
Project name:	Thakeham Tiles, Rock Road, Storrington	Author:	Nisha Parajuli MEng MCIWEM
Design note title:	Drainage Strategy Addendum	Approver:	Jon Candy IEng MICE
Document reference:	37212-STN-XX-XX-TN-C-0001-P01		
Date:	2 June 2026	Approved	✓

1 Introduction

This Technical Note has been prepared in response to comments from West Sussex County Council, acting as a Lead Local Flood Authority (LLFA), in their letter dated 3rd February 2026 regarding the proposed redevelopment on land at Thakeham Tiles, Rock Road, Storrington, RH20 3AD (Planning Application Reference: DC/25/2087). Refer to LLFA comments included in **Appendix A**.

Following documents have been submitted in support of the planning application.

- *Drainage Strategy: 37212-STN-XX-XX-RP-C-0001, Rev P02 dated 13/11/2025*
- *Flood Risk Assessment: 37212-HYD-XX-XX-RP-WENV-0001, Rev P04, dated 13/11/2025*
- *Proposed Drainage Strategy Plan: 37212-STN-XX-XX-DR-C-2200, Rev P01*

Accordingly, additional works and clarifications have been provided below to address the concerns raised.

2 Response to LLFA

LLFA comment

1. *A revised existing drainage plan, illustrating:*
 - a) *Onward connectivity of the watercourses being utilised for the two discharge locations.*
 - b) *Any existing drainage features to be retained post development (if applicable)*

Stantec Response

Please find attached the updated existing site plan (Drawing No. STO-HYD-XX-XX-DR-D-2001-P04) in **Appendix B**.

The main surface water outfall from the development site discharges to the existing watercourse located to the north, running adjacent to Rock Road. Site visits and topographical surveys confirm that the watercourse flows in a westerly direction, predominantly as an open ditch within the site vicinity. It has been culverted beneath the existing site access. Approximately 10 m west of the site, it enters a 300 mm diameter pipe which continues westward towards the River Stor tributary located 260m to the west. Refer to photos 1 & 2 on the existing drainage plan in **Appendix B**, and **Figure 1** below. The exact route and its condition will be established with a drainage survey in due course.

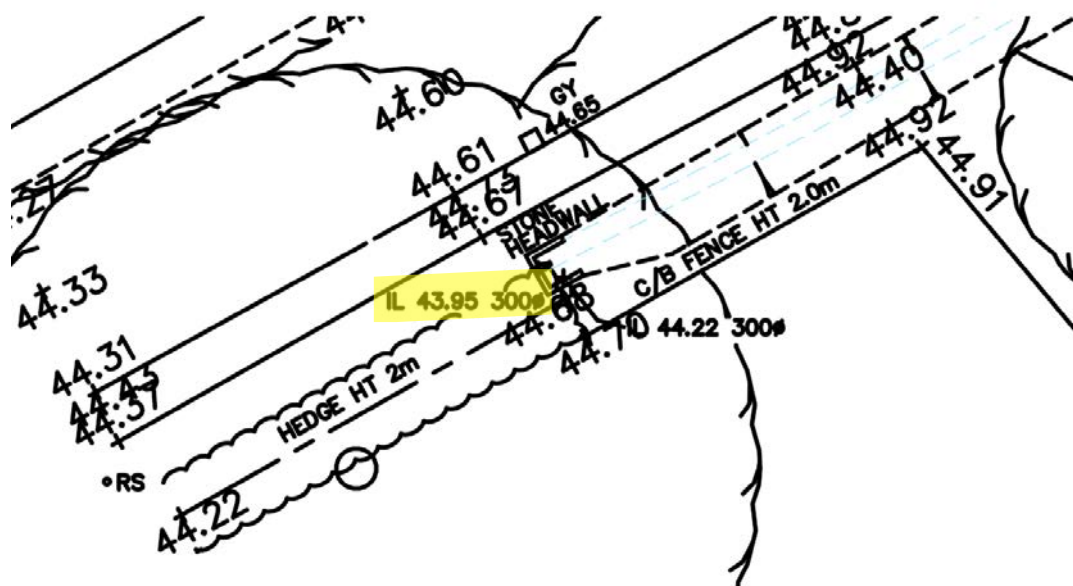


Figure 1: Topo Survey extract showing piped outfall from the ditch alongside Rock Road

The east–west watercourse located to the south of the woodland flows in a westerly direction before leaving the site via a 225 mm diameter pipe. Refer to photos 5 & 6 on the existing drainage plan in **Appendix B**, and **Figure 2** below. The topographical survey, in Appendix A, indicates that a 300mm pipe from the site currently discharges at the head of this ditch. It was desirable from ecological perspective to maintain some flow into this ditch to sustain its ecological function. Accordingly, this outfall has been retained.

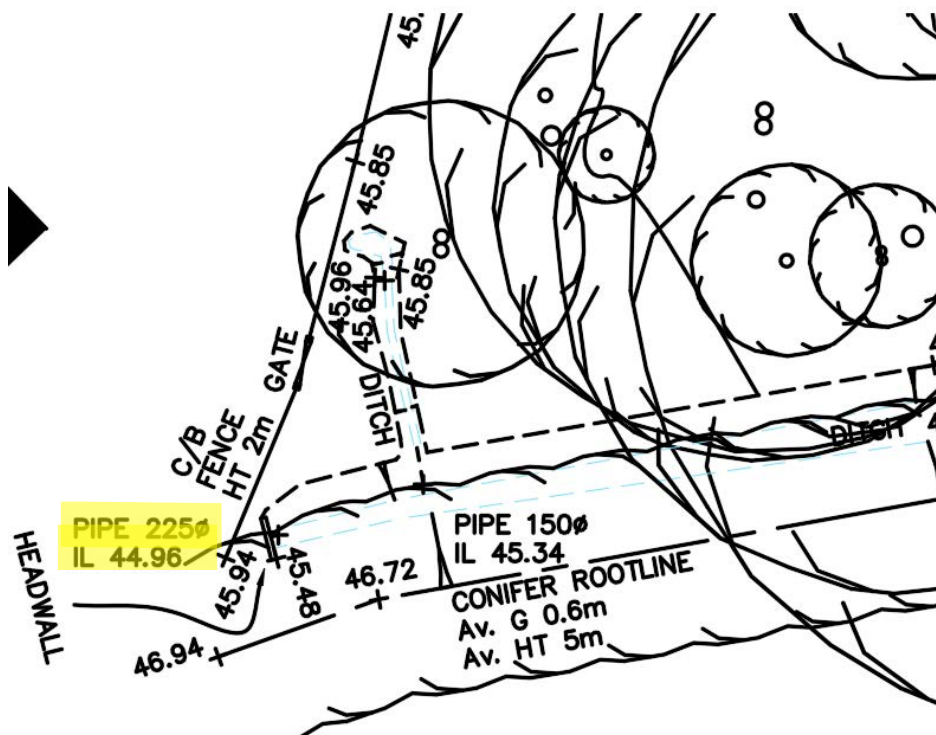


Figure 2: Topo Survey extract showing piped outfall from the ditch located south of the woodland

A shallow ditch is also present along the western boundary, continuing from the aforementioned ditch. Refer to photos 3 & 4 on the existing drainage plan in **Appendix B**. It is understood to have been excavated by local residents to alleviate flooding of adjacent properties to the west. The route of this ditch is poorly defined on site. However, this is not considered significant, as the ditch benefits from a positive outfall to the west.

LLFA comment

A catchment plan detailing which areas of the site are to drain to which attenuation features.

Stantec Response

Please find attached a new drawing, 37212-STN-XX-XX-DR-C-2201-P01 Catchment Area Plan, included in **Appendix B**.

LLFA comment

Revised calculations including the correct 1:100 plus climate change allowance for peak rainfall this catchment (currently 45%) and utilising FEH 2022. We will need to see the microdrainage calculations for the output for the critical result by maximum level for 1 in 100 plus appropriate allowance for climate change.

Stantec Response

The drainage design has been updated with FEH data 2022 and climate change allowance of 45%.

Please find attached updated drainage strategy plan (Drawing No. 37212-STN-XX-XX-DR-C-2200-P02) in **Appendix B** and drainage design calculations in **Appendix C**.

LLFA comment

It is noted from figure 4 of the Applicant's flood risk assessment that in some site areas the sequential approach to location of development in relation to surface water flood risk has not been followed. This should be considered with regard to the site layout, as there are currently properties proposed in surface water flow path areas.

Stantec Response

The flow path in question relates to that which originates in the northern/central area of the site and flows off to the west. Such flows originate within the site within localised depressions; there are no surface water flow routes from offsite land.

Following the development, the drainage strategy will be in place prior to occupation of the units and will therefore be built to redirect this rainfall that falls onto the site throughout the attenuation system for the 100yr plus climate change event (design event), releasing it at a controlled rate to the agreed discharge point. Therefore, upon completion of the development, this flow route will not be present for rainfall events up to and including the 100yr+CC design event. Beyond this, suitable land grading will be undertaken to avoid localised depressions and create appropriate overland flow routes contained within road corridors and green spaces. Finished floor levels will be set so that exceedance flows, beyond the capability of the drainage system, are directed towards low risk areas away from people/property, in accordance with good practice.

Furthermore, the Environment Agency's updated flood mapping (May 2026) indicates that areas susceptible to surface water flooding with depths exceeding 300mm are very limited across the site (refer to Figure 3). This reinforces that, following implementation of the drainage strategy and suitable exceedance flow routes design, surface water flood risk will be minimal.

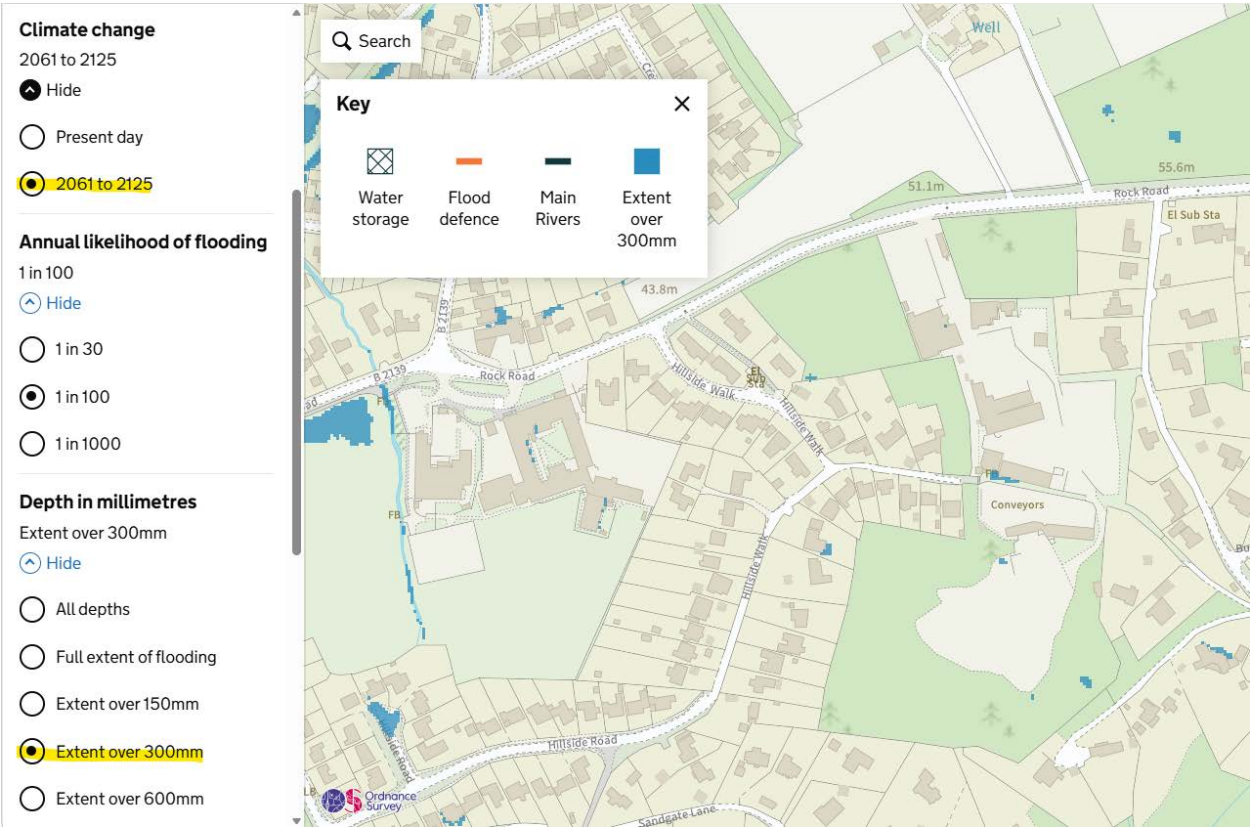


Figure 3: EA Surface Water Flood Depth Map (1:100year plus climate change event)

Appendices



Appendix A LLFA Comment

Appendix B Drainage Plans

Drawing No. STO-HYD-XX-XX-DR-D-2001-P04 Existing Drainage Plan

Drawing No. 37212-STN-XX-XX-DR-C-2200-P02 Proposed Drainage Strategy Plan

Drawing No. 37212-STN-XX-XX-DR-C-2201-P01 Catchment Area Plan

Appendix C Drainage Calculations

Appendices



Appendix A LLFA Comment

Ground Floor
Northleigh
County Hall
Chichester
West Sussex
PO19 1RH



Lead Local Flood Authority

Matthew Porter
Development Control
Horsham District Council
Albery House
Springfield Road
Horsham
RH12 2GB

Date 03/02/2026

Dear Matthew,

RE: DC/25/2087 Thakeham Tiles Ltd Rock Road Storrington RH20 3AD

Thank you for your consultation on the above site, received on 13th January 2026. We have reviewed the application as submitted and wish to make the following comments.

This is an Outline application for the demolition of existing buildings, and the re-development of the site for up to 108no. dwellings (including a mix of private and affordable housing units), with associated infrastructure including vehicular, cycle and pedestrian access, parking, landscaping, open space and play provision, and sustainable drainage with all matters reserved except access.

At present we **object and require additional information regarding:**

1. A revised existing drainage plan, illustrating:
 - a) Onward connectivity of the watercourses being utilised for the two discharge locations.
 - b) Any existing drainage features to be retained post development (if applicable)
2. A catchment plan detailing which areas of the site are to drain to which attenuation features.
3. Revised calculations including the correct 1:100 plus climate change allowance for peak rainfall this catchment (currently 45%) and utilising FEH 2022. We will need to see the microdrainage calculations for the output for the critical result by maximum level for 1 in 100 plus appropriate allowance for climate change.
4. It is noted from figure 4 of the Applicant's flood risk assessment that in some site areas the sequential approach to location of development in relation to surface water flood risk has not been followed. This should be considered with regard to the site layout, as there are currently properties proposed in surface water flow path areas.

We will consider reviewing this objection when the issues highlighted above are adequately addressed and we are formally reconsulted.

Yours sincerely,

Natalie Biddulph

Flood Risk Management Team

FRM@westsussex.gov.uk

Annex

The following documents have been reviewed, which have been submitted to support the application;

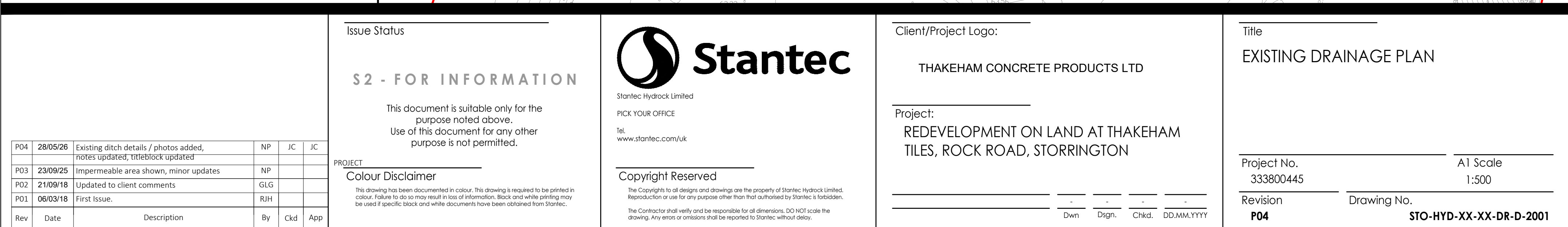
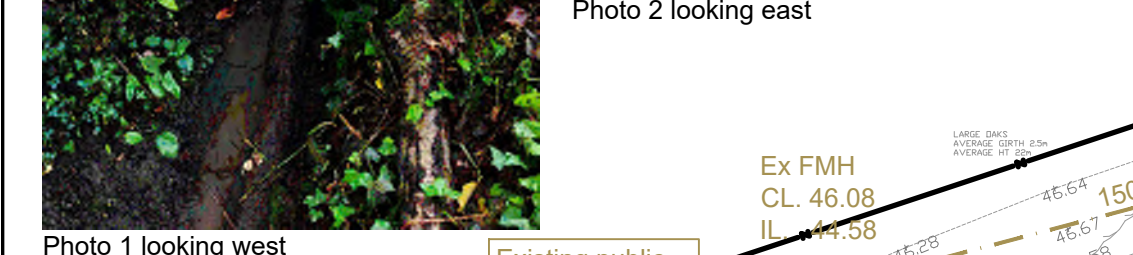
- PROPOSED DRAINAGE STRATEGY PLAN: 37212-STN-XX-XX-DR-C-2200, REV P01
- DRAINAGE STRATEGY 37212-STN-XX-XX-RP-C-0001-P02 13/11/2025
- FLOOD RISK ASSESSMENT 37212-HYD-XX-XX-RP-WENV-0001 13/11/2025

Appendix B Drainage Plans

Drawing No. STO-HYD-XX-XX-DR-D-2001-P04 Existing Drainage Plan

Drawing No. 37212-STN-XX-XX-DR-C-2200-P02 Proposed Drainage Strategy Plan

Drawing No. 37212-STN-XX-XX-DR-C-2201-P01 Catchment Area Plan





PO2 Update with new masterplan	NP	JC	2026.05.28
PO1 FIRST ISSUE	NP	JC	2025.09.24
Issued/Revision	By	Appd	YYYY.MM.DD

Issue Status

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Client/Project Logo:

Project:
Thakeham Tiles, Rock Road, Storrington

Proposed Residential Development

NP	NP	JC	2025.09.24
Dwn	Dsgn.	Chkd.	YYYY.MM.DD

Title

PROPOSED DRAINAGE STRATEGY PLAN

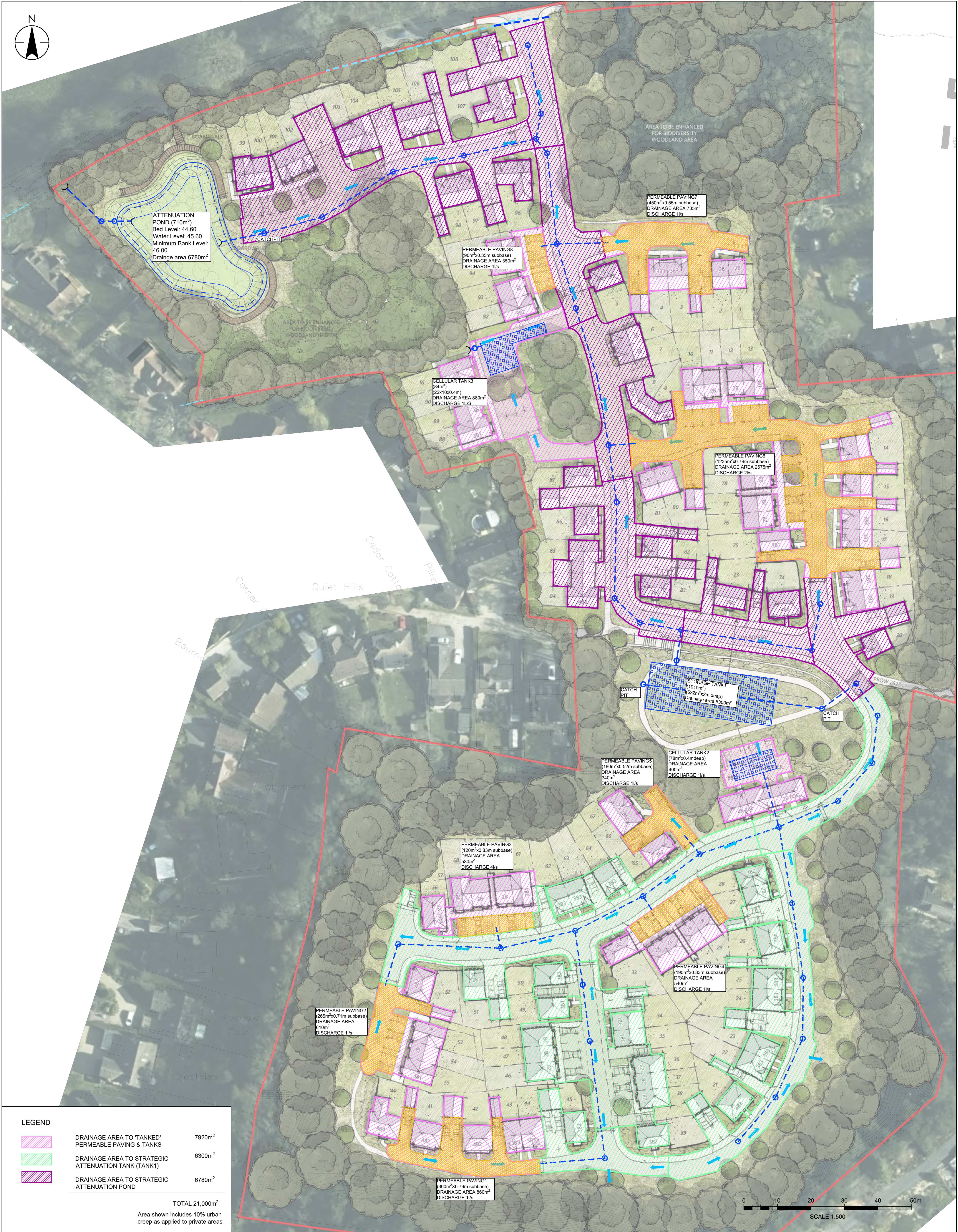
Project No.
333800445

Revision
P02

A1 Scale
1:500

Drawing No.

37212-STN-XX-XX-DR-C-2200



LEGEND

	DRAINAGE AREA TO 'TANKED' PERMEABLE PAVING & TANKS	7920m ²
	DRAINAGE AREA TO STRATEGIC ATTENUATION TANK (TANK1)	6300m ²
	DRAINAGE AREA TO STRATEGIC ATTENUATION POND	6780m ²

TOTAL 21,000m²
Area shown includes 10% urban creep as applied to private areas

Issue Status

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Client/Project Logo:

Project:
Thakeham Tiles, Rock Road, Storrington

Proposed Residential Development

Title
CATCHMENT AREA PLAN

Project No.
333800445

A1 Scale
1:500

Revision
P01

Drawing No.
37212-STN-XX-XX-DR-C-2201

P01 FIRST ISSUE	NP	JC	2026.05.28
Issued/Revision	By	Appd	YYYY.MM.DD

Appendix C Drainage Calculations

Hydrock Consultants Ltd		Page 1
.	Thakeham Tiles	
.	Rock Road, Storrington	
.	Existing Greenfield Runoff	
Date 1st March 2018	Designed by RJH	
File	Checked by	
XP Solutions	Source Control 2016.1	

ICP SUDS Mean Annual Flood

Input

Return Period (years) 100 SAAR (mm) 900 Urban 0.000
Area (ha) 1.000 Soil 0.450 Region Number Region 7

Results 1/s

QBAR Rural 5.9
QBAR Urban 5.9

Q100 years 18.8

Q1 year 5.0
Q30 years 13.4
Q100 years 18.8

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





Pond

Type : Pond

Dimensions

Exceedance Level (m)	46.000
Depth (m)	1.400
Base Level (m)	44.600
Freeboard (mm)	400
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.725
Total Volume (m³)	712.379

Depth (m)	Area (m²)	Volume (m³)
0.000	540.00	0.000
1.000	900.00	712.379
1.400	1055.00	1102.969

Inlets

Inlet

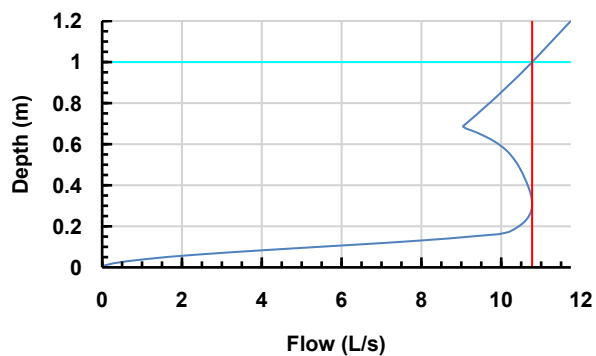
Inlet Type	Point Inflow
	CA11
	Pipe7
Incoming Item(s)	Pipe8
	Pipe9
	Pipe10
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	44.600
Design Depth (m)	1.000
Design Flow (L/s)	10.8
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☒

Unit Reference	SHE-0151-1080-1000-1080
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Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		



Advanced

Perimeter	Circular
Length (m)	48.984
Friction Scheme	Manning's n
n	0.03

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP1

Type : Porous Paving

Dimensions

Exceedance Level (m)	62.000
Depth (m)	1.000
Base Level (m)	61.000
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	19.000
Long. Slope (1:X)	500.00
Width (m)	19.000
Total Volume (m³)	96.387

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe1
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	61.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP2

Type : Porous Paving

Dimensions

Exceedance Level (m)	62.500
Depth (m)	1.000
Base Level (m)	61.500
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	16.300
Long. Slope (1:X)	500.00
Width (m)	16.300
Total Volume (m³)	70.939

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe2
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	61.500

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP3

Type : Porous Paving

Dimensions

Exceedance Level (m)	62.500
Depth (m)	1.100
Base Level (m)	61.400
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	11.000
Long. Slope (1:X)	500.00
Width (m)	11.000
Total Volume (m³)	35.937

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA3
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe3
Outlet Type	Orifice
Diameter (m)	0.100
Coefficient of Discharge	0.600
Invert Level (m)	61.400

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP4

Type : Porous Paving

Dimensions

Exceedance Level (m)	64.000
Depth (m)	1.000
Base Level (m)	63.000
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	13.800
Long. Slope (1:X)	500.00
Width (m)	13.800
Total Volume (m³)	50.847

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA4
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe4
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	63.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP5

Type : Porous Paving

Dimensions

Exceedance Level (m)	62.500
Depth (m)	1.000
Base Level (m)	61.500
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	13.400
Long. Slope (1:X)	500.00
Width (m)	13.400
Total Volume (m³)	47.943

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA5
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe5
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	61.500

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP6

Type : Porous Paving

Dimensions

Exceedance Level (m)	53.000
Depth (m)	1.000
Base Level (m)	52.000
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	35.100
Long. Slope (1:X)	500.00
Width (m)	35.100
Total Volume (m³)	328.947

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA8
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe7
Outlet Type	Orifice
Diameter (m)	0.075
Coefficient of Discharge	0.600
Invert Level (m)	52.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP7

Type : Porous Paving

Dimensions

Exceedance Level (m)	52.000
Depth (m)	1.000
Base Level (m)	51.000
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	21.200
Long. Slope (1:X)	500.00
Width (m)	21.200
Total Volume (m³)	120.000

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA9
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe8
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	51.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





PP8

Type : Porous Paving

Dimensions

Exceedance Level (m)	52.000
Depth (m)	1.000
Base Level (m)	51.000
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	21.200
Long. Slope (1:X)	500.00
Width (m)	21.200
Total Volume (m³)	120.000

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA10
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe9
Outlet Type	Orifice
Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	51.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0
Conductivity (m/hr)	500.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		





TANK2

Type : Cellular Storage

Dimensions

Exceedance Level (m)	62.000
Depth (m)	0.400
Base Level (m)	60.600
Number of Crates Long	13
Number of Crates Wide	14
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	35.580

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA6
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pip6
Outlet Type	Orifice
Diameter (m)	0.030
Coefficient of Discharge	0.600
Invert Level (m)	60.600

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0



TANK1

Type : Cellular Storage

Dimensions

Exceedance Level (m)	58.000
Depth (m)	2.000
Base Level (m)	55.000
Number of Crates Long	38
Number of Crates Wide	28
Number of Crates High	5
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	1011.800

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026			
	Designed by: nparajuli	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	CA7
	Pipe1
	Pipe2
	Pipe3
	Pipe4
	Pipe5
	Pip6
Bypass Destination	(None)
Capacity Type	No Restriction

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		

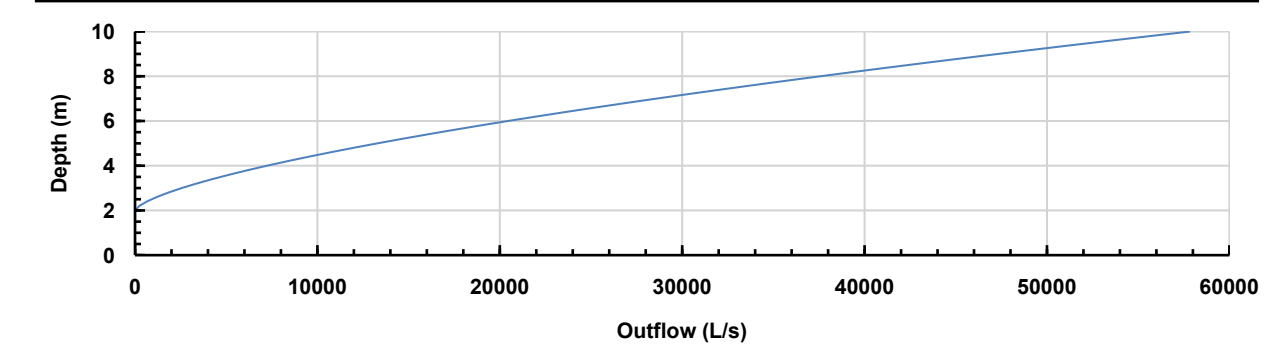


Outlets

Outlet

Outgoing Connection	Pipe10
Outlet Type	Multiple
Invert Level (m)	55.000

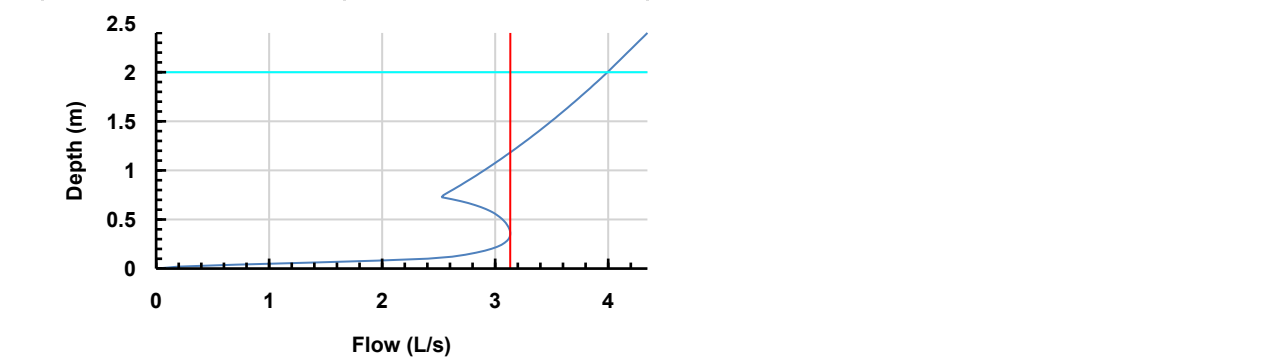
Combined Outflow



Hydro-Brake®

Depth Above Invert (m)	0.000
Design Depth (m)	2.000
Design Flow (L/s)	4.0
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☒

Unit Reference	SHE-0082-4000-2000-4000
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Weir

Width (m)	1.500
Coefficient of Discharge	0.544
Depth Above Invert (m)	2.000

Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026		
	Designed by: nparajuli	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Stantec:		



TANK3

Type : Cellular Storage

Dimensions

Exceedance Level (m)	51.000
Depth (m)	0.800
Base Level (m)	49.400
Number of Crates Long	11
Number of Crates Wide	22
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	92.760

Inlets

Inlet

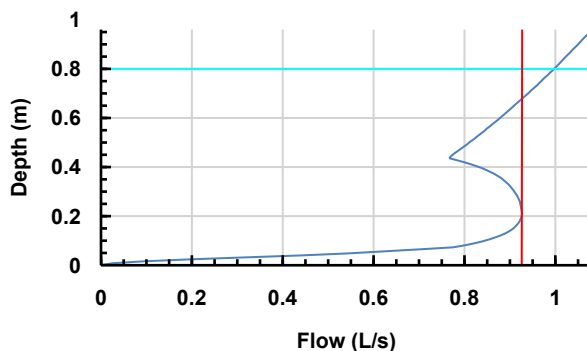
Inlet Type	Point Inflow
Incoming Item(s)	CA12
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	49.400
Design Depth (m)	0.800
Design Flow (L/s)	1.0
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☒

Unit Reference	SHE-0049-1000-0800-1000
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Advanced

Base Infiltration Rate (m/hr)	0.0
Side Infiltration Rate (m/hr)	0.0
Safety Factor	2.0

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations		Date: 22/05/2026			
		Designed by: nparajuli	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Stantec:			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
CA1	PP1		Time of Concentration	0.086	100	0	100	0.086
CA2	PP2		Time of Concentration	0.061	100	0	100	0.061
CA3	PP3		Time of Concentration	0.053	100	0	100	0.053
CA4	PP4		Time of Concentration	0.054	100	0	100	0.054
CA5	PP5		Time of Concentration	0.034	100	0	100	0.034
CA6	TANK2		Time of Concentration	0.040	100	0	100	0.040
CA7	TANK1		Time of Concentration	0.630	100	0	100	0.630
CA8	PP6		Time of Concentration	0.268	100	0	100	0.268
CA9	PP7		Time of Concentration	0.074	100	0	100	0.074
CA10	PP8		Time of Concentration	0.035	100	0	100	0.035
CA11	Pond		Time of Concentration	0.678	100	0	100	0.678
CA12	TANK3		Time of Concentration	0.088	100	0	100	0.088
TOTAL		0.0		2.100				2.100

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026			
	Designed by: nparajuli	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Stantec:			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Reduced
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall		
FEH_100yrCC		Type: FEH
Site Location	GB 510407 114998 TQ 10407 14998	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026			
	Designed by: nparajuli	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Stantec:			

FEH		Type: FEH
Site Location	GB 510407 114998 TQ 10407 14998	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period	
Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	0.000
Storm Durations	
Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations		Date: 22/05/2026			
		Designed by: nparajuli	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Stantec:			



FEH_100yrCC: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item:
Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
PP1	FEH_100yrC: 100 years: +45 %: 480 mins: Winter	61.822	61.787	0.784	0.787	8.8	84.955	0.000	0.000	1.1	43.682	11.860	OK
PP2	FEH_100yrC: 100 years: +45 %: 360 mins: Winter	62.245	62.209	0.712	0.709	7.9	56.583	0.000	0.000	1.0	30.755	20.237	OK
PP3	FEH_100yrC: 100 years: +45 %: 120 mins: Summer	62.378	62.232	0.956	0.832	21.4	31.986	0.000	0.000	4.3	36.848	10.994	OK
PP4	FEH_100yrC: 100 years: +45 %: 360 mins: Winter	63.857	63.825	0.829	0.825	7.0	47.261	0.000	0.000	1.1	33.327	7.053	OK
PP5	FEH_100yrC: 100 years: +45 %: 360 mins: Summer	62.064	62.023	0.537	0.523	6.7	28.510	0.000	0.000	0.9	24.957	40.534	OK
TANK2	FEH_100yrC: 100 years: +45 %: 240 mins: Winter	60.962	60.962	0.362	0.362	7.1	31.321	0.000	0.000	1.1	22.537	11.970	OK
TANK1	FEH_100yrC: 100 years: +45 %: 2880 mins: Winter	57.007	57.007	2.007	2.007	19.6	1010.982	0.000	0.000	5.3	1055.926	0.081	OK
PP6	FEH_100yrC: 100 years: +45 %: 960 mins: Winter	52.874	52.793	0.804	0.793	15.8	293.632	0.000	0.000	2.4	187.893	10.736	OK
PP7	FEH_100yrC: 100 years: +45 %: 480 mins: Winter	51.597	51.553	0.555	0.553	7.6	74.497	0.000	0.000	0.9	35.414	37.920	OK
PP8	FEH_100yrC: 100 years: +45 %: 480 mins: Winter	51.351	51.250	0.308	0.250	3.6	34.662	0.000	0.000	0.6	21.350	71.115	OK
TANK3	FEH_100yrC: 100 years: +45 %: 480 mins: Winter	50.124	50.124	0.724	0.724	9.1	83.182	0.000	0.000	0.9	44.845	10.325	OK
Pond	FEH_100yrC: 100 years: +45 %: 960 mins: Winter	45.582	45.582	0.982	0.982	44.8	695.965	0.000	0.000	10.8	1058.966	2.304	OK

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations		Date: 22/05/2026		
		Designed by: nparajuli	Checked by:	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Stantec:		



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
PP1	FEH: 2 years: +0 %: 960 mins: Summer	61.307	61.227	0.269	0.227	2.5	25.707	0.000	0.000	0.5	33.162	73.329	OK
PP2	FEH: 2 years: +0 %: 480 mins: Summer	61.801	61.701	0.268	0.201	3.1	17.176	0.000	0.000	0.5	17.242	75.788	OK
PP3	FEH: 2 years: +0 %: 240 mins: Summer	61.783	61.587	0.361	0.187	4.2	9.696	0.000	0.000	1.8	15.026	73.019	OK
PP4	FEH: 2 years: +0 %: 480 mins: Summer	63.311	63.232	0.283	0.232	2.7	14.094	0.000	0.000	0.5	17.288	72.283	OK
PP5	FEH: 2 years: +0 %: 480 mins: Summer	61.734	61.643	0.207	0.143	1.7	8.840	0.000	0.000	0.4	11.072	81.561	OK
TANK2	FEH: 2 years: +0 %: 360 mins: Summer	60.700	60.700	0.100	0.100	2.4	8.663	0.000	0.000	0.5	12.252	75.651	OK
TANK1	FEH: 2 years: +0 %: 960 mins: Summer	55.501	55.501	0.501	0.501	21.2	252.959	0.000	0.000	3.0	282.638	74.999	OK
PP6	FEH: 2 years: +0 %: 1440 mins: Summer	52.413	52.232	0.343	0.232	5.8	95.393	0.000	0.000	1.2	106.480	71.001	OK
PP7	FEH: 2 years: +0 %: 960 mins: Summer	51.262	51.161	0.219	0.161	2.2	23.460	0.000	0.000	0.4	26.998	80.450	OK
PP8	FEH: 2 years: +0 %: 960 mins: Summer	51.170	51.069	0.127	0.069	1.0	11.816	0.000	0.000	0.3	12.649	90.153	OK
TANK3	FEH: 2 years: +0 %: 360 mins: Summer	49.572	49.572	0.172	0.172	5.3	19.720	0.000	0.000	0.9	26.681	78.741	OK
Pond	FEH: 2 years: +0 %: 360 mins: Summer	44.863	44.863	0.263	0.263	44.0	153.432	0.000	0.000	10.7	323.941	78.462	OK

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations	Date: 22/05/2026			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	nparajuli			
	Stantec:			



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
PP1	FEH: 30 years: +0 %: 480 mins: Winter	61.478	61.423	0.440	0.423	5.0	46.181	0.000	0.000	0.8	30.029	52.088	OK
PP2	FEH: 30 years: +0 %: 360 mins: Winter	61.940	61.880	0.408	0.380	4.4	30.807	0.000	0.000	0.7	20.982	56.573	OK
PP3	FEH: 30 years: +0 %: 120 mins: Summer	62.037	61.821	0.615	0.421	11.8	17.771	0.000	0.000	2.9	21.268	50.551	OK
PP4	FEH: 30 years: +0 %: 360 mins: Summer	63.492	63.441	0.464	0.441	6.0	25.606	0.000	0.000	0.8	22.463	49.642	OK
PP5	FEH: 30 years: +0 %: 360 mins: Summer	61.860	61.780	0.333	0.280	3.8	15.769	0.000	0.000	0.6	16.158	67.108	OK
TANK2	FEH: 30 years: +0 %: 240 mins: Summer	60.792	60.792	0.192	0.192	5.9	16.557	0.000	0.000	0.8	15.261	53.465	OK
TANK1	FEH: 30 years: +0 %: 1440 mins: Summer	56.032	56.032	1.032	1.032	27.1	521.467	0.000	0.000	3.0	404.356	48.461	OK
PP6	FEH: 30 years: +0 %: 960 mins: Summer	52.618	52.424	0.548	0.424	13.7	161.513	0.000	0.000	1.7	124.658	50.900	OK
PP7	FEH: 30 years: +0 %: 480 mins: Winter	51.390	51.299	0.348	0.299	4.3	41.012	0.000	0.000	0.6	24.053	65.824	OK
PP8	FEH: 30 years: +0 %: 480 mins: Winter	51.246	51.131	0.203	0.131	2.0	19.677	0.000	0.000	0.4	13.437	83.603	OK
TANK3	FEH: 30 years: +0 %: 360 mins: Winter	49.758	49.758	0.358	0.358	6.4	41.206	0.000	0.000	0.9	32.594	55.578	OK
Pond	FEH: 30 years: +0 %: 360 mins: Summer	45.118	45.118	0.518	0.518	77.8	324.062	0.000	0.000	10.8	385.586	54.510	OK

Thakeham Tiles: Thakeham Tiles, Storrington Storage Calculations		Date: 22/05/2026		
		Designed by: nparajuli	Checked by:	
		Approved By:		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Stantec:		



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
PP1	FEH: 100 years: +0 %: 480 mins: Winter	61.570	61.528	0.532	0.528	6.1	57.347	0.000	0.000	0.9	34.443	40.504	OK
PP2	FEH: 100 years: +0 %: 360 mins: Winter	62.020	61.975	0.488	0.475	5.4	38.208	0.000	0.000	0.8	24.138	46.140	OK
PP3	FEH: 100 years: +0 %: 120 mins: Summer	62.141	61.945	0.719	0.545	14.7	22.020	0.000	0.000	3.4	26.417	38.727	OK
PP4	FEH: 100 years: +0 %: 360 mins: Summer	63.589	63.550	0.561	0.550	7.3	31.696	0.000	0.000	0.9	25.941	37.665	OK
PP5	FEH: 100 years: +0 %: 360 mins: Summer	61.916	61.850	0.389	0.350	4.6	19.412	0.000	0.000	0.7	19.001	59.510	OK
TANK2	FEH: 100 years: +0 %: 240 mins: Summer	60.840	60.840	0.240	0.240	7.2	20.717	0.000	0.000	0.8	17.615	41.772	OK
TANK1	FEH: 100 years: +0 %: 1440 mins: Winter	56.301	56.301	1.301	1.301	22.6	657.719	0.000	0.000	3.1	450.627	34.995	OK
PP6	FEH: 100 years: +0 %: 960 mins: Summer	52.705	52.531	0.635	0.531	16.9	199.166	0.000	0.000	1.9	145.116	39.453	OK
PP7	FEH: 100 years: +0 %: 480 mins: Winter	51.447	51.373	0.405	0.373	5.2	50.649	0.000	0.000	0.7	27.730	57.792	OK
PP8	FEH: 100 years: +0 %: 480 mins: Winter	51.278	51.166	0.236	0.166	2.5	23.950	0.000	0.000	0.5	16.002	80.042	OK
TANK3	FEH: 100 years: +0 %: 360 mins: Winter	49.868	49.868	0.468	0.468	7.8	53.791	0.000	0.000	0.9	30.702	42.011	OK
Pond	FEH: 100 years: +0 %: 480 mins: Summer	45.264	45.264	0.664	0.664	77.9	431.957	0.000	0.000	10.8	498.695	39.364	OK