

Co-ordinate Table			
Station	Easting	Northing	Level
1	530743.865	120569.021	25.181
2	530769.961	120460.463	24.336
4	530846.595	120750.416	25.450
6	530945.361	120868.502	27.573
7	530806.830	120776.886	27.433
10	530723.842	120407.384	22.236
11	530733.322	120371.809	20.745

All levels related to Ordnance Survey active GPS network, at survey station 6.

DISCLAIMERS

Every effort has been made to confirm true species on site, yet it is advised to confirm these details with an arborist before proceeding with any design.

KEY

Survey control station

Gate (single)

Gate (double)

Tree Spread and Girth shown to scale

Step Up

Banking

Foliage Line

Drainage run, direction of flow and pipe size

Approximate Position

Ramp Up

ABBREVIATIONS

Air Handling Unit	AHJ	Water Meter	WM
Belted Beacon	BB	Eaves Level	EL
Ballard	BD	Ridge Level	RL
Banquette	BH	Road Level	RFL
BT Inspection Cover	BT	Soft Level	SFL
Cable Television Cover	CTV	Threshold Level	THL
Drainage Channel	DC	Plaster Wall Level	PWL
Electricity Cover	EC	Finished Floor Level	FFL
Electricity Pole	EP	Head Level	HL
Earth Road	ER	Sill Level	SL
Fire Hydrant	FH	Cover Level	CL
Gas Valve	GV	Invert Level	IL
Gate Post	GP	No Visible Pipes	NVP
Gully	GY	Unstable Lift	UTL
Inspection Cover	IC	Foul Water	FW
Junction Box	JB	Bump Level	SUL
Kids Cuff	KD	Surface Water	SW
Lamp Post	LP	Brick Pavers	BP
Manhole	MH	Concrete	CON
Marker Post	MK	Concrete Paving Slabs	CPS
Post	P	Flower Bed	FB
Pipe	PE	Shrub Bed	SB
Road Sign	RS	Tackle Paving	TAC
Rodding Eye	RE	Unsurfaced	US
Marker Post	MK	Brick Wall	BW
Stop Post	SP	Retaining Wall	RW
Stop Valve	SV	Chainlink Fence	CLF
Stop Tap	ST	Chemical Paving Fence	CPF
Telegraph Pole	TP	Iron Railing Fence	IRF
Traffic Light	TL	Metal Security Fence	MSF
Vent Pipe	VP	Post and Chain Fence	PCF
Post and Rail Fence	PRF	Post and Wire Fence	PWF
Wooden Panel Fence	WPF		

Client

HILL GROUP

Project
**NORTHERN ARC, PHASE 1C
BURGESS HILL, WEST SUSSEX,
RH15 8RA**

Title
TOPOGRAPHICAL SURVEY

Drawing Number
TS23-677-1

Revision	Description	Rev. By	Date

Scale 1:500@A0		Sheet 1 of 2	
Drawn by SS	Checked by NEM	Date of Survey DEC 2023	



**TERRAIN
SURVEYS**

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www.terrain-surveys.co.uk
enquiries@terrain-surveys.co.uk

Associations:



ICES



THE SURVEY
ASSOCIATION



SQAAR



SSIP



Constructionline



Acclaim
Accreditation

Site area:
2.18 ha



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Appendix D

Southern Water Asset Maps



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Appendix E

Supporting Calculations

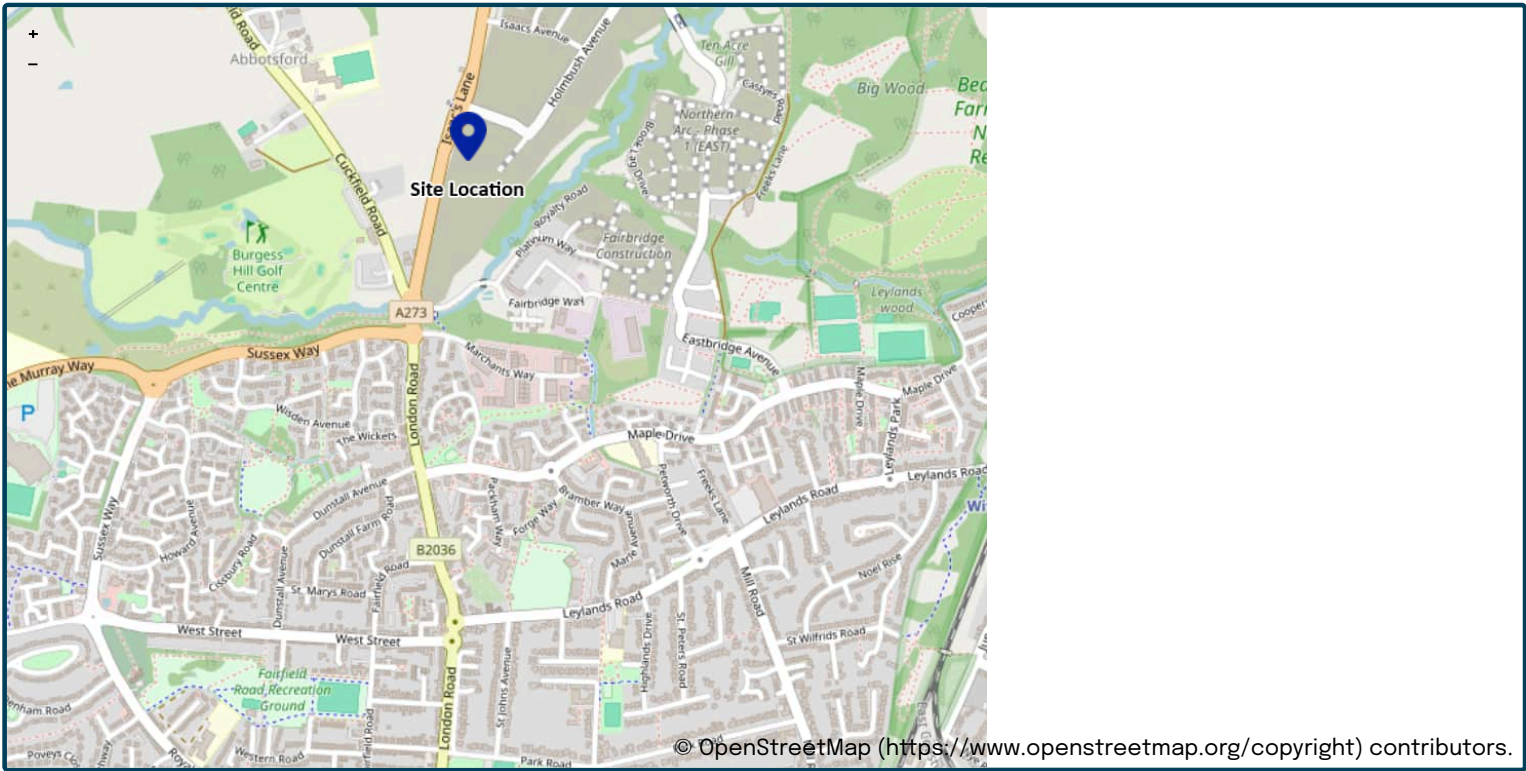
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015).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

Project details

Date	20/09/2025
Calculated by	AAR
Reference	14176
Model version	2.1.2

Location

Site name	Brookleigh School
Site location	Northern Arc, Burgess Hill, West Sussex



Site easting (British National Grid)	530837
Site northing (British National Grid)	120655

Site details

Total site area (ha)	1	ha
----------------------	---	----

Greenfield runoff

Method

Method	IH124	
IH124		
	<u>My value</u>	<u>Map value</u>
SAAR (mm)	820 mm	820
How should SPR be derived?	WRAP soil type	
WRAP soil type	4	4
SPR	0.47	
QBar (IH124) (l/s)	5.81 l/s	

Growth curve factors

	<u>My value</u>	<u>Map value</u>
Hydrological region	7	7
1 year growth factor	0.85	
2 year growth factor	0.88	
10 year growth factor	1.62	
30 year growth factor	2.3	
100 year growth factor	3.19	
200 year growth factor	3.74	

Results

Method	IH124	
Flow rate 1 year (l/s)	4.9 l/s	
Flow rate 2 year (l/s)	5.1 l/s	
Flow rate 10 years (l/s)	9.4 l/s	
Flow rate 30 years (l/s)	13.4 l/s	
Flow rate 100 years (l/s)	18.5 l/s	
Flow rate 200 years (l/s)	21.7 l/s	

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

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.1.2) developed by HR Wallingford and available at uksuds.com (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.



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Date: 13/10/2025 00:00:00

Designed by: AAR

Checked by: AJH

File: 14176-CRH-XX-XX-CA-C-0001-P1_Drainage Calculations.dwg

Plot Scale: 1:1414

14167- Brookleigh Eastern Primary School

Brookleigh, Burgess Hill

West Sussex, RH15 8RE

InfoDrainage 2025.5.1

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Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE	Date: 13/08/2025		
	Designed by: AAR	Checked by: AJH	Approved By: SBS
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN		

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Porous Paving (Muga)

Type : Porous Paving

Dimensions

Exceedance Level (m)	24.500
Depth (m)	0.380
Base Level (m)	24.120
Paving Layer Depth (mm)	80
Membrane Percolation (m/hr)	5.0
Porosity (%)	30
Length (m)	46.170
Long. Slope (1:X)	500.00
Width (m)	22.311
Total Volume (m³)	93.281

Under Drain

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

Advanced

Conductivity (m/hr)	500.0
---------------------	-------



Porous Paving (Car Park)

Type : Porous Paving

Dimensions

Exceedance Level (m)	25.000
Depth (m)	0.610
Base Level (m)	24.390
Paving Layer Depth (mm)	110
Membrane Percolation (m/hr)	5.0
Porosity (%)	30
Length (m)	89.569
Long. Slope (1:X)	500.00
Width (m)	20.233
Total Volume (m³)	274.329

Under Drain

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

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE	Date: 13/08/2025		
	Designed by: AAR	Checked by: AJH	Approved By: SBS
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN		

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Porous Paving (Around Building)

Type : Porous Paving

Dimensions

Exceedance Level (m)	25.000
Depth (m)	0.630
Base Level (m)	24.370
Paving Layer Depth (mm)	80
Membrane Percolation (m/hr)	5.0
Porosity (%)	30
Length (m)	112.406
Long. Slope (1:X)	500.00
Width (m)	21.354
Total Volume (m³)	402.315

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	225
No. of Barrels	2
Release Height (m)	0.000
Friction Scheme	Manning's n
n	0.015

Advanced

Conductivity (m/hr)	500.0
---------------------	-------

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE	Date: 13/08/2025		
	Designed by: AAR	Checked by: AJH	Approved By: SBS
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Campbill Reith Hill LLP 15 Bermondsey Square London, SE1 3UN		

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Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	23.500
Depth (m)	0.400
Base Level (m)	22.500
Number of Crates Long	1
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	20
Crate Width (m)	12
Crate Height (m)	0.4
Total Volume (m³)	91.800

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE	Date: 13/08/2025			CampbellReith consulting engineers
Report Title: Rainfall Analysis Criteria	Designed by: AAR	Checked by: AJH	Approved By: SBS	
	Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN			

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

Rainfall

FEH	Type: FEH
Site Location	GB 530650 120350 TQ 30650 20350
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

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

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE		Date: 13/08/2025			
		Designed by: AAR	Checked by: AJH		Approved By: SBS
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN			



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)	Percentage Available (%)	Status
Porous Paving (Muga)	FEH: 100 years: +45 %: 60 mins: Winter	24.594	24.317	0.381	0.197	31.3	48.064	0.230	0.000	0.8	3.040	48.474	Flood
Cellular Storage	FEH: 100 years: +45 %: 960 mins: Summer	22.876	22.876	0.376	0.376	8.5	85.773	0.000	0.000	1.0	93.752	6.566	OK
Porous Paving (Car Park)	FEH: 100 years: +45 %: 960 mins: Winter	24.814	24.813	0.245	0.423	10.3	181.675	0.000	0.000	1.5	132.212	33.775	OK
Porous Paving (Around Building)	FEH: 100 years: +45 %: 480 mins: Winter	24.919	24.915	0.324	0.545	33.5	312.998	0.000	0.000	4.5	199.146	22.201	OK

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE				Date: 13/08/2025			CampbellReith consulting engineers	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: AAR	Checked by: AJH	Approved By: SBS		
				Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN				



FEH: 100 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)	Percentage Available (%)	Status
Porous Paving (Muga)	FEH: 100 years: +0 %: 480 mins: Winter	24.325	24.323	0.113	0.203	5.3	48.821	0.000	0.000	0.8	34.278	47.663	OK
Cellular Storage	FEH: 100 years: +0 %: 960 mins: Summer	22.736	22.736	0.236	0.236	5.8	53.777	0.000	0.000	1.0	78.985	41.420	OK
Porous Paving (Car Park)	FEH: 100 years: +0 %: 960 mins: Winter	24.689	24.688	0.120	0.298	7.1	113.444	0.000	0.000	1.5	137.597	58.647	OK
Porous Paving (Around Building)	FEH: 100 years: +0 %: 480 mins: Winter	24.760	24.757	0.165	0.387	23.1	198.916	0.000	0.000	4.5	200.891	50.557	OK

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE				Date: 13/08/2025			CampbellReith consulting engineers	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: AAR	Checked by: AJH	Approved By: SBS		
				Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN				



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)	Percentage Available (%)	Status
Porous Paving (Muga)	FEH: 30 years: +40 %: 480 mins: Winter	24.349	24.347	0.137	0.227	6.0	56.248	0.000	0.000	0.8	33.722	39.700	OK
Cellular Storage	FEH: 30 years: +40 %: 480 mins: Summer	22.770	22.770	0.270	0.270	10.9	61.626	0.000	0.000	1.0	45.862	32.869	OK
Porous Paving (Car Park)	FEH: 30 years: +40 %: 960 mins: Winter	24.717	24.716	0.148	0.326	7.9	128.676	0.000	0.000	1.5	137.044	53.094	OK
Porous Paving (Around Building)	FEH: 30 years: +40 %: 480 mins: Winter	24.806	24.804	0.212	0.434	26.0	232.405	0.000	0.000	4.5	196.483	42.233	OK

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE				Date: 13/08/2025				
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: AAR	Checked by: AJH	Approved By: SBS		
				Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN				



FEH: 30 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)	Percentage Available (%)	Status
Porous Paving (Muga)	FEH: 30 years: +0 %: 480 mins: Winter	24.300	24.287	0.088	0.167	4.3	37.733	0.000	0.000	0.8	34.341	59.549	OK
Cellular Storage	FEH: 30 years: +0 %: 480 mins: Summer	22.679	22.679	0.179	0.179	7.7	40.768	0.000	0.000	1.0	43.872	55.591	OK
Porous Paving (Car Park)	FEH: 30 years: +0 %: 480 mins: Winter	24.683	24.639	0.114	0.249	9.5	87.280	0.000	0.000	1.5	64.396	68.184	OK
Porous Paving (Around Building)	FEH: 30 years: +0 %: 360 mins: Winter	24.724	24.693	0.129	0.323	22.6	153.419	0.000	0.000	4.5	146.477	61.866	OK

Project: 14167- Brookleigh Eastern Primary School Brookleigh, Burgess Hill, West Sussex, RH15 8RE		Date: 13/08/2025			
		Designed by: AAR	Checked by: AJH		Approved By: SBS
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Campbell Reith Hill LLP 15 Bermondsey Square London, SE1 3UN			



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

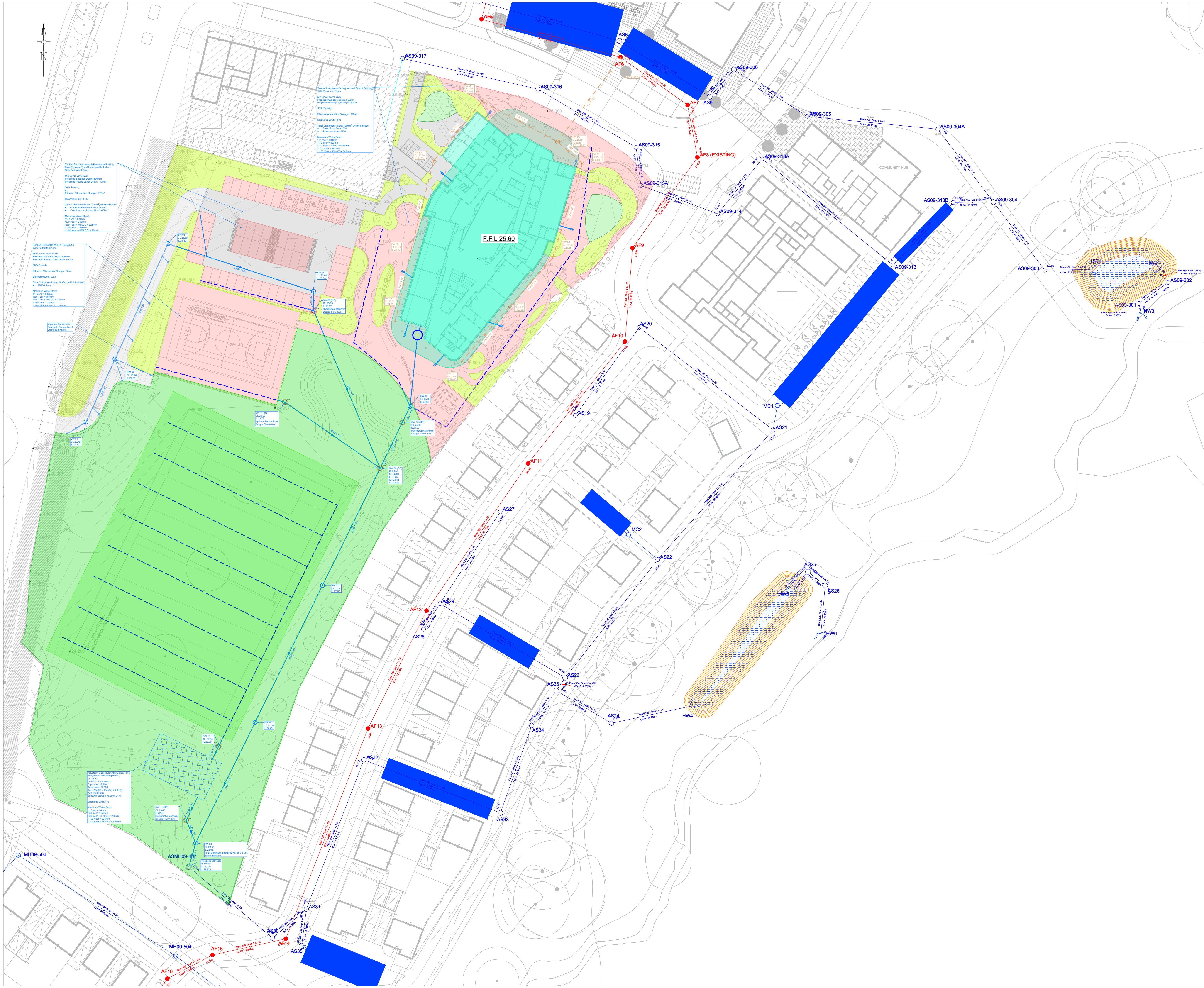
Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residant Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Porous Paving (Muga)	FEH: 2 years: +0 %: 480 mins: Winter	24.276	24.226	0.063	0.106	2.4	20.812	0.000	0.000	0.8	23.973	77.688	OK
Cellular Storage	FEH: 2 years: +0 %: 480 mins: Summer	22.594	22.594	0.094	0.094	4.4	21.524	0.000	0.000	1.0	26.081	76.553	OK
Porous Paving (Car Park)	FEH: 2 years: +0 %: 480 mins: Winter	24.652	24.549	0.083	0.159	5.4	47.801	0.000	0.000	1.5	51.792	82.575	OK
Porous Paving (Around Building)	FEH: 2 years: +0 %: 360 mins: Winter	24.687	24.574	0.092	0.204	12.6	80.996	0.000	0.000	4.5	101.450	79.868	OK



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Appendix F

Proposed Drainage Strategy



- ### Notes
- Do not scale from this drawing on print or electronically. Work from figured dimensions only.
 - No deviation from the details on this drawing is allowed without CampbellReith's prior permission in writing.
 - Read this drawing with all Architect's, Service Engineer's and CampbellReith's relevant details, specifications and drawings.
 - All work is to be done in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory Requirements and the Contract Documents.
 - Drawing revision:
P: Preliminary Evolving drawings for approvals, tenders, billings etc.
C: Contractual Drawings authorized and approved for stage completion.
 - Drawing status:
Work in progress
S0 - Initial status
Shared (Non-contractual)
S1 - Suitable for coordination, **S2** - Suitable for information, **S3** - Suitable for review and comment, **S4** - Suitable for stage approval.
Published (For contractors purposes)
A1, An etc - Authorised and accepted ('n' relates to work stages)
B1, Bn etc - Partial sign-off (with comments)
CR - As constructed record document (Final Construction ONLY). Any deviations to that which is on site is not the liability of CampbellReith)
 - Work Stages:
2 - Concept, **3** - Definition, **4** - Design, **5** - Build & commission, **6** - Handover
 - Only drawings with **revision Cn** and **status A5** to be used for Construction.

Legend

- Site Boundary
- Surface Water Pipe
- Surface Water Manhole
- Surface Water Inspection Chamber
- CP Surface Water Catchpit Manhole
- HB Surface Water Hydrobrake Manhole
- Foul Water Pipe
- Foul Water Manhole
- Foul Water Inspection Chamber
- Geocellular Attenuation Tank
- Green Roof
- Tanked Permeable Paving
- Impermeable Paving with Tanked Subbase
- Access Road Impermeable Paving
- Grass
- Planting
- Sport Pitch with Perforated Pipes
- 225mm-1:100 Perforated Pipe in Trench
- Diffuser Unit
- Proposed Surface Water Drainage by Others
- Proposed Foul Water Drainage by Others
- Water Butt

P2	Issued for Planning	13.10.25	AAR
P1	Issued for information	02.10.25	AAR
Rev	Description	Date	By

CampbellReith

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www.campbellreith.com

Job Title
Brookleigh Eastern Primary School

Client
Homes England

Proposed Drainage Layout

Drawn by	Date made	Scale @ A1	Checked by	Suitability	CR Project
AL	08.08.25	1:500	AJH	S2	14176

Project No	Orig.	Funct.	Spatial	Form	Disc.	Number	Rev
14176	CRH	XX	XX	DR	C	5050	P2



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Appendix G

Masterplan Drainage Strategy Plans

London

15 Bermondsey Square
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SE1 3UN

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