.644	0.073	2.5
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
73.6	1.6	82.432	54	28.432		
Upper End Allowance Check (40%)			60	22.432		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			82	0.432		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 12D

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
12137.107	9451.169	238.370	0.000	2128.603	0.213	8.5
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
270.0447	1.38	260.8631802	150	110.8631802		
Upper End Allowance Check (40%)			166	94.8631802		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			225	35.8631802		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 10A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
9048.766	5547.396	783.444	14.757	1907.680	0.191	6.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
203.8027	1.6	228.259024	144	84.259024		
Upper End Allowance Check (40%)			159	69.259024		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			217	11.259024		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 10B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
12737.548	9196.657	290.239	0.000	2129.571	0.213	8.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
271.809	1.32	251.151516	148	103.151516		
Upper End Allowance Check (40%)			163	88.151516		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			221	30.151516		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 4

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
14489.568	11166.657	943.624	14.757	3191.712	0.319	10.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
426.2222	1.32	393.8293128	243	150.8293128		
Upper End Allowance Check (40%)			268	125.8293128		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			367	26.8293128		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 5

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
38302.971	35419.546	227.548	29.513	7340.970	0.734	26.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
196.81	5.76	816.210432	532	284.210432		
Upper End Allowance Check (40%)			589	227.210432		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			802	14.210432		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 3A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
19166.802	16817.369	238.387	14.757	3616.617	0.362	13.4
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
375.243	1.6	420.27216	261	159.27216		
Upper End Allowance Check (40%)			290	130.27216		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			394	26.27216		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 3B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
16682.739	14062.109	455.283	0.000	3267.705	0.327	11.7
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
341.2	1.6	382.144	239	143.144		
Upper End Allowance Check (40%)			265	117.144		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			361	21.144		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.327	Update
Peak Discharge (l/s)	11.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	139	
to	239	
With infiltration (m ³)		
from	139	
to	239	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.327	Update
Peak Discharge (l/s)	11.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	156	
to	265	
With infiltration (m ³)		
from	156	
to	265	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.327	Update
Peak Discharge (l/s)	11.700	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	47	
to	96	
With infiltration (m ³)		
from	47	
to	96	

Catchment 7A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
30588.252	27653.787	218.185	0.000	5748.942	0.575	21.4
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)	Cumulative 1 in 10-year event cannot be accomodated, however there is still ample redundancy within the provided storage volume in order to accomodate smaller concurrent rainfall events.	
342.2	1.82	467.103	414	53.103		
Upper End Allowance Check (40%)			459	8.103		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			624	-156.897		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.575	Update
Peak Discharge (l/s)	21.400	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	240	
to	414	
With infiltration (m ³)		
from	240	
to	414	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.575	Update
Peak Discharge (l/s)	21.400	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	269	
to	459	
With infiltration (m ³)		
from	269	
to	459	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.575	Update
Peak Discharge (l/s)	21.400	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	81	
to	165	
With infiltration (m ³)		
from	81	
to	165	

Catchment 7B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
14759.611	9250.559	839.780	14.757	2704.648	0.270	10.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
403.0373	1	302.277975	193	109.277975		
Upper End Allowance Check (40%)			214	88.277975		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			291	11.277975		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 6A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
28254.890	24342.685	1228.827	29.513	6126.877	0.613	19.8
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)	Cumulative 1 in 10-year event cannot be accomodated, however there is still ample redundancy within the provided storage volume in order to accommodate smaller concurrent rainfall events.	
397.6926	1.82	579.0404256	466	113.0404256		
Upper End Allowance Check (40%)			514	65.0404256		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			610	-30.9595744		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 6B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
18278.700	16051.226	210.100	0.000	3420.345	0.342	12.8
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
317.0389	1.6	380.44668	246	134.44668		
Upper End Allowance Check (40%)			272	108.44668		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			370	10.44668		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 6C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
6852.207	4106.159	840.867	0.000	1662.099	0.166	4.8
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)	Cumulative 1 in 10-year event cannot be accomodated, however there is still ample redundancy within the provided storage volume in order to accomodate smaller concurrent rainfall events.	
196.458	1.28	176.026368	131	45.026368		
Upper End Allowance Check (40%)			144	32.026368		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			199	-22.973632		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr) (leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 9A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
10618.465	6268.473	495.416	14.757	1763.867	0.176	7.4
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
225.35	1	169.0125	113	56.0125		
Upper End Allowance Check (40%)			125	44.0125		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			169	0.0125		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Catchment 9B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
4991.915	3559.614	284.918	0.000	996.840	0.100	3.5
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
151.7	1	113.775	74	39.775		
Upper End Allowance Check (40%)			82	31.775		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			112	1.775		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)
from to

Catchment 13A

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5745.701	4303.662	215.222	0.000	1075.954	0.108	4.0
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
146.5541	1	117.24328	78	39.24328		
Upper End Allowance Check (40%)			86	31.24328		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			117	0.24328		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.108	Update
Peak Discharge (l/s)	4.000	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	45	
to	78	
With infiltration (m ³)		
from	45	
to	78	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.108	Update
Peak Discharge (l/s)	4.000	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	51	
to	86	
With infiltration (m ³)		
from	51	
to	86	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.108	Update
Peak Discharge (l/s)	4.000	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	15	
to	31	
With infiltration (m ³)		
from	15	
to	31	

Catchment 13B

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
10478.987	8008.802	932.012	0.000	2533.772	0.253	7.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
287.59	1.38	317.49936	199	118.49936		
Upper End Allowance Check (40%)			220	97.49936		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			303	14.49936		

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	30	Cancel
Impermeable Area (ha)	0.253	Update
Peak Discharge (l/s)	7.300	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	121	
to	199	
With infiltration (m ³)		
from	121	
to	199	

Storage Estimate

Return Period (years)	100	OK
Climate Change (%)	40	Cancel
Impermeable Area (ha)	0.253	Update
Peak Discharge (l/s)	7.300	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	135	
to	220	
With infiltration (m ³)		
from	135	
to	220	

Storage Estimate

Return Period (years)	10	OK
Climate Change (%)	0	Cancel
Impermeable Area (ha)	0.253	Update
Peak Discharge (l/s)	7.300	
Infiltration Coefficient (m/hr) (leave blank if no infiltration)	0.00000	Calc
Required Storage (m ³)	Calc	
from	43	
to	83	
With infiltration (m ³)		
from	43	
to	83	

Catchment 13C

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
14013.982	10921.144	1053.831	14.757	3252.817	0.325	9.8
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
383.1605	1.38	396.5711175	252	144.5711175		
Upper End Allowance Check (40%)			278	118.5711175		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			383	13.5711175		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 13D

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
10463.297	8756.694	239.575	0.000	1990.914	0.199	7.3
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
251.3319	1.32	232.2306756	144	88.2306756		
Upper End Allowance Check (40%)			160	72.2306756		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			218	14.2306756		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 13E

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
4833.802	3507.391	114.228	0.000	815.706	0.082	3.4
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
175.2624	1	122.68368	57	65.68368		
Upper End Allowance Check (40%)			63	59.68368		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			85	37.68368		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 13F

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
5978.537	4494.985	269.323	14.757	1183.076	0.118	4.2
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
131.6416	1.6	147.438592	87	60.438592		
Upper End Allowance Check (40%)			96	51.438592		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			131	16.438592		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³) from to

Catchment 13G

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
2655.381	1532.703	385.426	0.000	691.966	0.069	1.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
107.7601	1	86.20808	55	31.20808		
Upper End Allowance Check (40%)			61	25.20808		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			84	2.20808		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

Catchment 13H

Catchment Details						
Total Catchment Area (m ²)	Solar Panel Area (m ²)	Access Road Area (m ²)	Building Impermeable Area (m ²)	Total Impermeable Area (m ²)	Total Impermeable Area (ha)	Proposed Runoff Rate (l/s)
4202.855	3043.604	167.278	0.000	775.999	0.078	2.9
Storage Details						
Swale Length (m)	Swale Volume (m ³ /3)	Total Volume Provided (m ³)	Required Volume from QSE (m ³)	Difference in Volume (m ³)		
134.2	1	93.94	56	37.94		
Upper End Allowance Check (40%)			62	31.94		
Cumulative 1 in 100-year+CC and 1 in 10-year Event Check			84	9.94		

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

Storage Estimate

Return Period (years)

Climate Change (%)

Impermeable Area (ha)

Peak Discharge (l/s)

Infiltration Coefficient (m/hr)
(leave blank if no infiltration)

Required Storage (m³)

from to

With infiltration (m³)

from to

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