

Technical Note

Second Response to LLFA Comments

Wickhurst Green, Broadbridge Heath, West Sussex

Project Number: 24184
Doc Number: 24184-MA-XX-XX-TN-D-0003
Prepared for: Vistry South East

29 October 2025

Rev	Issue Purpose	Author	Reviewed	Approved	Date
P01	For Information	HJ	SS	HJ	22/10/25
P02	For Information	HJ	SS	HJ	23/10/25
P03	For Information	HJ	SS	HJ	23/10/25
P04	For Information	HJ	SS	HJ	29/10/25

1. Introduction

- 1.1.1 Markides Associates were instructed by Vistry South East to prepare a Flood Risk Assessment (FRA), including a surface water and foul water Drainage Strategy (DS), to support a planning application located on land at Wickhurst Green, Broadbridge Heath, Horsham, West Sussex, within the administrative boundary of Horsham District Council (HDC), who act as the Local Planning Authority (LPA). The Lead Local Flood Authority (LLFA) for the site is West Sussex County Council (WSCC).
- 1.1.2 The development proposal includes the construction of 92 residential dwellings, with 36% allocated for affordable housing, as well as associated access and parking, and open space. Access to the site will be provided via Sargent Way, with additional pedestrian access from Broadbridge Way and Wickhurst Lane.
- 1.1.3 The application was submitted in June 2025 and backdated to the 29th of May 2025 (reference number: DC/25/0894). As response was received from the LLFA in a letter dated 2nd July 2025, objecting to the application and a response was prepared and issued in July 2025 (reference number: 24189-MA-XX-XX-TN-D-0002).
- 1.1.4 Subsequently, a further response from the LLFA was received in a letter dated 31st July 2025, the LLFA stated that they maintained their objection, and raised the following:

We disagree with section 2.3 of the Technical Note Surface Water Drainage: Response to LLFA Comments. We believe there are opportunities to increase the use of interception in the drainage strategy. As stated in the Technical Note, the application currently does not follow

the National Standards for SuDS as the SuDS Approach is not being followed. SuDS can be designed to fit within constrained sites and have been at other sites with similar densities and geology within the county as well as country.

As raised in pre-application advice as well as our previous comments, we'd encourage the use of source control SuDS instead of traditional piped, underground systems.

- 1.1.5 Markides Associates have been appointed by Vistry South East to prepare a response to the LLFA comments. The aim of this response is to provide enough information to the LLFA to allow them to lift their objection to the planning application.

2. Response to LLFA Comments

2.1 Design Approach

- 2.1.1 The proposed surface water drainage strategy has been developed in accordance with national and local policy and guidance, including the National Standards for SuDS. The design has also been coordinated with other engineering disciplines to ensure compatibility with wider site design requirements and constraints.

2.2 Development and Site Constraints

- 2.2.1 There are a number of development-related and site-specific constraints that have influenced the surface water drainage design.
- 2.2.2 From a development perspective, the scheme is subject to requirements relating to housing density and the provision of street trees. These design parameters significantly reduce the available space within the development for above ground SuDS features. In addition, certain SuDS components, such as green roofs and rainwater harvesting systems, have not been proposed due to the uncertainty regarding the future tenure and management arrangements for the development. There is a concern that the long-term maintenance of such components could not be guaranteed following occupation.
- 2.2.3 Furthermore, a substantial proportion of the development's road network is proposed for adoption. The West Sussex Guidance Note for Developers – Adoptable Highway Drainage and SuDS, limits the range of SuDS components acceptable for adoption, further constraining the design options available (refer to Figure 2.1 below).

Figure 2.1 West Sussex Guidance Note for Developers Adoptable Highway Drainage and SuDS:

The following table establishes the permitted drainage components that are suitable for adoption.

Component	Commuted Sum Payable?	S278/38 Standard Detail Reference
Precast concrete gully	NO	S278/38/11
225mm pipe	NO	S278/38/33
Catchpit	NO	S278/38/13
Combined Kerb Drainage systems	NO	S278/38/02
Precast concrete Ring Soakaway	YES	S278/38/12
Lateral Connections	NO	S278/38/36
Hydro-brakes	YES	S27/38/14
Trench Soakaway	YES	S278/38/28
Cellular Storage (Tanks and/or Soakaways)	YES	S278/38/34-35
Filter Strips	YES	-
Swales/Ditches	YES	S278/382/25 - 26 - 27
Filter Drains	YES	S278/38/29
Permeable Paving	YES	S278/38/30-31
Underground Storage Oversized Pipes and/or In-situ Storage Tanks	YES	-
Petrol Interceptors	YES	-
Concrete Bagwork Headwall	YES	S278/38/23
Brick Headwall	NO	S278/S38/32
Dry & Wet Ponds	YES	-

Source: West Sussex Guidance Note for Developers

2.2.4 In terms of site-specific constraints, the underlying geology and the potential for localised ground contamination mean that infiltration is not a feasible discharge option. As such, surface water is required to be managed through a positive, controlled drainage network.

2.2.5 Proposed SuDS Components

2.2.6 Taking into account the above constraints, the surface water drainage design has been reconsidered and further developed to maximise the inclusion of SuDS features wherever practicable. The proposed strategy incorporates the following SuDS components:

- Permeable paving;
- Geocellular (below ground) attenuation / sub-base attenuation;
- Attenuation basin;
- Filter drains; and
- Proprietary Treatment Chamber.

2.2.7 This approach provides both water quality treatment and attenuation benefits, ensuring that surface water runoff from the development is appropriately managed and discharged in a controlled manner.

2.2.8 Refer to the updated drainage strategy attached in Appendix A.

2.3 Compliance with National Standards for SuDS

2.3.1 Although the design aims to comply fully with the National Standards for SuDS, it is recognised that certain constraints have prevented full compliance with all standards. The Standards acknowledge that there may be specific site or development conditions under which it is not possible to achieve full compliance. In such cases, the opportunity to meet the standard should be maximised, and justification provided for any departure, to be agreed in consultation with the approving body.

2.3.2 Table 2 below summarises how the proposed drainage strategy complies with the National Standards for SuDS.

Table 2.1 Compliance with National Standards for SuDS

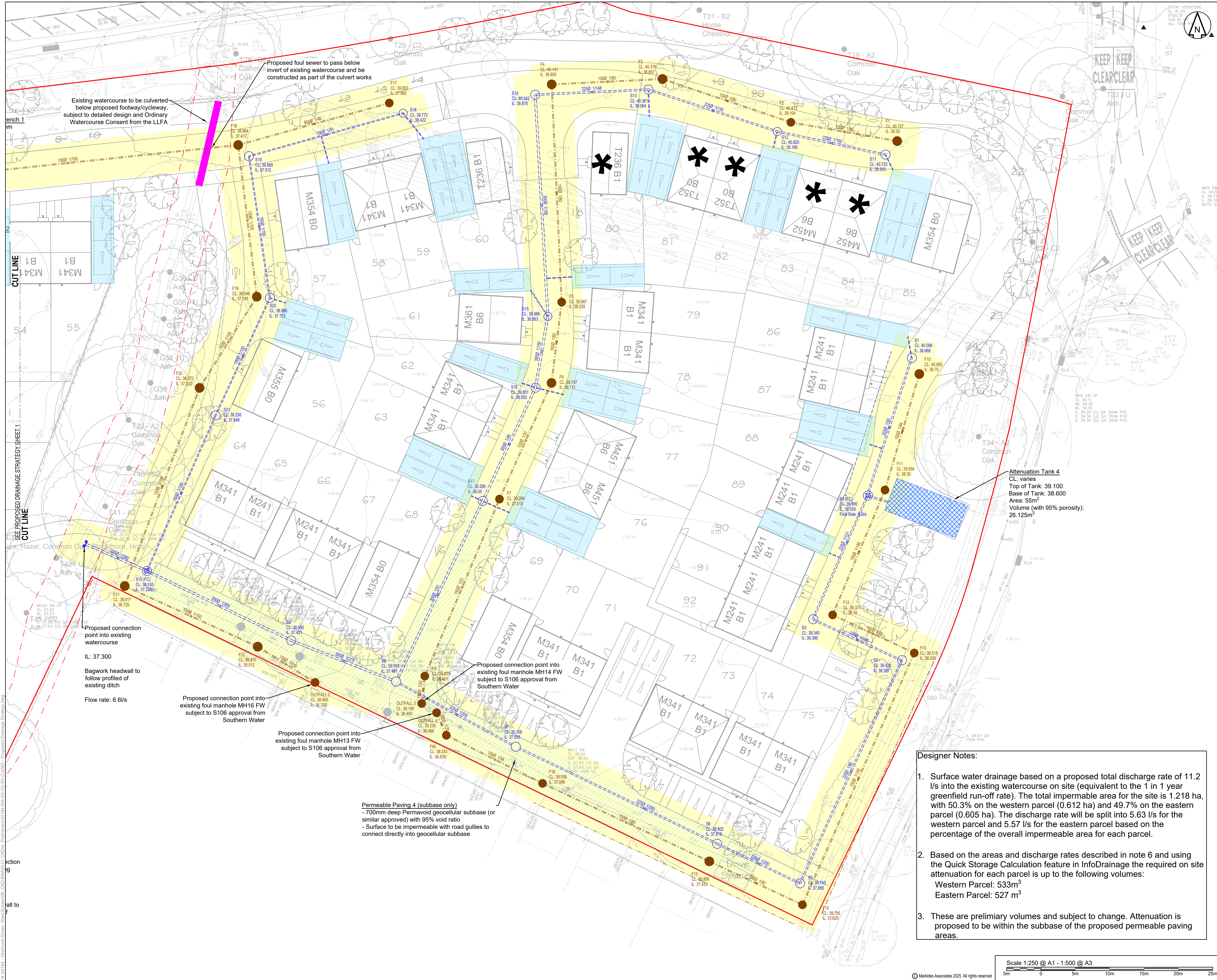
Standard	Standard Description	Compliance Summary	Status
1	Run-off destinations	Discharge hierarchy followed	Met
2	Management of everyday rainfall (interception)	Maximised as far as possible within site constraints	Minor Shortfall
3	Management of extreme rainfall and flooding	Surface water runoff for the 1% AEP event is controlled to greenfield rates; flooding contained within the system for all events up to and including the 1% AEP + climate change allowance	Met
4	Water quality	Pollution mitigation achieved through SuDS components and network design	Met
5	Amenity	Maximised through inclusion of the attenuation basin, which provides amenity value	Met
6	Biodiversity	Maximised through inclusion of the attenuation basin, which contributes to biodiversity enhancement	Met
7	Design for construction, operation, and maintenance	Achieved through design coordination; Maintenance and Management Plan provided	Met

3. Summary

- 3.1.1 The proposed drainage strategy meets six of the seven National Standards for SuDS. Standard 2, relating to the management of everyday rainfall (interception), cannot be fully achieved due to the site and development constraints outlined above. Nevertheless, opportunities to provide interception and source control have been maximised within the available design envelope.
- 3.1.2 It is therefore requested that the LPA, in consultation with the LLFA, agree to a justified departure from Standard 2 on the basis that the proposed strategy:
- Maximises feasible SuDS opportunities;
 - Provides effective control of runoff rates and volumes;
 - Delivers appropriate treatment for water quality; and
 - Ensures that the development will be safe for its lifetime without increasing flood risk elsewhere.

APPENDIX A – PROPOSED DRAINAGE STRATEGY

APPENDIX A – PROPOSED DRAINAGE STRATEGY



- DO NOT SCALE OFF THIS DRAWING
- Notes:
- This drawing is not to be used for construction; it is preliminary and intended for informational purposes only. It is subject to change during the design process.
 - All dimensions in metres unless otherwise stated.
 - Proposed works are based on the topographic survey provided by MK Surveys, (ref: 34921.dwg) dated October 2024.
 - This drawing is based upon drawing number 24.1945.1000P Wickhurst Green - Proposed Site Layout, supplied by FINC, Markides Associates shall not be liable for any inaccuracies or deficiencies.
 - No deviation from the details shown on this drawing is permitted without prior approval from the Engineer.

- Key:
- Proposed Adoptable Surface Water Drainage
 - Proposed Adoptable Surface Water Chamber
 - Proposed Adoptable Surface Water Flow Control
 - Proposed Adoptable Foul Water Drainage
 - Proposed Adoptable Foul Water Chamber
 - Proposed Private Surface Water Drainage
 - Proposed Filter Strip
 - Proposed Permeable Paving
 - Proposed Permeable Subbase
 - Proposed Attenuation Tank
 - 6m Adopted Sewer Easement
 - 3m Watercourse Easement
 - Culverted Watercourse
 - Proposed Attenuation Basin
 - Proposed Bagwork Headwall

Revision History					
P02	UPDATED DRAINAGE STRATEGY	OT	SS	HJ	22.10.25
P01	DRAFT FOR COMMENT	OT	SS	HJ	31.03.25
Rev	Comment	By	Chkd	Appr	Date
Current Revision					
P02	UPDATED DRAINAGE STRATEGY	OT	SS	HJ	22.10.25
Rev	Comment	By	Chkd	Appr	Date

PRELIMINARY

VISTRY

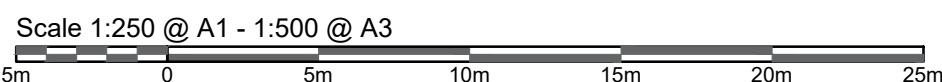
MARKIDES ASSOCIATES
TRANSPORT PLANNING AND ENGINEERING

Project
**WICKHURST GREEN
BROADBRIDGE HEATH**

Drawing Title
**PROPOSED DRAINAGE STRATEGY
SHEET 2
EASTERN PARCEL**

Markides Associates reference: 24184 1:250@A1
24184-MA-XX-XX-SK-C-0501 - P02

- Designer Notes:
- Surface water drainage based on a proposed total discharge rate of 11.2 l/s into the existing watercourse on site (equivalent to the 1 in 1 year greenfield run-off rate). The total impermeable area for the site is 1.218 ha, with 50.3% on the western parcel (0.612 ha) and 49.7% on the eastern parcel (0.605 ha). The discharge rate will be split into 5.63 l/s for the western parcel and 5.57 l/s for the eastern parcel based on the percentage of the overall impermeable area for each parcel.
 - Based on the areas and discharge rates described in note 6 and using the Quick Storage Calculation feature in InfoDrainage the required on site attenuation for each parcel is up to the following volumes:
Western Parcel: 533m³
Eastern Parcel: 527 m³
 - These are preliminary volumes and subject to change. Attenuation is proposed to be within the subbase of the proposed permeable paving areas.



Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Storm Phase: West	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



Pond

Type : Pond

Dimensions

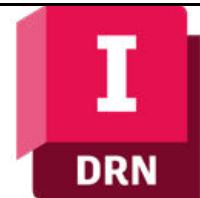
Exceedance Level (m)	39.000
Depth (m)	0.650
Base Level (m)	38.350
Freeboard (mm)	489
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.00
Total Volume (m³)	5.668

Depth (m)	Area (m²)	Volume (m³)
0.000	28.66	0.000
0.650	99.24	39.267

Advanced

Perimeter	Circular
Length (m)	13.860
Friction Scheme	Manning's n
n	0.001

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Permeable Paving 1

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.421
Depth (m)	0.575
Base Level (m)	39.846
Paving Layer Depth (mm)	150
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	31.935
Long. Slope (1:X)	200.00
Width (m)	13.779
Total Volume (m³)	56.106

Advanced

Conductivity (m/hr)	50.0
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Permeable Paving 2

Type : Porous Paving

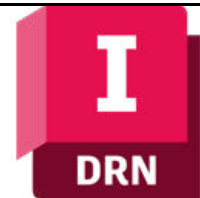
Dimensions

Exceedance Level (m)	40.457
Depth (m)	0.575
Base Level (m)	39.882
Paving Layer Depth (mm)	150
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	22.595
Long. Slope (1:X)	200.00
Width (m)	10.335
Total Volume (m³)	29.773

Advanced

Conductivity (m/hr)	50.0
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Permeable Paving 3

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.252
Depth (m)	0.575
Base Level (m)	39.677
Paving Layer Depth (mm)	150
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	19.305
Long. Slope (1:X)	200.00
Width (m)	9.126
Total Volume (m³)	22.463

Advanced

Conductivity (m/hr)	50.0
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Porous Paving (14)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.079
Depth (m)	0.450
Base Level (m)	38.629
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	10.550
Long. Slope (1:X)	200.00
Width (m)	3.130
Total Volume (m³)	2.535

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (15)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.344
Depth (m)	0.450
Base Level (m)	38.894
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	11.688
Long. Slope (1:X)	200.00
Width (m)	5.146
Total Volume (m³)	4.575

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (16)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.396
Depth (m)	0.450
Base Level (m)	38.946
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.701
Long. Slope (1:X)	200.00
Width (m)	5.251
Total Volume (m³)	5.072

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ				



Porous Paving (17)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.100
Depth (m)	0.450
Base Level (m)	38.650
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.033
Long. Slope (1:X)	200.00
Width (m)	3.190
Total Volume (m³)	3.189

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (19)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.277
Depth (m)	0.450
Base Level (m)	38.827
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	14.600
Long. Slope (1:X)	200.00
Width (m)	5.467
Total Volume (m³)	6.066

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (20)

Type : Porous Paving

Dimensions

Exceedance Level (m)	38.930
Depth (m)	1.350
Base Level (m)	37.580
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.812
Long. Slope (1:X)	200.00
Width (m)	5.295
Total Volume (m³)	23.477

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (21)

Type : Porous Paving

Dimensions

Exceedance Level (m)	38.491
Depth (m)	0.450
Base Level (m)	38.041
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.892
Long. Slope (1:X)	200.00
Width (m)	5.556
Total Volume (m³)	5.443

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025		
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Porous Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	38.100
Depth (m)	0.450
Base Level (m)	37.650
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.180
Long. Slope (1:X)	200.00
Width (m)	3.300
Total Volume (m³)	3.082

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025		
	Designed by: OT	Checked by: SS	Approved By: HJ
Report Details: Type: Stormwater Controls Storm Phase: West	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Infiltration Trench (3)

Type : Infiltration Trench

Dimensions

Exceedance Level (m)	40.031
Depth (m)	0.540
Base Level (m)	39.491
Freeboard (mm)	15
Porosity (%)	30
Length (m)	15.920
Long. Slope (1:X)	40.00
Width (m)	1.489
Total Volume (m³)	3.929

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	50.0
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025 Designed by: OT	Checked by: SS	Approved By: HJ	
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Infiltration Trench (4)

Type : Infiltration Trench

Dimensions

Exceedance Level (m)	39.943
Depth (m)	1.200
Base Level (m)	38.743
Freeboard (mm)	15
Porosity (%)	30
Length (m)	6.855
Long. Slope (1:X)	200.00
Width (m)	1.500
Total Volume (m³)	3.740

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	50.0
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Infiltration Trench (2)

Type : Infiltration Trench

Dimensions

Exceedance Level (m)	40.000
Depth (m)	1.775
Base Level (m)	38.225
Freeboard (mm)	0
Porosity (%)	30
Length (m)	18.502
Long. Slope (1:X)	100.00
Width (m)	1.297
Total Volume (m³)	13.008

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184	Date: 22/10/2025		
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Infiltration Trench (1)

Type : Infiltration Trench

Dimensions

Exceedance Level (m)	40.400
Depth (m)	0.800
Base Level (m)	39.600
Freeboard (mm)	0
Porosity (%)	30
Length (m)	26.551
Long. Slope (1:X)	500.00
Width (m)	1.287
Total Volume (m³)	8.527

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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Report Details: Type: Stormwater Controls Storm Phase: West	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



Attenuation Tank 2

Type : Cellular Storage

Dimensions

Exceedance Level (m)	38.425
Depth (m)	1.000
Base Level (m)	37.425
Number of Crates Long	1
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	9.5
Crate Width (m)	13
Crate Height (m)	1
Total Volume (m³)	117.325



Attenuation Tank 3

Type : Cellular Storage

Dimensions

Exceedance Level (m)	38.250
Depth (m)	1.000
Base Level (m)	37.250
Number of Crates Long	1
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	9.5
Crate Width (m)	12
Crate Height (m)	1
Total Volume (m³)	108.300



Attenuation Tank 1

Type : Cellular Storage

Dimensions

Exceedance Level (m)	39.100
Depth (m)	1.000
Base Level (m)	38.100
Number of Crates Long	1
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	14
Crate Width (m)	11
Crate Height (m)	1
Total Volume (m³)	146.300

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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Report Details: Type: Network Design Criteria Storm Phase: West	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Manhole Options

Apply Offset	☐
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



Porous Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	38.737
Depth (m)	0.450
Base Level (m)	38.287
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	11.982
Long. Slope (1:X)	200.00
Width (m)	5.508
Total Volume (m³)	5.016

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (1)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.062
Depth (m)	0.450
Base Level (m)	38.612
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.306
Long. Slope (1:X)	200.00
Width (m)	3.631
Total Volume (m³)	3.419

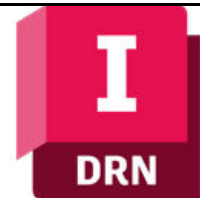
Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025		
	Designed by: OT	Checked by: SS	Approved By: HJ
Report Details: Type: Stormwater Controls Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Porous Paving (2)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.709
Depth (m)	0.450
Base Level (m)	39.259
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.617
Long. Slope (1:X)	200.00
Width (m)	5.467
Total Volume (m³)	5.658

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (3)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.660
Depth (m)	0.450
Base Level (m)	39.210
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.131
Long. Slope (1:X)	200.00
Width (m)	3.077
Total Volume (m³)	2.866

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



Porous Paving (4)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.525
Depth (m)	0.450
Base Level (m)	39.075
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	11.677
Long. Slope (1:X)	200.00
Width (m)	3.090
Total Volume (m³)	2.770

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (5)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.651
Depth (m)	0.450
Base Level (m)	39.201
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.494
Long. Slope (1:X)	200.00
Width (m)	5.137
Total Volume (m³)	4.882

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Stormwater Controls Storm Phase: East	Designed by: OT		Checked by: SS	Approved By: HJ
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ				



Porous Paving (6)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.311
Depth (m)	0.450
Base Level (m)	38.861
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.850
Long. Slope (1:X)	200.00
Width (m)	5.412
Total Volume (m³)	5.698

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (7)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.107
Depth (m)	0.450
Base Level (m)	38.657
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.691
Long. Slope (1:X)	200.00
Width (m)	5.287
Total Volume (m³)	5.102

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025	
Report Details: Type: Stormwater Controls Storm Phase: East	Designed by: OT Checked by: SS Approved By: HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Porous Paving (8)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.539
Depth (m)	0.450
Base Level (m)	39.089
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	11.414
Long. Slope (1:X)	200.00
Width (m)	2.896
Total Volume (m³)	2.542

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (9)

Type : Porous Paving

Dimensions

Exceedance Level (m)	39.887
Depth (m)	0.450
Base Level (m)	39.437
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	12.189
Long. Slope (1:X)	200.00
Width (m)	5.130
Total Volume (m³)	4.756

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025	
Report Details: Type: Stormwater Controls Storm Phase: East	Designed by: OT Checked by: SS Approved By: HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Porous Paving (10)

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.074
Depth (m)	0.450
Base Level (m)	39.624
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	15.531
Long. Slope (1:X)	200.00
Width (m)	3.041
Total Volume (m³)	3.628

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (11)

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.307
Depth (m)	0.450
Base Level (m)	39.857
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.126
Long. Slope (1:X)	200.00
Width (m)	5.573
Total Volume (m³)	5.559

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025	
Report Details: Type: Stormwater Controls Storm Phase: East	Designed by: OT Checked by: SS Approved By: HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Porous Paving (12)

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.508
Depth (m)	0.450
Base Level (m)	40.058
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.159
Long. Slope (1:X)	200.00
Width (m)	5.344
Total Volume (m³)	5.346

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Porous Paving (13)

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.370
Depth (m)	0.450
Base Level (m)	39.920
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	13.760
Long. Slope (1:X)	200.00
Width (m)	5.415
Total Volume (m³)	5.664

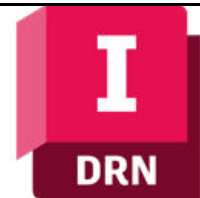
Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025		
	Designed by: OT	Checked by: SS	Approved By: HJ
Report Details: Type: Stormwater Controls Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		



Permeable Paving 4

Type : Porous Paving

Dimensions

Exceedance Level (m)	38.200
Depth (m)	0.851
Base Level (m)	37.349
Paving Layer Depth (mm)	150
Membrane Percolation (m/hr)	3.0
Porosity (%)	95
Length (m)	97.795
Long. Slope (1:X)	200.00
Width (m)	7.870
Total Volume (m³)	512.764

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	225
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	50.0
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Porous Paving (14)

Type : Porous Paving

Dimensions

Exceedance Level (m)	40.033
Depth (m)	0.450
Base Level (m)	39.583
Paving Layer Depth (mm)	200
Membrane Percolation (m/hr)	3.0
Porosity (%)	30
Length (m)	10.516
Long. Slope (1:X)	200.00
Width (m)	3.300
Total Volume (m³)	2.660

Under Drain

Height Above Base (m)	0.010
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	0.001
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



Attenuation Tank 4

Type : Cellular Storage

Dimensions	
Exceedance Level (m)	39.100
Depth (m)	0.500
Base Level (m)	38.600
Number of Crates Long	1
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	11
Crate Width (m)	5
Crate Height (m)	0.5
Total Volume (m³)	26.125

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Network Design Criteria Storm Phase: East	Designed by:	Checked by:	Approved By:	
	OT	SS	HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ				

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Manhole Options

Apply Offset	☐
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Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025	
Report Title: Rainfall Analysis Criteria	Designed by: OT Checked by: SS Approved By: HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	10
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☒
Rainfall Depth (mm)	1.0
Run Time (mins)	1440

Rainfall

FEH	Type: FEH
Site Location	GB 514884 130983 TQ 14884 30983
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	40.000
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	1440
480	1920
600	2400
720	1440
960	1920
1440	4320

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Junctions Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



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

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S30 (FC)	FEH: 2 years: +0 %: 240 mins: Summer	39.92 6	37.10 0	37.445	0.345	5.2	0.390	0.000	3.8	74.379	Surcharged
S29	FEH: 2 years: +0 %: 240 mins: Summer	39.89 8	37.11 5	37.445	0.330	3.8	0.373	0.000	2.4	32.285	Surcharged
S26	FEH: 2 years: +0 %: 15 mins: Summer	40.37 0	38.54 4	38.566	0.022	3.5	0.025	0.000	3.5	1.661	OK
S25	FEH: 2 years: +0 %: 15 mins: Summer	39.99 0	37.44 1	37.484	0.043	11.0	0.049	0.000	10.7	6.451	OK
S24 (FC)	FEH: 2 years: +0 %: 240 mins: Winter	40.34 4	37.55 2	38.275	0.723	1.8	0.818	0.000	1.4	35.271	Surcharged
S23	FEH: 2 years: +0 %: 240 mins: Winter	40.09 7	37.61 8	38.275	0.657	3.2	0.744	0.000	1.4	35.765	Surcharged
S31	FEH: 2 years: +0 %: 480 mins: Winter	38.54 4	36.93 5	36.971	0.036	3.8	0.041	0.000	3.8	109.182	OK
S22	FEH: 2 years: +0 %: 30 mins: Summer	40.32 1	38.67 1	38.689	0.018	2.9	0.021	0.000	2.9	2.430	OK
S28	FEH: 2 years: +0 %: 240 mins: Summer	40.19 1	37.17 6	37.445	0.269	6.0	0.304	0.000	2.3	36.195	OK
S27	FEH: 2 years: +0 %: 1440 mins: Winter	40.43 3	37.33 6	37.686	0.350	0.5	0.395	0.000	0.0	16.469	OK
Outfall	FEH: 2 years: +0 %: 480 mins: Winter	36.86 0	36.36 0	36.395	0.035	3.8	0.000	0.000	3.8	109.182	OK

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Junctions Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S30 (FC)	FEH: 30 years: +40 %: 240 mins: Winter	39.92 6	37.10 0	37.968	0.868	7.8	0.982	0.000	3.8	106.103	Surcharged
S29	FEH: 30 years: +40 %: 240 mins: Winter	39.89 8	37.11 5	37.968	0.853	9.5	0.965	0.000	2.3	65.151	Surcharged
S26	FEH: 30 years: +40 %: 15 mins: Summer	40.37 0	38.54 4	38.585	0.042	11.7	0.047	0.000	11.6	6.093	OK
S25	FEH: 30 years: +40 %: 240 mins: Winter	39.99 0	37.44 1	37.968	0.527	7.9	0.596	0.000	7.4	78.081	Surcharged
S24 (FC)	FEH: 30 years: +40 %: 360 mins: Winter	40.34 4	37.55 2	38.776	1.224	2.6	1.384	0.000	1.6	131.432	Surcharged
S23	FEH: 30 years: +40 %: 360 mins: Winter	40.09 7	37.61 8	38.776	1.158	5.3	1.309	0.000	1.6	139.745	Surcharged
S31	FEH: 30 years: +40 %: 960 mins: Winter	38.54 4	36.93 5	36.971	0.036	3.8	0.041	0.000	3.8	306.971	OK
S22	FEH: 30 years: +40 %: 360 mins: Winter	40.32 1	38.67 1	38.776	0.105	1.9	0.119	0.000	1.9	16.379	OK
S28	FEH: 30 years: +40 %: 240 mins: Winter	40.19 1	37.17 6	37.968	0.792	13.5	0.896	0.000	1.8	82.758	Surcharged
S27	FEH: 30 years: +40 %: 1440 mins: Winter	40.43 3	37.33 6	38.114	0.778	1.2	0.880	0.000	0.0	41.055	OK
Outfall	FEH: 30 years: +40 %: 960 mins: Winter	36.86 0	36.36 0	36.395	0.035	3.8	0.000	0.000	3.8	306.971	OK

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Junctions Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S30 (FC)	FEH: 100 years: +45 %: 360 mins: Winter	39.92 6	37.10 0	38.196	1.096	7.9	1.240	0.000	3.9	292.357	Surcharged
S29	FEH: 100 years: +45 %: 360 mins: Winter	39.89 8	37.11 5	38.196	1.081	8.6	1.223	0.000	2.6	147.931	Surcharged
S26	FEH: 100 years: +45 %: 15 mins: Summer	40.37 0	38.54 4	38.593	0.049	15.6	0.055	0.000	15.4	8.148	OK
S25	FEH: 100 years: +45 %: 360 mins: Winter	39.99 0	37.44 1	38.197	0.756	7.7	0.855	0.000	7.5	188.091	Surcharged
S24 (FC)	FEH: 100 years: +45 %: 600 mins: Winter	40.34 4	37.55 2	39.017	1.465	2.3	1.657	0.000	1.7	217.370	Surcharged
S23	FEH: 100 years: +45 %: 600 mins: Winter	40.09 7	37.61 8	39.018	1.400	4.2	1.583	0.000	1.7	218.571	Surcharged
S31	FEH: 100 years: +45 %: 360 mins: Winter	38.54 4	36.93 5	36.971	0.036	3.9	0.041	0.000	3.9	268.935	OK
S22	FEH: 100 years: +45 %: 600 mins: Winter	40.32 1	38.67 1	39.018	0.347	1.6	0.392	0.000	1.6	23.699	Surcharged
S28	FEH: 100 years: +45 %: 360 mins: Winter	40.19 1	37.17 6	38.196	1.020	12.0	1.154	0.000	1.9	167.022	Surcharged
S27	FEH: 100 years: +45 %: 1440 mins: Winter	40.43 3	37.33 6	38.342	1.006	1.6	1.138	0.000	0.0	54.124	OK
Outfall	FEH: 100 years: +45 %: 360 mins: Winter	36.86 0	36.36 0	36.395	0.035	3.9	0.000	0.000	3.9	268.935	OK

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



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

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Infiltration Trench (3)	FEH: 2 years: +0 %: 15 mins: Summer	39.925	39.571	0.036	0.080	4.5	0.387	0.000	0.000	3.9	1.862		90.160
Infiltration Trench (4)	FEH: 2 years: +0 %: 15 mins: Summer	38.814	38.768	0.037	0.026	1.4	0.097	0.000	0.000	1.2	0.566		97.396
Infiltration Trench (2)	FEH: 2 years: +0 %: 15 mins: Summer	38.452	38.294	0.042	0.069	4.1	0.393	0.000	0.000	3.4	1.876		96.977
Attenuation Tank 2	FEH: 2 years: +0 %: 1440 mins: Winter	37.686	37.686	0.261	0.261	0.8	30.575	0.000	0.000	0.0	0.075		73.939
Attenuation Tank 3	FEH: 2 years: +0 %: 240 mins: Summer	37.445	37.445	0.195	0.195	7.4	21.129	0.000	0.000	2.2	19.300		80.491
Attenuation Tank 1	FEH: 2 years: +0 %: 240 mins: Winter	38.275	38.275	0.175	0.175	6.6	25.675	0.000	0.000	1.8	24.191		82.450
Permeable Paving 1	FEH: 2 years: +0 %: 1440 mins: Winter	40.089	39.924	0.083	0.078	0.4	12.450	0.000	0.000	0.1	7.647		77.809
Permeable Paving 2	FEH: 2 years: +0 %: 1440 mins: Winter	40.074	39.983	0.079	0.102	0.2	6.715	0.000	0.000	0.0	3.350		77.444
Permeable Paving 3	FEH: 2 years: +0 %: 1440 mins: Winter	39.853	39.755	0.080	0.078	0.2	4.402	0.000	0.000	0.1	3.347		80.402
Infiltration Trench (1)	FEH: 2 years: +0 %: 15 mins: Summer	39.708	39.668	0.054	0.068	4.6	0.672	0.000	0.000	2.9	1.792		92.114
Porous Paving (14)	FEH: 2 years: +0 %: 60 mins: Winter	38.703	38.644	0.021	0.015	0.3	0.206	0.000	0.000	0.2	0.381		91.890
Porous Paving (15)	FEH: 2 years: +0 %: 120 mins: Summer	38.976	38.924	0.024	0.030	0.5	0.497	0.000	0.000	0.4	0.800		89.145
Porous Paving (16)	FEH: 2 years: +0 %: 120 mins: Summer	39.034	38.977	0.024	0.030	0.5	0.564	0.000	0.000	0.4	0.878		88.888
Porous Paving (17)	FEH: 2 years: +0 %: 60 mins: Winter	38.737	38.669	0.022	0.019	0.4	0.285	0.000	0.000	0.3	0.460		91.059
Porous Paving (19)	FEH: 2 years: +0 %: 120 mins: Summer	38.926	38.860	0.026	0.033	0.6	0.712	0.000	0.000	0.4	1.055		88.269
Porous Paving (20)	FEH: 2 years: +0 %: 120 mins: Summer	37.668	37.611	0.024	0.031	0.5	0.581	0.000	0.000	0.4	0.890		97.527

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Stormwater Controls Summary Storm Phase: West	Designed by: OT	Checked by: SS		Approved By: HJ
	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

Porous Paving (21)	FEH: 2 years: +0 %: 120 mins: Summer	38.130	38.072	0.025	0.031	0.6	0.618	0.000	0.000	0.4	0.946		88.645
Pond	FEH: 2 years: +0 %: 30 mins: Winter	38.366	38.366	0.016	0.016	1.2	0.468	0.000	0.000	0.9	0.991		91.748
Porous Paving	FEH: 2 years: +0 %: 60 mins: Winter	37.733	37.667	0.022	0.017	0.4	0.269	0.000	0.000	0.3	0.458		91.262

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



**FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max.
Avg. Depth**

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Infiltration Trench (3)	FEH: 30 years: +40 %: 15 mins: Summer	39.946	39.654	0.058	0.164	14.3	0.712	0.000	0.000	13.2	6.092		81.876
Infiltration Trench (4)	FEH: 30 years: +40 %: 15 mins: Summer	38.835	38.800	0.058	0.058	4.3	0.178	0.000	0.000	4.0	1.842		95.238
Infiltration Trench (2)	FEH: 30 years: +40 %: 360 mins: Winter	38.776	38.776	0.366	0.551	2.6	3.298	0.000	0.000	2.1	22.267		74.650
Attenuation Tank 2	FEH: 30 years: +40 %: 1440 mins: Winter	38.114	38.114	0.689	0.689	2.2	80.828	0.000	0.000	0.0	0.006		31.108
Attenuation Tank 3	FEH: 30 years: +40 %: 240 mins: Winter	37.968	37.968	0.718	0.718	17.1	77.743	0.000	0.000	1.5	19.568		28.215
Attenuation Tank 1	FEH: 30 years: +40 %: 360 mins: Winter	38.776	38.776	0.676	0.676	14.1	98.906	0.000	0.000	1.6	97.552	345	32.395
Permeable Paving 1	FEH: 30 years: +40 %: 1440 mins: Winter	40.219	39.927	0.213	0.080	1.1	25.030	0.000	0.000	0.3	25.025		55.387
Permeable Paving 2	FEH: 30 years: +40 %: 1440 mins: Winter	40.193	39.986	0.198	0.104	0.6	12.328	0.000	0.000	0.2	13.600		58.593
Permeable Paving 3	FEH: 30 years: +40 %: 1440 mins: Summer	39.965	39.758	0.192	0.081	0.6	8.118	0.000	0.000	0.3	11.264		63.861
Infiltration Trench (1)	FEH: 30 years: +40 %: 15 mins: Summer	39.785	39.745	0.132	0.145	14.5	1.478	0.000	0.000	10.5	6.070		82.668
Porous Paving (14)	FEH: 30 years: +40 %: 480 mins: Winter	38.729	38.728	0.048	0.100	0.2	0.729	0.000	0.000	0.2	2.285		71.242
Porous Paving (15)	FEH: 30 years: +40 %: 30 mins: Winter	38.995	38.959	0.042	0.065	2.3	0.978	0.000	0.000	1.8	1.845		78.619
Porous Paving (16)	FEH: 30 years: +40 %: 30 mins: Winter	39.053	39.014	0.044	0.067	2.6	1.121	0.000	0.000	1.8	2.038		77.902
Porous Paving (17)	FEH: 30 years: +40 %: 600 mins: Winter	38.751	38.751	0.036	0.101	0.2	0.856	0.000	0.000	0.2	3.062		73.169

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by:	Checked by:	Approved By:	
	OT	SS	HJ	
Report Details: Type: Stormwater Controls Summary Storm Phase: West	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

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Wickhurst Green: 24184		Date: 22/10/2025			
Wickhurst Green Revision P02		Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

Porous Paving (19)	FEH: 30 years: +40 %: 30 mins: Winter	38.947	38.902	0.046	0.075	3.1	1.419	0.000	0.000	2.1	2.405		76.604
Porous Paving (20)	FEH: 30 years: +40 %: 240 mins: Winter	37.968	37.968	0.324	0.388	1.3	7.247	0.000	0.000	0.7	4.897		69.130
Porous Paving (21)	FEH: 30 years: +40 %: 30 mins: Winter	38.150	38.110	0.045	0.070	2.8	1.234	0.000	0.000	2.0	2.188		77.331
Pond	FEH: 30 years: +40 %: 30 mins: Winter	38.381	38.381	0.031	0.031	3.8	0.939	0.000	0.000	3.6	3.402		83.427
Porous Paving	FEH: 30 years: +40 %: 600 mins: Winter	37.805	37.805	0.094	0.155	0.2	1.505	0.000	0.000	0.2	2.861		51.148

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Stormwater Controls Summary Storm Phase: West	Designed by:	Checked by:	Approved By:	
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		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Infiltration Trench (3)	FEH: 100 years: +45 %: 15 mins: Summer	39.954	39.701	0.065	0.210	18.7	0.868	0.000	0.000	16.6	8.005		77.907
Infiltration Trench (4)	FEH: 100 years: +45 %: 600 mins: Winter	39.017	39.017	0.240	0.274	0.5	0.794	0.000	0.000	0.5	6.967		78.780
Infiltration Trench (2)	FEH: 100 years: +45 %: 600 mins: Winter	39.017	39.018	0.607	0.793	2.2	5.039	0.000	0.000	1.6	32.489		61.265
Attenuation Tank 2	FEH: 100 years: +45 %: 1440 mins: Winter	38.342	38.342	0.917	0.917	2.9	107.569	0.000	0.000	0.0	0.118		8.316
Attenuation Tank 3	FEH: 100 years: +45 %: 360 mins: Winter	38.197	38.197	0.947	0.947	14.6	102.509	0.000	0.000	1.6	74.594	650	5.347
Attenuation Tank 1	FEH: 100 years: +45 %: 600 mins: Winter	39.018	39.018	0.918	0.918	11.8	134.268	0.000	0.000	1.7	156.919	820	8.224
Permeable Paving 1	FEH: 100 years: +45 %: 1440 mins: Winter	40.285	39.928	0.279	0.081	1.4	31.288	0.000	0.000	0.4	34.938	515	44.234
Permeable Paving 2	FEH: 100 years: +45 %: 1440 mins: Summer	40.252	39.987	0.257	0.106	1.1	15.093	0.000	0.000	0.4	19.226	120	49.308
Permeable Paving 3	FEH: 100 years: +45 %: 1440 mins: Summer	40.021	39.758	0.247	0.082	0.9	9.934	0.000	0.000	0.4	15.614		55.777
Infiltration Trench (1)	FEH: 100 years: +45 %: 15 mins: Summer	39.831	39.764	0.178	0.164	19.0	1.854	0.000	0.000	13.2	8.003		78.260
Porous Paving (14)	FEH: 100 years: +45 %: 960 mins: Winter	38.817	38.816	0.135	0.187	0.2	1.596	0.000	0.000	0.2	3.241	405	37.013
Porous Paving (15)	FEH: 100 years: +45 %: 600 mins: Winter	39.017	39.018	0.065	0.123	0.4	1.698	0.000	0.000	0.5	7.092		62.882
Porous Paving (16)	FEH: 100 years: +45 %: 30 mins: Winter	39.059	39.030	0.050	0.083	3.4	1.342	0.000	0.000	2.7	2.789		73.534
Porous Paving (17)	FEH: 100 years: +45 %: 960 mins: Winter	38.841	38.841	0.126	0.191	0.2	1.979	0.000	0.000	0.2	4.234	345	37.948

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Stormwater Controls Summary Storm Phase: West	Designed by:	Checked by:	Approved By:	
	OT	SS	HJ	
		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Summary Storm Phase: West		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

Porous Paving (19)	FEH: 100 years: +45 %: 30 mins: Winter	38.954	38.917	0.054	0.089	4.0	1.718	0.000	0.000	2.9	3.292		71.677
Porous Paving (20)	FEH: 100 years: +45 %: 360 mins: Winter	38.196	38.196	0.553	0.617	1.3	11.900	0.000	0.000	0.6	13.571	15	49.312
Porous Paving (21)	FEH: 100 years: +45 %: 360 mins: Winter	38.197	38.196	0.092	0.156	0.8	2.656	0.000	0.000	0.7	7.015		51.207
Pond	FEH: 100 years: +45 %: 30 mins: Winter	38.387	38.387	0.037	0.037	5.0	1.110	0.000	0.000	4.8	4.510		80.409
Porous Paving	FEH: 100 years: +45 %: 1440 mins: Winter	37.891	37.891	0.180	0.241	0.1	2.540	0.000	0.000	0.2	4.531	245	17.561

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
Report Details: Type: Stormwater Controls Summary Storm Phase: West	Designed by:	Checked by:	Approved By:	
	OT	SS	HJ	
		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Junctions Summary Storm Phase: East		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



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

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S14	FEH: 2 years: +0 %: 15 mins: Winter	40.17 9	38.87 8	38.994	0.116	29.2	0.166	0.000	28.1	14.720	OK
S15	FEH: 2 years: +0 %: 15 mins: Winter	39.89 0	38.66 3	38.784	0.121	32.7	0.137	0.000	31.2	17.008	OK
S16	FEH: 2 years: +0 %: 15 mins: Winter	39.65 1	38.59 3	38.667	0.074	31.2	0.106	0.000	30.6	17.253	OK
S17	FEH: 2 years: +0 %: 15 mins: Winter	39.28 9	37.83 8	37.949	0.111	37.2	0.159	0.000	36.2	20.612	OK
S10 (FC)	FEH: 2 years: +0 %: 15 mins: Winter	38.15 3	37.33 3	37.644	0.311	36.8	0.445	0.000	5.6	27.112	Surcharged
OUTFALL 1	FEH: 2 years: +0 %: 15 mins: Summer	37.99 0	37.30 0	37.364	0.064	6.6	0.000	0.000	6.6	5.628	OK
S1	FEH: 2 years: +0 %: 15 mins: Summer	40.10 1	38.66 8	38.739	0.071	7.2	0.102	0.000	6.8	3.227	OK
S2	FEH: 2 years: +0 %: 15 mins: Summer	39.80 7	38.55 9	38.723	0.164	11.0	0.235	0.000	4.8	5.549	OK
S3	FEH: 2 years: +0 %: 15 mins: Summer	39.34 0	38.39 6	38.473	0.077	11.1	0.110	0.000	10.7	5.906	OK
S4	FEH: 2 years: +0 %: 15 mins: Summer	39.42 5	38.30 1	38.366	0.065	10.7	0.093	0.000	10.1	5.821	OK
S5	FEH: 2 years: +0 %: 15 mins: Winter	38.75 6	37.88 5	37.967	0.082	10.1	0.117	0.000	9.2	6.080	OK
S11	FEH: 2 years: +0 %: 15 mins: Winter	40.76 6	39.30 3	39.377	0.074	9.9	0.105	0.000	9.5	4.718	OK
S12	FEH: 2 years: +0 %: 15 mins: Winter	40.75 9	39.19 6	39.282	0.086	13.6	0.098	0.000	13.0	6.739	OK
S13	FEH: 2 years: +0 %: 15 mins: Winter	40.43 0	39.06 4	39.147	0.083	13.0	0.118	0.000	12.0	6.850	OK
S18	FEH: 2 years: +0 %: 120 mins: Summer	39.77 2	38.42 2	38.436	0.013	0.4	0.015	0.000	0.4	0.966	OK
S19	FEH: 2 years: +0 %: 120 mins: Summer	38.97 0	37.91 2	37.934	0.022	0.7	0.025	0.000	0.7	1.536	OK
S20	FEH: 2 years: +0 %: 120 mins: Summer	38.66 6	37.77 3	37.806	0.033	1.5	0.038	0.000	1.5	3.913	OK
S21	FEH: 2 years: +0 %: 15 mins: Winter	38.23 6	37.64 8	37.689	0.041	3.6	0.047	0.000	3.4	2.094	OK
S8	FEH: 2 years: +0 %: 15 mins: Winter	39.16 2	37.48 1	37.681	0.200	43.6	0.226	0.000	32.6	26.247	OK
S9	FEH: 2 years: +0 %: 15 mins: Winter	38.89 5	37.42 1	37.664	0.243	32.6	0.274	0.000	35.1	25.890	OK
S7	FEH: 2 years: +0 %: 15 mins: Winter	39.10 6	37.65 5	37.713	0.058	8.4	0.065	0.000	7.5	5.848	OK
S6	FEH: 2 years: +0 %: 15 mins: Winter	38.80 2	37.81 8	37.895	0.077	9.2	0.087	0.000	8.4	5.974	OK

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
Report Details: Type: Junctions Summary Storm Phase: East		Designed by: OT	Checked by: SS		Approved By: HJ
		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S14	FEH: 30 years: +40 %: 15 mins: Winter	40.17 9	38.87 8	39.132	0.254	95.1	0.364	0.000	90.4	49.198	OK
S15	FEH: 30 years: +40 %: 15 mins: Winter	39.89 0	38.66 3	38.921	0.258	106.3	0.292	0.000	101.4	57.349	OK
S16	FEH: 30 years: +40 %: 15 mins: Winter	39.65 1	38.59 3	38.737	0.144	102.7	0.206	0.000	105.0	59.264	OK
S17	FEH: 30 years: +40 %: 15 mins: Winter	39.28 9	37.83 8	38.667	0.829	127.0	1.186	0.000	116.3	71.582	Surcharged
S10 (FC)	FEH: 30 years: +40 %: 360 mins: Winter	38.15 3	37.33 3	37.908	0.576	32.9	0.824	0.000	6.6	519.856	Surcharged
OUTFALL 1	FEH: 30 years: +40 %: 600 mins: Summer	37.99 0	37.30 0	37.364	0.064	6.6	0.000	0.000	6.6	348.212	OK
S1	FEH: 30 years: +40 %: 60 mins: Winter	40.10 1	38.66 8	38.879	0.211	12.7	0.302	0.000	11.9	19.612	OK
S2	FEH: 30 years: +40 %: 60 mins: Winter	39.80 7	38.55 9	38.877	0.318	20.5	0.455	0.000	8.9	45.933	Surcharged
S3	FEH: 30 years: +40 %: 15 mins: Winter	39.34 0	38.39 6	38.559	0.163	26.7	0.234	0.000	25.7	19.975	OK
S4	FEH: 30 years: +40 %: 15 mins: Winter	39.42 5	38.30 1	38.545	0.244	25.7	0.348	0.000	22.2	19.705	Surcharged
S5	FEH: 30 years: +40 %: 15 mins: Winter	38.75 6	37.88 5	38.475	0.590	22.2	0.845	0.000	23.6	19.429	Flood Risk
S11	FEH: 30 years: +40 %: 15 mins: Winter	40.76 6	39.30 3	39.452	0.149	32.0	0.213	0.000	31.0	15.794	OK
S12	FEH: 30 years: +40 %: 15 mins: Winter	40.75 9	39.19 6	39.383	0.187	44.6	0.211	0.000	42.4	23.005	OK
S13	FEH: 30 years: +40 %: 15 mins: Winter	40.43 0	39.06 4	39.244	0.180	43.1	0.258	0.000	40.8	24.286	OK
S18	FEH: 30 years: +40 %: 30 mins: Winter	39.77 2	38.42 2	38.452	0.030	2.0	0.034	0.000	2.1	2.239	OK
S19	FEH: 30 years: +40 %: 30 mins: Winter	38.97 0	37.91 2	37.965	0.053	3.3	0.060	0.000	3.8	3.584	OK
S20	FEH: 30 years: +40 %: 30 mins: Winter	38.66 6	37.77 3	37.948	0.175	8.4	0.198	0.000	7.2	8.795	Surcharged
S21	FEH: 30 years: +40 %: 30 mins: Winter	38.23 6	37.64 8	37.914	0.266	11.0	0.301	0.000	10.3	12.609	Surcharged
S8	FEH: 30 years: +40 %: 30 mins: Winter	39.16 2	37.48 1	38.310	0.829	117.0	0.938	0.000	116.1	128.215	Surcharged
S9	FEH: 30 years: +40 %: 30 mins: Winter	38.89 5	37.42 1	38.071	0.650	116.1	0.736	0.000	115.2	126.404	Surcharged
S7	FEH: 30 years: +40 %: 15 mins: Winter	39.10 6	37.65 5	38.329	0.674	26.6	0.762	0.000	29.9	19.520	Surcharged
S6	FEH: 30 years: +40 %: 15 mins: Winter	38.80 2	37.81 8	38.435	0.617	23.6	0.697	0.000	26.6	19.233	Surcharged

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: East	OT	SS	HJ	
Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ				



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S14	FEH: 100 years: +45 %: 15 mins: Winter	40.179	38.878	39.415	0.537	102.5	0.769	0.000	93.9	64.948	Surcharged
S15	FEH: 100 years: +45 %: 15 mins: Winter	39.890	38.663	39.185	0.522	115.2	0.591	0.000	109.2	76.648	Surcharged
S16	FEH: 100 years: +45 %: 15 mins: Winter	39.651	38.593	39.107	0.514	111.5	0.735	0.000	104.8	80.148	Surcharged
S17	FEH: 100 years: +45 %: 15 mins: Winter	39.289	37.838	38.974	1.136	131.7	1.626	0.000	121.0	97.953	Surcharged
S10 (FC)	FEH: 100 years: +45 %: 60 mins: Winter	38.153	37.333	38.013	0.680	127.0	0.974	0.000	6.6	243.457	Surcharged
OUTFALL 1	FEH: 100 years: +45 %: 960 mins: Summer	37.990	37.300	37.364	0.064	6.6	0.000	0.000	6.6	490.313	OK
S1	FEH: 100 years: +45 %: 60 mins: Winter	40.101	38.668	39.050	0.382	16.9	0.547	0.000	16.3	26.167	Surcharged
S2	FEH: 100 years: +45 %: 60 mins: Winter	39.807	38.559	39.049	0.490	27.8	0.702	0.000	9.0	63.130	Surcharged
S3	FEH: 100 years: +45 %: 15 mins: Winter	39.340	38.396	38.779	0.383	32.1	0.547	0.000	26.3	23.535	Surcharged
S4	FEH: 100 years: +45 %: 15 mins: Winter	39.425	38.301	38.765	0.464	26.3	0.664	0.000	18.1	23.181	Surcharged
S5	FEH: 100 years: +45 %: 15 mins: Winter	38.756	37.885	38.725	0.840	18.1	1.202	0.000	26.8	22.860	Flood Risk
S11	FEH: 100 years: +45 %: 15 mins: Winter	40.766	39.303	39.647	0.344	42.1	0.492	0.000	31.9	20.874	Surcharged
S12	FEH: 100 years: +45 %: 15 mins: Winter	40.759	39.196	39.595	0.399	50.0	0.452	0.000	40.1	30.482	Surcharged
S13	FEH: 100 years: +45 %: 15 mins: Winter	40.430	39.064	39.475	0.411	41.4	0.589	0.000	43.0	32.363	Surcharged
S18	FEH: 100 years: +45 %: 15 mins: Winter	39.772	38.422	38.456	0.033	2.9	0.038	0.000	2.9	1.983	OK
S19	FEH: 100 years: +45 %: 30 mins: Winter	38.970	37.912	38.180	0.268	4.9	0.304	0.000	4.9	4.922	Surcharged
S20	FEH: 100 years: +45 %: 30 mins: Winter	38.666	37.773	38.162	0.389	8.9	0.440	0.000	9.3	11.762	Surcharged
S21	FEH: 100 years: +45 %: 60 mins: Winter	38.236	37.648	38.112	0.464	11.8	0.524	0.000	11.3	21.614	Flood Risk
S8	FEH: 100 years: +45 %: 15 mins: Winter	39.162	37.481	38.625	1.144	134.4	1.294	0.000	135.6	117.257	Surcharged

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Junctions Summary Storm Phase: East		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

S9	FEH: 100 years: +45 %: 30 mins: Winter	38.89 5	37.42 1	38.328	0.907	132.6	1.026	0.000	131.6	162.106	Surcharged
S7	FEH: 100 years: +45 %: 15 mins: Winter	39.10 6	37.65 5	38.657	1.002	29.9	1.133	0.000	31.7	23.001	Surcharged
S6	FEH: 100 years: +45 %: 15 mins: Winter	38.80 2	37.81 8	38.706	0.888	26.8	1.004	0.000	29.9	22.711	Flood Risk

Wickhurst Green: 24184	Date: 22/10/2025			
Wickhurst Green Revision P02	Designed by: OT	Checked by: SS	Approved By: HJ	
Report Details: Type: Stormwater Controls Summary Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			



**FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max.
Avg. Depth**

Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
		Designed by: OT	Checked by: SS		Approved By: HJ
Report Details: Type: Stormwater Controls Summary Storm Phase: East		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Attenuation Tank 4	FEH: 2 years: +0 %: 120 mins: Winter	38.678	38.678	0.078	0.078	2.4	4.064	0.000	0.000	1.0	3.905		84.446
Porous Paving	FEH: 2 years: +0 %: 120 mins: Summer	38.371	38.317	0.024	0.030	0.5	0.557	0.000	0.000	0.4	0.876		88.894
Porous Paving (1)	FEH: 2 years: +0 %: 60 mins: Winter	38.696	38.640	0.022	0.028	0.4	0.346	0.000	0.000	0.3	0.459		89.890
Porous Paving (2)	FEH: 2 years: +0 %: 120 mins: Summer	39.353	39.291	0.025	0.031	0.6	0.644	0.000	0.000	0.4	0.981		88.610
Porous Paving (3)	FEH: 2 years: +0 %: 60 mins: Winter	39.293	39.236	0.022	0.026	0.3	0.276	0.000	0.000	0.3	0.387		90.361
Porous Paving (4)	FEH: 2 years: +0 %: 60 mins: Winter	39.154	39.100	0.021	0.025	0.3	0.262	0.000	0.000	0.2	0.368		90.536
Porous Paving (5)	FEH: 2 years: +0 %: 120 mins: Summer	39.288	39.231	0.024	0.030	0.5	0.537	0.000	0.000	0.4	0.853		88.994
Porous Paving (6)	FEH: 2 years: +0 %: 120 mins: Summer	38.955	38.892	0.025	0.031	0.6	0.652	0.000	0.000	0.4	1.001		88.549
Porous Paving (7)	FEH: 2 years: +0 %: 120 mins: Summer	38.745	38.677	0.024	0.020	0.5	0.503	0.000	0.000	0.4	0.951		90.136
Porous Paving (8)	FEH: 2 years: +0 %: 60 mins: Winter	39.168	39.115	0.021	0.025	0.3	0.237	0.000	0.000	0.2	0.350		90.660
Porous Paving (9)	FEH: 2 years: +0 %: 120 mins: Summer	39.522	39.467	0.024	0.030	0.5	0.520	0.000	0.000	0.4	0.823		89.076
Porous Paving (10)	FEH: 2 years: +0 %: 60 mins: Winter	39.725	39.651	0.023	0.027	0.4	0.367	0.000	0.000	0.3	0.485		89.874
Porous Paving (11)	FEH: 2 years: +0 %: 120 mins: Summer	39.948	39.888	0.025	0.031	0.6	0.631	0.000	0.000	0.4	0.967		88.655
Porous Paving (12)	FEH: 2 years: +0 %: 120 mins: Summer	40.148	40.088	0.025	0.030	0.6	0.599	0.000	0.000	0.4	0.918		88.791
Porous Paving (13)	FEH: 2 years: +0 %: 120 mins: Summer	40.014	39.951	0.025	0.031	0.6	0.645	0.000	0.000	0.4	0.980		88.608
Permeable Paving 4	FEH: 2 years: +0 %: 360 mins: Winter	37.895	37.589	0.057	0.240	12.3	74.097	0.000	0.000	4.8	70.949		85.549
Porous Paving (14)	FEH: 2 years: +0 %: 30 mins: Winter	39.657	39.608	0.021	0.025	0.4	0.251	0.000	0.000	0.2	0.251		90.551

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
	Designed by: OT		Checked by: SS	Approved By: HJ
Report Details: Type: Stormwater Controls Summary Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

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**FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max.
Avg. Depth**

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Attenuation Tank 4	FEH: 30 years: +40 %: 60 mins: Winter	38.877	38.877	0.277	0.277	13.1	14.493	0.000	0.000	5.9	13.102	5	44.524
Porous Paving	FEH: 30 years: +40 %: 30 mins: Winter	38.391	38.354	0.044	0.067	2.5	1.103	0.000	0.000	1.9	2.024		78.003
Porous Paving (1)	FEH: 30 years: +40 %: 30 mins: Winter	38.712	38.673	0.038	0.060	1.7	0.663	0.000	0.000	1.5	1.395		80.609
Porous Paving (2)	FEH: 30 years: +40 %: 30 mins: Winter	39.373	39.330	0.045	0.070	2.9	1.287	0.000	0.000	2.0	2.265		77.252
Porous Paving (3)	FEH: 30 years: +40 %: 30 mins: Winter	39.307	39.266	0.036	0.056	1.4	0.516	0.000	0.000	1.3	1.171		81.994
Porous Paving (4)	FEH: 30 years: +40 %: 30 mins: Winter	39.169	39.129	0.036	0.054	1.4	0.490	0.000	0.000	1.3	1.129		82.300
Porous Paving (5)	FEH: 30 years: +40 %: 30 mins: Winter	39.307	39.267	0.043	0.066	2.5	1.065	0.000	0.000	1.8	1.969		78.181
Porous Paving (6)	FEH: 30 years: +40 %: 30 mins: Winter	38.975	38.931	0.045	0.070	2.9	1.297	0.000	0.000	2.0	2.274		77.228
Porous Paving (7)	FEH: 30 years: +40 %: 15 mins: Winter	38.761	38.738	0.041	0.082	3.9	1.252	0.000	0.000	3.1	1.373		75.466
Porous Paving (8)	FEH: 30 years: +40 %: 30 mins: Winter	39.181	39.142	0.035	0.053	1.3	0.436	0.000	0.000	1.2	1.035		82.834
Porous Paving (9)	FEH: 30 years: +40 %: 30 mins: Winter	39.541	39.503	0.043	0.066	2.4	1.028	0.000	0.000	1.8	1.914		78.391
Porous Paving (10)	FEH: 30 years: +40 %: 30 mins: Winter	39.741	39.684	0.039	0.059	1.8	0.704	0.000	0.000	1.5	1.466		80.588
Porous Paving (11)	FEH: 30 years: +40 %: 30 mins: Winter	39.968	39.927	0.045	0.069	2.8	1.258	0.000	0.000	2.0	2.226		77.364
Porous Paving (12)	FEH: 30 years: +40 %: 30 mins: Winter	40.168	40.125	0.044	0.068	2.7	1.195	0.000	0.000	1.9	2.144		77.637

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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Report Details: Type: Stormwater Controls Summary Storm Phase: East	Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ			

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
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Porous Paving (13)	FEH: 30 years: +40 %: 30 mins: Winter	40.034	39.990	0.045	0.070	2.9	1.291	0.000	0.000	2.0	2.270		77.207
Permeable Paving 4	FEH: 30 years: +40 %: 360 mins: Winter	37.925	37.909	0.087	0.560	40.3	230.744	0.000	0.000	6.2	220.680		55.000
Porous Paving (14)	FEH: 30 years: +40 %: 30 mins: Winter	39.671	39.637	0.035	0.054	1.3	0.467	0.000	0.000	1.2	1.099		82.458

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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		Company Address: Markides Associates 81 Southwark Bridge Road London, SE1 0NQ		

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Wickhurst Green: 24184 Wickhurst Green Revision P02		Date: 22/10/2025			
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FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

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. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Attenuation Tank 4	FEH: 100 years: +45 %: 60 mins: Winter	39.049	39.049	0.449	0.449	18.4	23.486	0.000	0.000	8.3	19.404	30	10.102
Porous Paving	FEH: 100 years: +45 %: 30 mins: Winter	38.397	38.369	0.050	0.082	3.3	1.317	0.000	0.000	2.7	2.760		73.750
Porous Paving (1)	FEH: 100 years: +45 %: 30 mins: Winter	38.716	38.685	0.043	0.072	2.3	0.770	0.000	0.000	2.1	1.893		77.467
Porous Paving (2)	FEH: 100 years: +45 %: 30 mins: Winter	39.380	39.345	0.052	0.086	3.8	1.549	0.000	0.000	2.9	3.096		72.619
Porous Paving (3)	FEH: 100 years: +45 %: 15 mins: Winter	39.364	39.333	0.093	0.122	2.8	1.246	0.000	0.000	5.2	1.740		56.528
Porous Paving (4)	FEH: 100 years: +45 %: 15 mins: Winter	39.260	39.230	0.127	0.155	2.7	1.564	0.000	0.000	5.5	1.996	0	43.555
Porous Paving (5)	FEH: 100 years: +45 %: 30 mins: Winter	39.312	39.283	0.049	0.082	3.3	1.270	0.000	0.000	2.6	2.687		73.985
Porous Paving (6)	FEH: 100 years: +45 %: 15 mins: Winter	39.077	39.058	0.147	0.198	5.7	3.914	0.000	0.000	4.8	3.598	0	31.302
Porous Paving (7)	FEH: 100 years: +45 %: 30 mins: Winter	38.809	38.809	0.089	0.153	3.4	2.424	0.000	0.000	3.5	2.821		52.496
Porous Paving (8)	FEH: 100 years: +45 %: 30 mins: Winter	39.185	39.152	0.038	0.063	1.7	0.500	0.000	0.000	1.6	1.407		80.322
Porous Paving (9)	FEH: 100 years: +45 %: 30 mins: Winter	39.547	39.519	0.049	0.081	3.2	1.223	0.000	0.000	2.6	2.613		74.279
Porous Paving (10)	FEH: 100 years: +45 %: 30 mins: Winter	39.746	39.696	0.044	0.072	2.4	0.822	0.000	0.000	2.2	1.999		77.345
Porous Paving (11)	FEH: 100 years: +45 %: 30 mins: Winter	39.975	39.942	0.052	0.085	3.7	1.513	0.000	0.000	2.8	3.040		72.778
Porous Paving (12)	FEH: 100 years: +45 %: 30 mins: Winter	40.174	40.141	0.051	0.084	3.6	1.435	0.000	0.000	2.8	2.928		73.151

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Wickhurst Green: 24184		Date: 22/10/2025			
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Porous Paving (13)	FEH: 100 years: +45 %: 30 mins: Winter	40.041	40.006	0.052	0.086	3.8	1.552	0.000	0.000	2.9	3.095		72.596
Permeable Paving 4	FEH: 100 years: +45 %: 480 mins: Winter	37.998	37.997	0.160	0.648	41.6	295.323	0.000	0.000	6.2	287.684	125	42.406
Porous Paving (14)	FEH: 100 years: +45 %: 30 mins: Winter	39.674	39.646	0.039	0.063	1.8	0.535	0.000	0.000	1.7	1.483		79.880

Wickhurst Green: 24184 Wickhurst Green Revision P02	Date: 22/10/2025			
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