



Land Adjacent To Hilgay Cottage, Birchwood
Grove Road,
Burgess Hill, West Sussex, RH15 0DL

Drainage Details

For

Remmus Designer Homes

Document Control Sheet

Land Adjacent To Hilgay Cottage, Birchwood Grove Road,
Burgess Hill, West Sussex, RH15 0DL
Remmus Designer Homes

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
6 th March 2026	Final	Chris Gray	Jason Morgans
9 th March 2026	Final B	Chris Gray	Jason Morgans



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1.0 Introduction

- 1.1 Motion has been commissioned by Remmus Designer Homes to provide full details of the means of foul and surface water drainage for the Land Adjacent To Hilgay Cottage Site to discharge conditions 5 and 7 of Mid Sussex District Council planning application DC/24/0846.
- 1.2 The approximately 0.26 hectares (ha) Site is located in the existing garden of Hilgay Cottage. The garden will be subdivided to create a reduced garden plot for Hilgay Cottage, with parking provided for two Hilgay Cottage vehicles off a reconfigured shared vehicular access.
- 1.3 The Site Location Plan and Topographical Survey are included in **Appendix A**. The Proposed Development Site Layout Plan is included in **Appendix B**.
- 1.4 The report builds on the work prepared by *Motion*¹ for Mid Sussex District Council planning application DC/24/0846 and provides full details of the means of foul and surface water drainage.
- 1.5 The Appeal Decision for planning application Ref DC/24/0846 Dated 16 September 2025 includes the conditions below.

Condition 5

The development shall not progress above the damp proof course of the new houses until details of the proposed surfacing materials for the driveway and parking spaces have been submitted to and approved in writing by the Local Planning Authority. The driveway and parking spaces shall not be brought into use until they are constructed in accordance with the approved details.

Condition 7

The development shall not progress above the damp proof course of the new houses until details of the proposed foul and surface water drainage and means of disposal have been submitted to and approved in writing by the Local Planning Authority. The details shall include a timetable for implementation and a management and maintenance plan for the lifetime of the development which shall include arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime. No building shall be occupied until all the approved drainage works have been carried out in accordance with the approved details. Maintenance and management during the lifetime of the development should be in accordance with the approved details.

- 1.6 This Drainage Strategy follows the guidance set out in:
 - National Planning Policy Framework² (NPPF)
 - Planning Practice Guidance (PPG) to the NPPF
 - relevant policies of the Lewes District Council Local Plan (2016 - 2030)
 - CIRIA C753 The SuDS Manual 2015
 - Environment Agency Rainfall Runoff Management for Developments
 - National standards for sustainable drainage systems (SuDS) Guidance Updated 30 July 2025

¹ Motion, Technical Note 1: Flood Risk & Drainage Summary, Date 27 March 2024

² <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

2.0 Condition 5 Details of the Proposed Surfacing Materials for the Driveway and Parking spaces

The development shall not progress above the damp proof course of the new houses until details of the proposed surfacing materials for the driveway and parking spaces have been submitted to and approved in writing by the Local Planning Authority. The driveway and parking spaces shall not be brought into use until they are constructed in accordance with the approved details.

- 2.1 The Standard Details in **Appendix C** shows the proposal for pervious pavement construction including a CORE DRIVE 50-35 pervious surface layer or similar.

3.0 Condition 7 Foul and Surface Water Drainage Details

The development shall not progress above the damp proof course of the new houses until details of the proposed foul and surface water drainage and means of disposal have been submitted to and approved in writing by the Local Planning Authority. The details shall include a timetable for implementation and a management and maintenance plan for the lifetime of the development which shall include arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime.

- 3.1 The Detailed Drainage Strategy and Standard Details are in **Appendix C**.
- 3.2 Hydraulic calculations for the 1 in 2, 1 in 30 + 40% and 1 in 100 + 45% critical rainfall events are included in **Appendix D**.
- 3.3 The results of the hydraulic modelling show that the drainage strategy can attenuate and discharge surface water generated in the 1 in 100-year + 45% climate change critical rainfall event with negligible flooding.
- 3.4 Please see the two blue arrows on the Detailed Drainage Strategy for how the pervious pavement subgrade will nominally slope towards the geocellular soakaway between S5 and S6.
- 3.5 The pervious pavement will be 485mm thick with a 35mm gravel surface layer with stabiliser grid (or similar), 10mm bedding layer (or similar), and 440mm thick coarse graded aggregate sub base Type 4/40mm or similar (BS 7533-13:2009) (or similar).
- 3.6 Surface water runoff from the development will collect in the two geocellular soakaway locations between S5 and S6 and between S9 and S10, and during extreme rainfall events, when the water depth increases, water will widen into the pervious pavement sub base area.
- 3.7 The infiltration coefficient is 0.008m/h once a factor of safety of 1.5 is applied with reference to Table 25.2 of CIRIA C753 The SuDS Manual 2015, and the maximum depth of water in the geocellular soakaway between S5 and S6 will be 0.414m for the 1440 minute critical event. Therefore, the surface water runoff will approximately half empty within 24 hrs.
- 3.8 The maximum depth of water in the geocellular soakaway between S5 and S6 will be 63.129m for the 1440 minute critical event, which is 0.371m below the low point ground level of 63.50m AOD. On the basis the top surface of the pervious pavement should finish at least 150mm below any adjoining DPC level, Finished Floor Levels (FFLs) of 63.75m AOD are proposed.
- 3.9 Infiltration testing in accordance with the BRE365 was undertaken in the approximate low point of the proposed surface water drainage system (TP03), and the Test Location and Results are shown in Figure 1 and Appendix D of the GEOTECHNICAL ASSESSMENT REPORT³. The ground investigation confirms that groundwater was recorded at 2.90m depth on completion of WS04, and BH01 and WS05 were recorded as dry on completion.
- 3.10 The Asset Location Sewer Map obtained from Southern Water (SW) Wastewater Plan in **Appendix E** shows that a 225mm diameter foul water gravity public sewer flows west southwest along Birchwood Grove Road.

³ Ashdown Site Investigation, GEOTECHNICAL ASSESSMENT REPORT, PROJECT REFERENCE: P17576, REPORT REFERENCE: R17049, Issue No. 1, Dated 26th February 2026

- 3.11 As the development is less than 4 dwellings, a pre development capacity check is not required. An S106 application to connect to the 225mm diameter foul water gravity public sewer downstream of SW Manhole 8201 as shown in the Detailed Drainage Drawing in **Appendix C** will be submitted to SW in due course.
- 3.12 The Construction Phase Plan will be the responsibility of the appointed contractor. Below is an Outline Construction Phase Plan that describes an acceptable method of sequencing of the works. The below outline construction phase plan refers to the Detailed Drainage Strategy Drawing in **Appendix C**.

Stage 1

- 3.13 Construct the contractor's site compound. While construction logistics have not been considered by the client at this point as a contractor has not been appointed, the contractor's site compound will be located within the red line planning boundary, at a location that can be accessed from the proposed road.
- 3.14 Install the permanent surface and below ground drainage including the linear drainage channels, pervious pavement and geocellular soakaways. Cover the surface layer of the pervious pavement with a protective heavy duty permeable separating geotextile.
- 3.15 It is a requirement of the detailed drainage strategy that catchpit chambers are provided before the geocellular soakaways that are designed to both collect gross solids and sediments and to facilitate access and maintenance of the catchpits and geocellular soakaways.

Stage 2

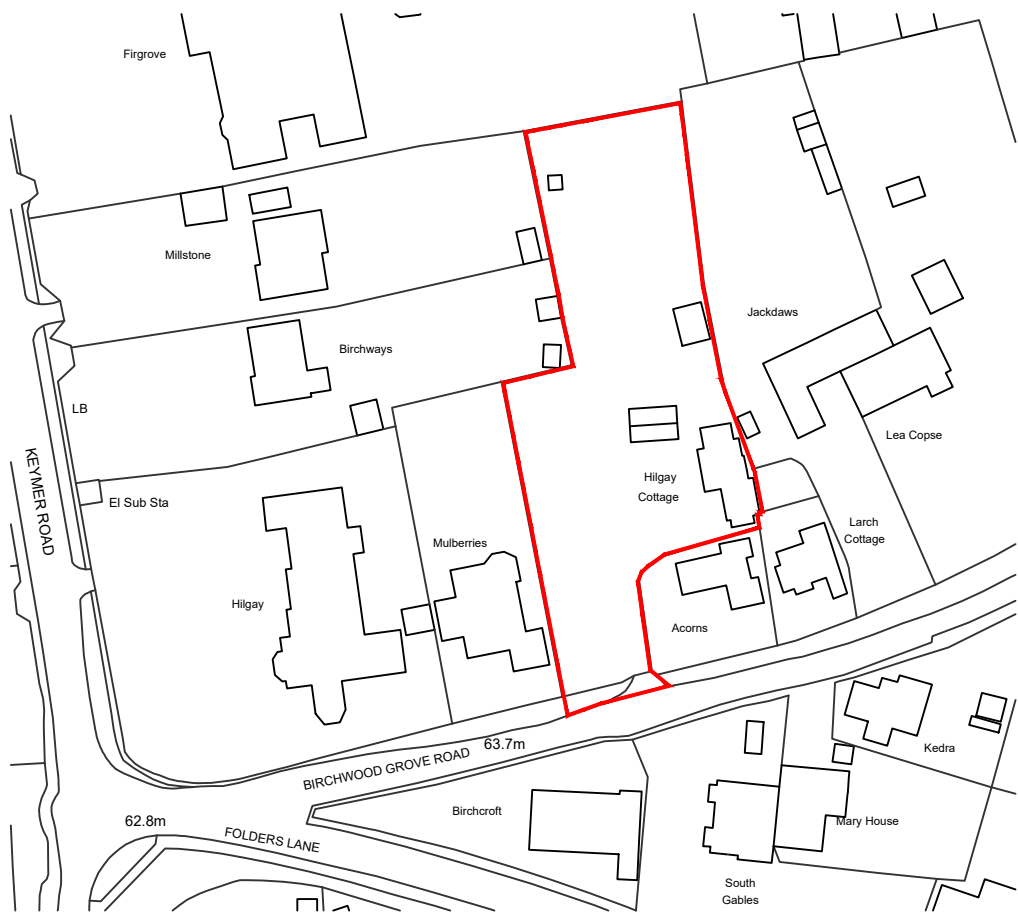
- 3.16 Continue with the construction phase of the development with surface water runoff routed to the permanent surface and below ground drainage.

Stage 3

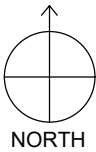
- 3.17 On completion of the construction phase remove the heavy duty permeable separating geotextile from the surface of the pervious pavement and clean the permanent surface and below ground drainage.
- 3.18 Remove the contractor's site compound and reinstate.
- 3.19 The Drainage Management and Maintenance Plan is included in **Appendix F**.

Appendix A

Site Location Plan and Topographical Survey



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Client's Name



Job Title

Land at Hilgay Cottage, Burgess Hill

Drawing Title

Site Location Plan

Scale

1:1250 @ A4



Drawn	Checked	Date
KB	DP	20.03.24
Job No	Drawing No	Rev
7441	PL 01	P2
Status		

APPROVAL

P2	04.04.24	Amended to officer comment	JY	DP
P1	27.03.24	Planning Issue	KB	DP
Rev	Date	Revision Details	Dr	Ch



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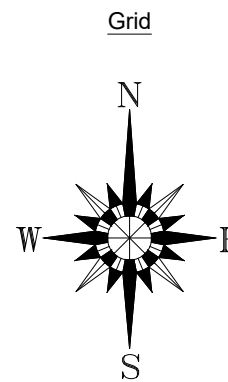
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© ECE Architecture Limited. No dimensions to be scaled from drawing except for the purposes of Planning Applications. The contractor should check all dimensions on site. It is the contractors responsibility to ensure compliance with Building Regulations.

CAD Plot date: 4/04/2024 - 11:58:04

7441 - location plan.dwg



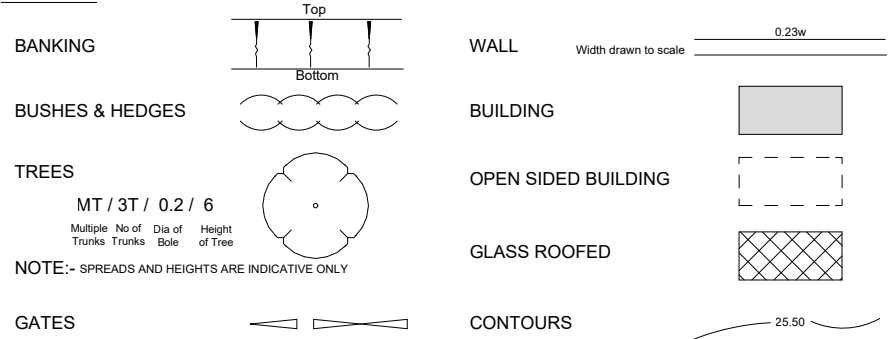
SURVEY STATIONS - COORDINATE SCHEDULE			
Station	Easting	Northing	Level
S1	531839.069	118266.983	63.584
S2	531846.386	118230.352	63.759
S3	531833.361	118249.770	63.628
S4	531835.477	118281.657	63.537
S5	531837.498	118302.108	63.260
S6	531845.333	118295.845	63.265

Survey station S2 has a direct relationship to the Ordnance Survey active network. All other stations have been descaled about this point. The scale factor for these quoted stations is 1.

This is effectively a local coordinate system with a good connection to the OS to facilitate overlaying of further OS digital data.

Please contact Maltby Surveys if further clarification is required.

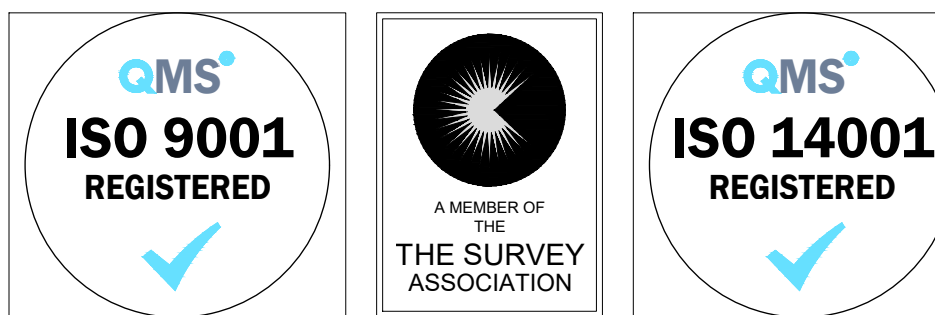
LEGEND



ABBREVIATIONS (WHERE APPLICABLE)

ARCH HEAD HEIGHT	AHH	MARKER	MKR
ARCH HEAD LEVEL	AHL	MONITORING WELL	MM
ARCH SPRINGER HEIGHT	ASH	NOTICE BOARD	NB
ARCH SPRINGER LEVEL	ASL	NAME PLATE	NP
AIR VALVE	AV	OVERHEAD WIRES	OWH
BED LEVEL	BL	PARKING TRAIL	PM
BELLISHA BEACON	BB	REDGE LEVEL	RD
BOLLARD	B	ROOF LEVEL	R
BRITISH TELECOM BOX	BTB	ROAD SIGN	RS
BRITISH TELECOM MANHOLE	BTM	RODDING EYE	RE
BRICKWORK	BWK	RETAINING WALL	RW
BUS STOP	BTS	RAIN WATER PIPE	RWP
CABLE TV	CAV	SUJICE VALVE	SV
COVER LEVEL	CL	STOP COCK	SC
CABLE MARKER	CM	SOFTT LEVEL	SOF
COLUMN	COL	STRUCTURAL SLAB LEVEL	SSL
CONCRETE POST	CP	THREE STUMP	ST
EAVES LEVEL	EAV	SOIL AND VENT PIPE	SVW
ELECTRICAL CABLE	EAC	TREESIDE LEVEL	THL
ELECTRICITY CONTROL BOX	ECB	TELEGRAPH POLE	TP
ELECTRICITY POLE	EP	TELEPHONE CALL BOX	TCB
EARTH ROD	ER	TOP OF KERB	TK
FLOWER BED	B	TURNSTILE	TL
FINISHED FLOOR LEVEL	FFL	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TOP OF MERE	TM
FLOOR LEVEL	FL	UNABLE TO LIFT	UFL
FLAG STAFF	FS	UNABLE TO SURVEY	UTS
GAS PIPE	GP	VENT PIPE	VP
GAS VALVE	GV	WATER METER	WM
GULLY	G	WATER LEVEL	WL
GATE STOP	GS	WASH OUT	WO
INSPECTION COVER	IC	WASTE PIPE	WP
INVERT LEVEL	IL	WATER TANK	WT
LAMP POST	L	WATER VALVE	WV
FENCES			
BARBED WIRE FENCE	BWF	LARCH LAMP FENCE	LLF
CORRUGATED IRON FENCE	CIF	METAL RAILING FENCE	MPF
CLOSE BOARD FENCE	CBF	POST AND RAIL FENCE	PRF
CHAIN LINK FENCE	CLF	PICKET FENCE	PF
CHAETNUIT PAILING FENCE	CPF	POST AND RAIL FENCE	PRF
FENCE POST	FPO	SECURE POST AND RAIL FENCE	PWF
FLYING FENCE	FF	STEEL PALISADE SECURITY FENCE	SF
IRON RAILING FENCE	IRF	TUBULAR STEEL RAIL FENCE	TSRF

REV.	NOTES	DWN	DATE
A	----	---	--/--



Notes:

Grid and levels relate to OS GPS Active Network.
Sheet is North orientated unless stated.

Survey scale 1:200 Plot Scale 1:250

Maltby Surveys Ltd



SURVEYED	JF	CLIENT
DRAWN	JF	Remmus Homes Ltd
CHECKED	MT	
		SCALE
		1/250 (A1 Sheet)

Hilgay Cottage, Birchwood Grove Road, Burgess Hill, RH15 0D

TOPOGRAPHICAL SURVEY

Job No	Rev	Drawing Number
24/009	-	24/009/100
Date : Jan 2024		

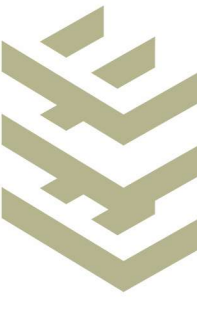
Appendix B

Proposed Site Layout



P3	30/10/24	Plot 1 position amended	JY	DP
P2	28/03/24	Highways Updates	JY	DP
P1	27/03/24	Issued for Planning	JY	DP

Rev	Date	Revision Details	Dr	Ch
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ECE Architecture
www.ecearchitecture.com



Job Title
Land at Hilgay Cottage, Burgess Hill

Drawing Title
Proposed Site Plan - Roof Level

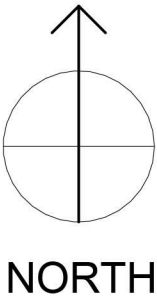
Scale
1:250 @ A1 / 1:500 @ A3

metres 5 10 15 20 25

Project	Drawing No	Rev
7441	PL 05	P3

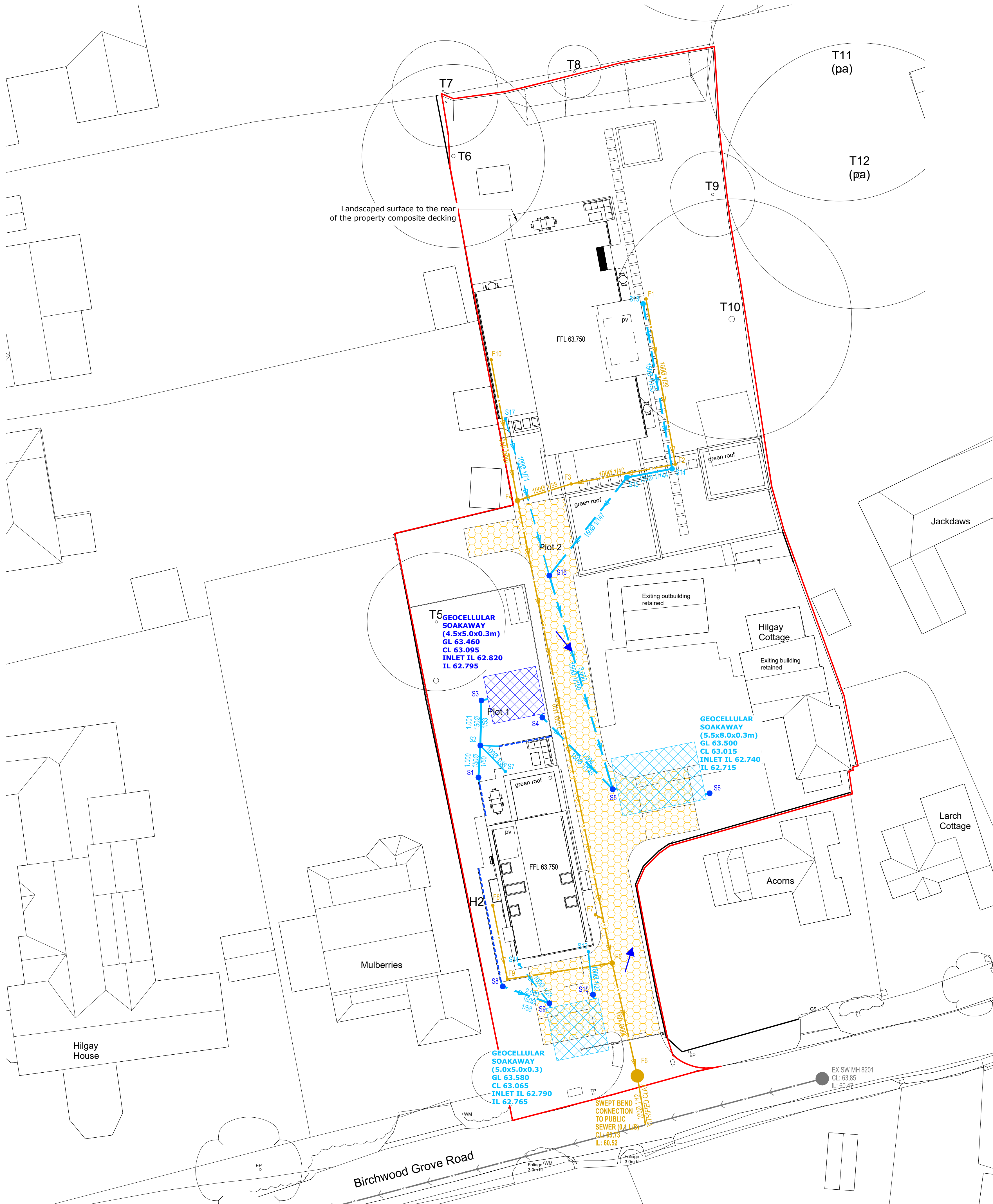
Status

FOR APPROVAL



Appendix C

Detailed Drainage Strategy and Standard Details Drawings



- Notes**
- All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
 - Any discrepancies shall be reported to the engineer immediately, so that clarification can be sought prior to the commencement of works.
 - This drawing shall be read in conjunction with all other relevant engineering details, drawings and specification.
 - The contractor is to keep a record of any variations made on site, including the relocation of sewers or drains, for their 'as built' drawings to be prepared upon project completion.
 - All works to adopted systems are to be carried out in accordance with Sewerage Sector Guidance Appendix C, Approved Version 2.1, 23 May 2021. All works to private drainage systems are to be in accordance with the Building Regulations Approved Document Part 'H' 2015 edition.
 - 900mm min cover to be provided for private pipes laid beneath agricultural land and public open space unless not practicable. 1200mm min cover to be provided for highways and parking areas with unrestricted access to vehicles with a gross vehicle weight in excess of 7.5 tonnes unless not practicable. Where unachievable, shallow private drains may require protection using ductile iron pipe, concrete surround or concrete slabs bridging the trench, subject to the HBC Inspector's requirements.
 - All pipes shall be laid soffit to soffit with outgoing pipes unless otherwise stated.
 - Manholes situated within areas accessible to motor vehicles are to be fitted with suitable strength covers and frames. Please refer to the manhole schedule for guidance on this.
 - This drawing has been based upon survey information supplied by Matby Surveys Ltd and Motion cannot guarantee the accuracy of the data provided.
 - Adjacent areas of handstanding will comply with building regulations and divert water away from the buildings.
 - The top surface of the pervious pavement should finish at least 150mm below any adjoining DPC level. Advice should always be sought from the manufacturer.
 - Linear drainage channels are required to convey surface water for up to the 100 year + 45% climate change critical flow rate. Construction details and supporting calculations are to be provided at the detailed design stage.
 - Please see Motion drawing number 2403090-0800-01-P01 [Standard Details]. Subject to detailed design.

- Legend**
- Planning Site Boundary
 - Proposed Type A total infiltration pervious pavement. Please see Motion drawing number 2403090-0800-01-P01 [Standard Details]. Subject to detailed design.
 - New Surface Water Linear Drainage with Sump Unit. Required to convey surface water for up to the 100 year + 45% climate change critical flow rate.
 - New Surface Water Catchpit Chamber. Please see Motion drawing number 2403090-0800-01-P01 [Standard Details]. Subject to detailed design.
 - Proposed Pervious Pavement Sub Grade Slope / Flow Route
 - Geocellular Soakaway - suitable for minimum 485mm cover. Please see Motion drawing number 2403090-0800-01-P01 [Standard Details]. Subject to detailed design.
 - Geocellular Soakaway - suitable for minimum 300mm cover. Please see Motion drawing number 2403090-0800-01-P01 [Standard Details]. Subject to detailed design.
 - New Surface Water Gravity Pipe
 - New Surface Water Manhole
 - New Foul Water Manhole
 - New Foul Water Gravity Pipe
 - Indicative Existing Southern Water Foul Sewer and Manhole

P03 Third Issue	EH	CG	JM	09/03/2026
P02 Second Issue	EH	CG	JM	06/03/2026
P01 First Issue	EH	CG	JM	02/03/2026
Rev. Description	Drm	Chk	App	Date

Drawing Status: **FOR PLANNING**
NOT FOR CONSTRUCTION



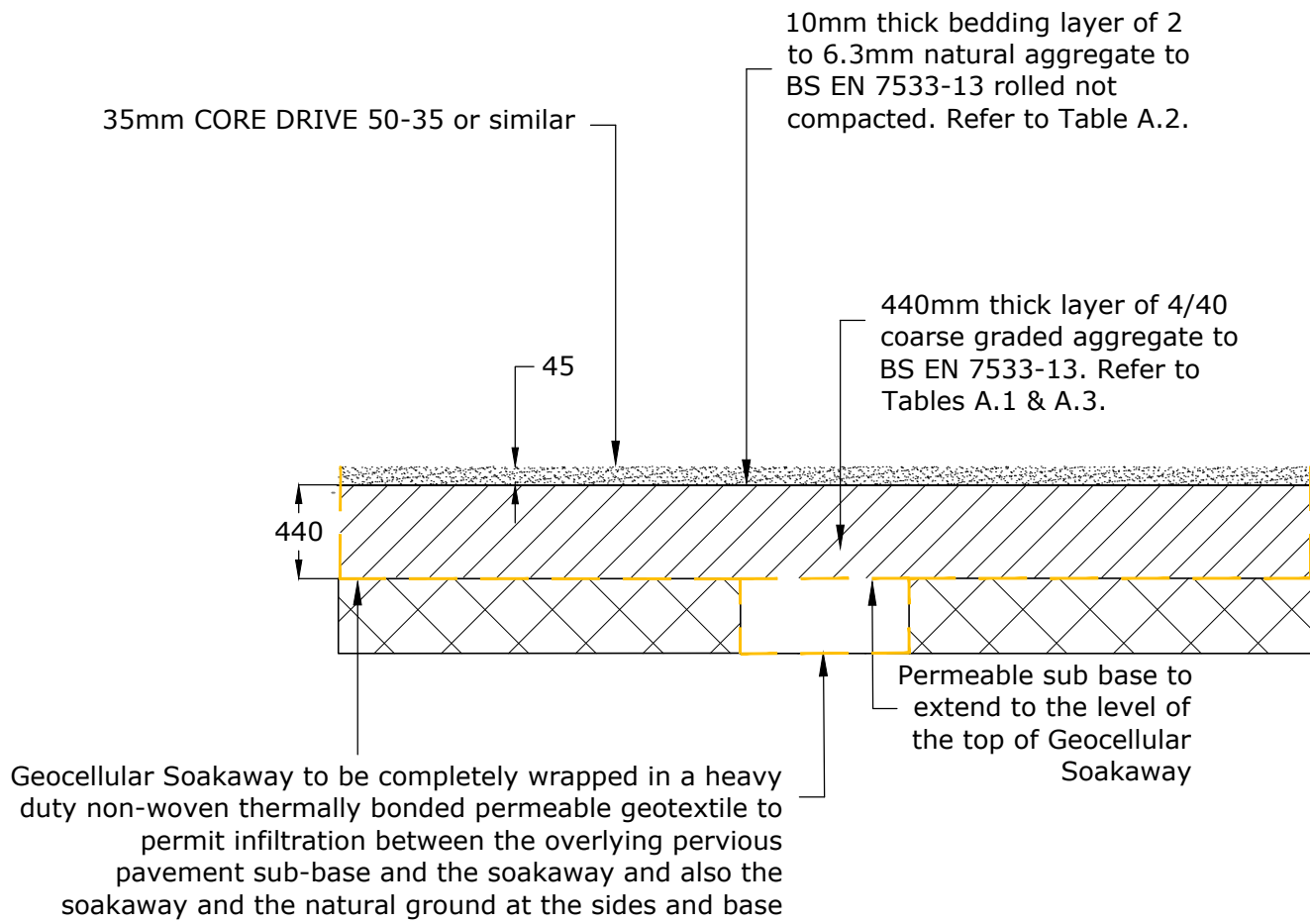
Client:
Remmus Designer Homes Ltd

Project:
Hilgay Cottage, Birdwood Grove Road, Burgess Hill RH15 0DL
Title:
Detailed Drainage Strategy

Scale: 1:200 (@ A1)
Drawing:
2403090-0501
Revision:
P03

C:\Users\jgray\Motion\StaffSite - 1\h2\2 2403090\Drawings\2403090-0501-P03 [Drainage Strategy].dwg

C:\Users\jcrow\Documents\StaffSite - 1\hub2_2403090\Drawings\2403090-0801-P01 [Detailed Drainage Strategy - Standard Details].dwg

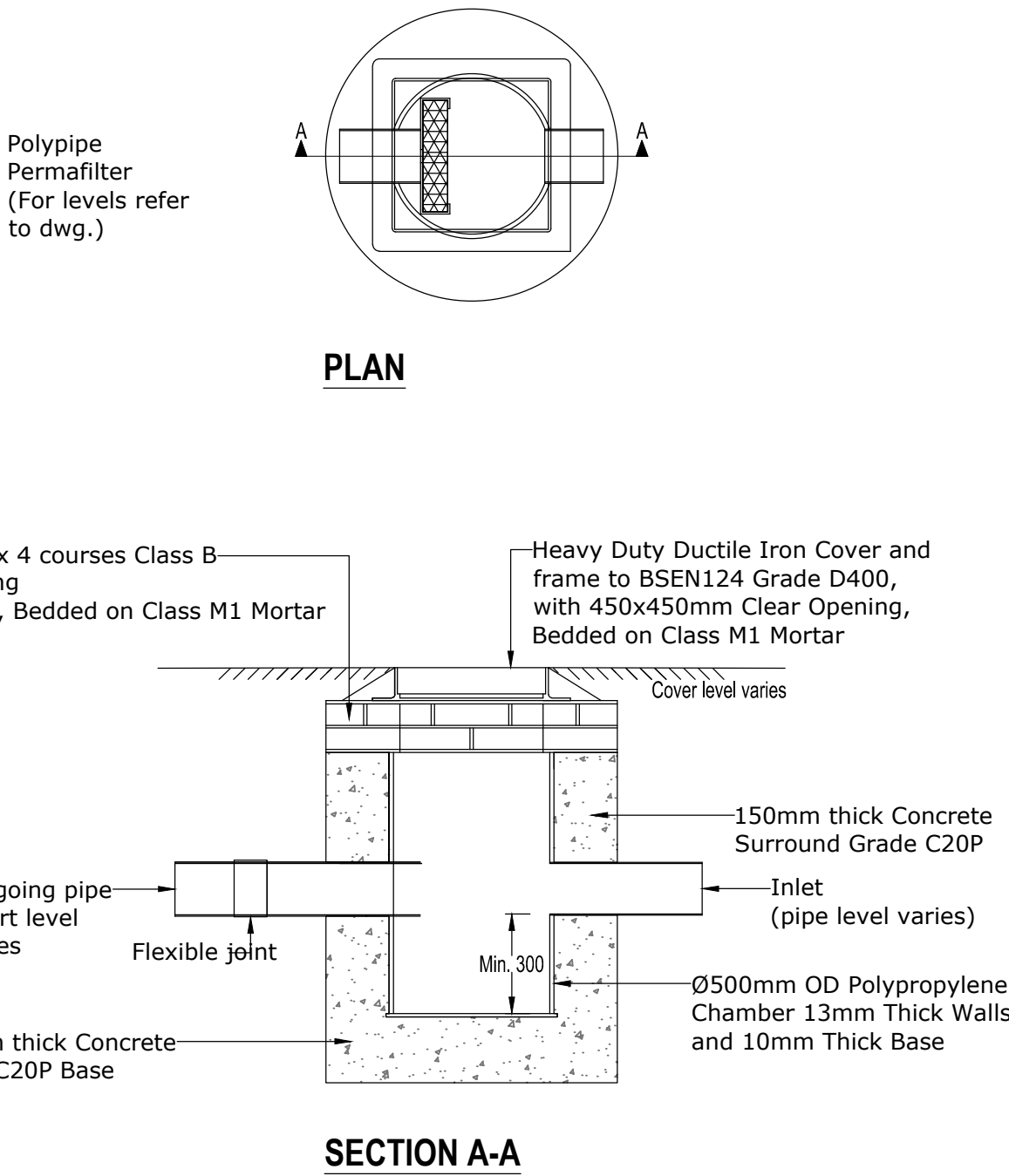


**Pervious Pavement Construction
Overlying Geocellular
Soakaway**

- Notes:
- Geocellular Soakaway to be suitable for minimum 485mm cover.
 -
 - Geocellular Soakaway to be completely wrapped in a heavy duty non-woven thermally bonded permeable geotextile to permit infiltration between the overlying pervious pavement sub-base and the soakaway and also the soakaway and the natural ground at the sides and base
 - Geocellular Soakaway completely wrapped in a heavy duty non-woven thermally bonded permeable geotextile to have 100mm Type 2/6mm Sharp Grit or Clean Sand Surround at the sides and base

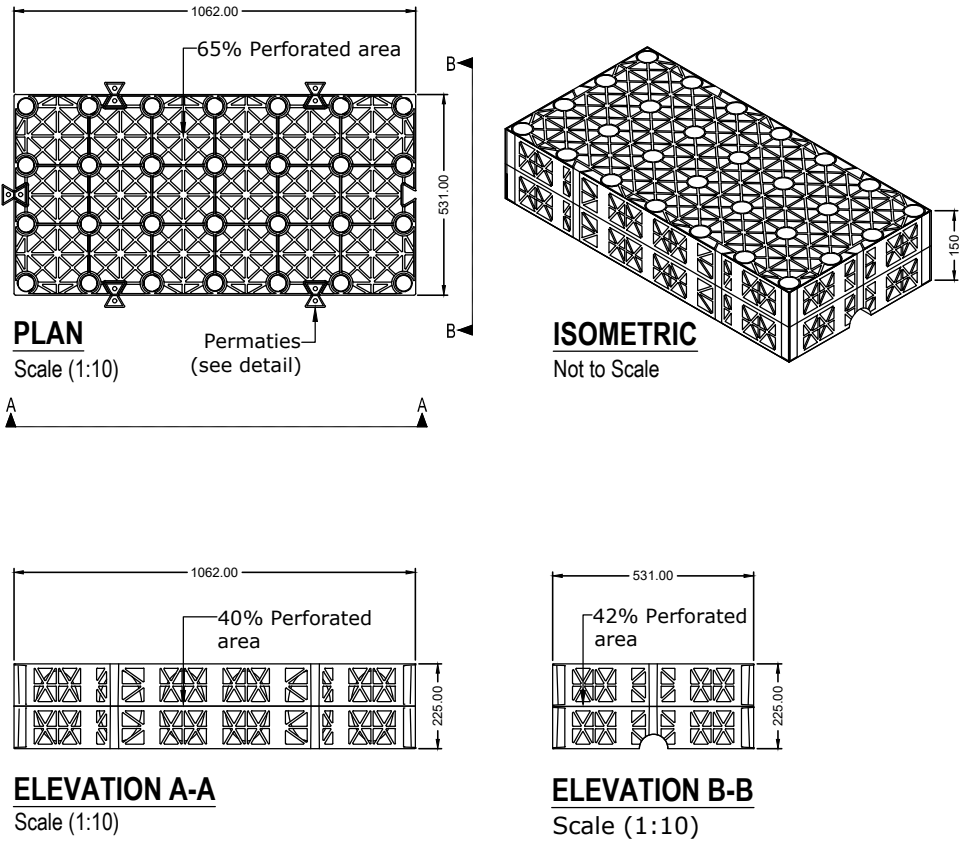
CBR Table 2	
CBR (%)	Capping Thickness (mm)
≤2.0	Subgrade improvement
2.0-3.0	Subgrade improvement layer (may be incorporated into capping layer to provide a total layer thickness of 350 mm)
3.0-4.0	225mm capping
4.0-5.0	150mm capping

- Notes:
- The contractor is to carry out CBR testing at formation levels. The results are to be issued to the Engineer in order to determine capping requirements.
 - For frost susceptible subgrade materials the minimum depth of construction shall be 450mm.
 - Table 2 is based on Interpave's design & construction of concrete block permeable pavements - 8.8 Adjustment for low CBR



Ø500mm POLYPIPE CATCHPIT INSPECTION CHAMBER

PERMATIE DETAIL



PERMAVOID 150mm UNIT
Product Code: (PVPP150)

- Notes
- All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
 -
 - Any discrepancies should be reported to the engineer immediately, so that clarification can be sought prior to the commencement of works.
 - This drawing should be read in conjunction with all other relevant engineering details, drawings and specification.

P01	First Issue	ST	CG	JM	06/03/2026
Rev.	Description	Drm	Chk	App	Date

Drawing Status:

**FOR PLANNING
NOT FOR CONSTRUCTION**



Client:
Remmus Designer Homes Ltd

Project:
Hilgay Cottage, Birdwood Grove Road, Burgess Hill
RH15 0DL

Title:
Detailed Drainage Strategy Standard Details

Scale: NTS (@ A1)

Drawing:
2403090-0801

Revision:
P01

Appendix D

Hydraulic Calculations

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
	Report Details: Type: Junctions Storm Phase: Phase		
84 North Street: Guildford GU1 4AU			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)	Lock
S8	Manhole	531831.981	118238.991	63.380	0.500	62.880	Circular	0.500	None
S9	Manhole	531836.376	118237.403	63.580	0.780	62.800	Circular	0.500	None
S1	Manhole	531829.703	118258.640	63.470	0.500	62.970	Circular	0.500	None
S2	Manhole	531829.880	118261.648	63.440	0.530	62.910	Circular	0.500	None
S3	Manhole	531829.980	118265.882	63.560	0.730	62.830	Circular	0.500	None
S4	Manhole	531835.713	118264.281	63.470	0.660	62.810	Circular	0.500	None
S16	Manhole	531836.365	118277.629	63.560	0.675	62.885	Circular	0.500	None
S5	Manhole	531842.326	118257.533	63.500	0.755	62.745	Circular	0.450	None

Inlets

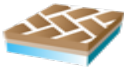
Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S8	Inlet	Catchment Area (1) Catchment Area (8)	(None)	No Restriction
S9	Inlet	2.000 Catchment Area	(None)	No Restriction
S1	Inlet	Catchment Area (2)	(None)	No Restriction
S2	Inlet	1.000	(None)	No Restriction
S3	Inlet	1.001	(None)	No Restriction
S4	Inlet	1.003	(None)	No Restriction
S16	Inlet	Catchment Area (4) Green Roof (2) Catchment Area (5)	(None)	No Restriction
S5	Inlet	1.004 3.000	(None)	No Restriction

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Junctions Storm Phase: Phase			
		84 North Street: Guildford GU1 4AU		

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S8	Outlet	2.000	Free Discharge
S9	Outlet	2.001	Free Discharge
S1	Outlet	1.000	Free Discharge
S2	Outlet	1.001	Free Discharge
S3	Outlet	1.002	Free Discharge
S4	Outlet	1.004	Free Discharge
S16	Outlet	3.000	Free Discharge
S5	Outlet	1.005	Free Discharge

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	84 North Street: Guildford GU1 4AU			



Porous Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	63.500
Depth (m)	0.485
Base Level (m)	63.015
Paving Layer Depth (mm)	35
Membrane Percolation (m/hr)	1.0
Porosity (%)	30
Length (m)	6.050
Long. Slope (1:X)	1000.00
Width (m)	51.235
Total Volume (m³)	41.846

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	84 North Street: Guildford GU1 4AU			

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Green Roof Green Roof (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.012
Safety Factor	1.5
Conductivity (m/hr)	10.8

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	63.020
Depth (m)	0.300
Base Level (m)	62.715
Number of Crates Long	8
Number of Crates Wide	11
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.15
Total Volume (m³)	12.545

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	1.005
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Advanced

Base Infiltration Rate (m/hr)	0.012
Side Infiltration Rate (m/hr)	0.012
Safety Factor	1.5

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				



Cellular Storage (1)

Type : Cellular Storage

Dimensions

Exceedance Level (m)	63.070
Depth (m)	0.300
Base Level (m)	62.765
Number of Crates Long	5
Number of Crates Wide	10
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.15
Total Volume (m³)	7.130

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	2.001
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Advanced

Base Infiltration Rate (m/hr)	0.012
Side Infiltration Rate (m/hr)	0.012
Safety Factor	1.5

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	84 North Street: Guildford GU1 4AU			



Cellular Storage (2)

Type : Cellular Storage

Dimensions

Exceedance Level (m)	63.100
Depth (m)	0.300
Base Level (m)	62.795
Number of Crates Long	5
Number of Crates Wide	9
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.15
Total Volume (m³)	6.418

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	1.002
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	1.003
Outlet Type	Free Discharge

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Manhole Schedule Storm Phase: Phase			
		84 North Street: Guildford GU1 4AU		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S8	63.380 62.880	Diameter / Length: 0.500					Manhole
E:531831.981 N:118238.991	0.500		{a} 2.000	Pipe	62.880	Diam/Width:150	Not Applicable
S9	63.580 62.800	Diameter / Length: 0.500	{1} 2.000	Pipe	62.800	Diam/Width:150	Manhole
E:531836.376 N:118237.403	0.780		{a} 2.001	Pipe	62.800	Diam/Width:150	Not Applicable
S1	63.470 62.970	Diameter / Length: 0.500					Manhole
E:531829.703 N:118258.640	0.500		{a} 1.000	Pipe	62.970	Diam/Width:150	Not Applicable

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Manhole Schedule Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S2	63.440 62.910	Diameter / Length: 0.500	{1} 1.000	Pipe	62.910	Diam/Width:150	Manhole
E:531829.880 N:118261.648	0.530		{a} 1.001	Pipe	62.910	Diam/Width:150	Not Applicable
S3	63.560 62.830	Diameter / Length: 0.500	{1} 1.001	Pipe	62.830	Diam/Width:150	Manhole
E:531829.980 N:118265.882	0.730		{a} 1.002	Pipe	62.830	Diam/Width:150	Not Applicable
S4	63.470 62.810	Diameter / Length: 0.500	{1} 1.003	Pipe	62.810	Diam/Width:150	Manhole
E:531835.713 N:118264.281	0.660		{a} 1.004	Pipe	62.810	Diam/Width:150	Not Applicable

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Manhole Schedule Storm Phase: Phase			
		84 North Street: Guildford GU1 4AU		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S16	63.560 62.885	Diameter / Length: 0.500					Manhole
E:531836.365 N:118277.629	0.675		{a} 3.000	Pipe	62.885	Diam/Width:150	Not Applicable
S5	63.500 62.745	Diameter / Length: 0.450	{1} 1.004	Pipe	62.745	Diam/Width:150	Manhole
E:531842.326 N:118257.533	0.755		{2} 3.000	Pipe	62.745	Diam/Width:150	
			{a} 1.005	Pipe	62.745	Diam/Width:150	Not Applicable

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase	84 North Street: Guildford GU1 4AU		



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S9		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (1)	S8		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (2)	S1		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (3)	Porous Paving		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (4)	S16		Time of Concentration	0.021	100	0	100	0.021
Catchment Area (5)	S16		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	Porous Paving		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (8)	S8		Time of Concentration	0.004	100	0	100	0.004
Green Roof	Porous Paving		Green Roof	0.002		0		0.002
Green Roof (1)	Porous Paving		Green Roof	0.006		0		0.006
Green Roof (2)	S16		Green Roof	0.003		0		0.003
TOTAL		0.0		0.083				0.083

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Details: Type: Network Design Criteria Storm Phase: Phase	84 North Street: Guildford GU1 4AU			

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	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

Manhole Options

Apply Offset	☐
--------------	--------------------------

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Network Design Criteria Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	84 North Street: Guildford GU1 4AU			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Shortest
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	84 North Street: Guildford GU1 4AU			

FEH

Type: FEH

Site Location	GB 532100 119050 TQ 32100 19050	
Rainfall Version	2013	
Data Type	Catchment	
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	720
480	960
600	1200
720	1440
960	1920
1440	2880

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Phase	84 North Street: Guildford GU1 4AU			



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
S8	FEH: 2 years: +0 %: 15 mins: Winter	63.380	62.880	62.900	0.020	0.9	0.004	0.000	0.9	0.422	OK
S9	FEH: 2 years: +0 %: 360 mins: Winter	63.580	62.800	62.846	0.046	0.4	0.009	0.000	0.4	3.155	OK
S1	FEH: 2 years: +0 %: 15 mins: Winter	63.470	62.970	62.979	0.009	0.2	0.002	0.000	0.1	0.071	OK
S2	FEH: 2 years: +0 %: 15 mins: Winter	63.440	62.910	62.918	0.008	0.1	0.002	0.000	0.1	0.070	OK
S3	FEH: 2 years: +0 %: 30 mins: Winter	63.560	62.830	62.839	0.009	0.1	0.002	0.000	0.1	0.099	OK
S4	FEH: 2 years: +0 %: 360 mins: Winter	63.470	62.810	62.830	0.020	0.1	0.004	0.000	0.0	0.546	OK
S16	FEH: 2 years: +0 %: 15 mins: Winter	63.560	62.885	62.940	0.055	4.1	0.011	0.000	4.0	1.990	OK
S5	FEH: 2 years: +0 %: 360 mins: Winter	63.500	62.745	62.830	0.085	0.9	0.013	0.000	0.8	7.479	OK

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	84 North Street: Guildford GU1 4AU		





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
S8	FEH: 30 years: +40 %: 720 mins: Winter	63.380	62.880	63.030	0.150	0.3	0.029	0.000	0.3	4.399	OK
S9	FEH: 30 years: +40 %: 720 mins: Winter	63.580	62.800	63.030	0.230	0.5	0.045	0.000	0.5	9.112	Surcharged
S1	FEH: 30 years: +40 %: 960 mins: Winter	63.470	62.970	63.009	0.039	0.0	0.008	0.000	0.0	0.888	OK
S2	FEH: 30 years: +40 %: 960 mins: Winter	63.440	62.910	63.009	0.099	0.0	0.019	0.000	0.0	0.883	OK
S3	FEH: 30 years: +40 %: 960 mins: Winter	63.560	62.830	63.009	0.179	0.0	0.035	0.000	0.0	0.797	Surcharged
S4	FEH: 30 years: +40 %: 960 mins: Winter	63.470	62.810	63.009	0.199	0.6	0.039	0.000	0.0	6.688	Surcharged
S16	FEH: 30 years: +40 %: 960 mins: Winter	63.560	62.885	63.009	0.124	1.0	0.024	0.000	1.0	23.394	OK
S5	FEH: 30 years: +40 %: 960 mins: Winter	63.500	62.745	63.009	0.264	1.0	0.042	0.000	0.7	25.446	Surcharged

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	84 North Street: Guildford GU1 4AU		





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
S8	FEH: 100 years: +45 %: 960 mins: Winter	63.380	62.880	63.140	0.260	0.3	0.051	0.000	0.2	6.084	Flood Risk
S9	FEH: 100 years: +45 %: 960 mins: Winter	63.580	62.800	63.140	0.340	0.5	0.067	0.000	0.5	12.669	Surcharged
S1	FEH: 100 years: +45 %: 1440 mins: Winter	63.470	62.970	63.129	0.159	0.0	0.031	0.000	0.0	1.340	Surcharged
S2	FEH: 100 years: +45 %: 1440 mins: Winter	63.440	62.910	63.129	0.219	0.0	0.043	0.000	0.0	1.328	Surcharged
S3	FEH: 100 years: +45 %: 1440 mins: Winter	63.560	62.830	63.129	0.299	0.1	0.059	0.000	0.0	1.263	Surcharged
S4	FEH: 100 years: +45 %: 1440 mins: Winter	63.470	62.810	63.129	0.319	0.5	0.063	0.000	0.1	10.609	Surcharged
S16	FEH: 100 years: +45 %: 1440 mins: Winter	63.560	62.885	63.129	0.244	1.0	0.048	0.000	1.0	34.150	Surcharged
S5	FEH: 100 years: +45 %: 1440 mins: Winter	63.500	62.745	63.129	0.384	1.0	0.061	0.000	0.7	37.517	Surcharged

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		
84 North Street: Guildford GU1 4AU			



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. Resident 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 (%)
Porous Paving	FEH: 2 years: +0 %: 120 mins: Winter	63.065	63.035	0.044	0.020	2.2	2.909	0.000	7.041	0.0	0.000		93.048
Cellular Storage	FEH: 2 years: +0 %: 360 mins: Winter	62.830	62.830	0.115	0.115	0.8	4.792	0.000	4.336	0.0	0.004		61.803
Cellular Storage (1)	FEH: 2 years: +0 %: 360 mins: Winter	62.846	62.846	0.081	0.081	0.4	1.914	0.000	2.438	0.0	0.000		73.151
Cellular Storage (2)	FEH: 2 years: +0 %: 360 mins: Winter	62.825	62.825	0.030	0.030	0.1	0.646	0.000	0.000	0.0	0.091		89.934

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				

Status
OK
OK
OK
OK

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		
84 North Street: Guildford GU1 4AU			





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. Resident 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 (%)
Porous Paving	FEH: 30 years: +40 %: 180 mins: Winter	63.221	63.126	0.200	0.111	4.8	14.469	0.000	14.567	0.0	0.000		65.423
Cellular Storage	FEH: 30 years: +40 %: 960 mins: Winter	63.009	63.009	0.294	0.294	0.7	12.305	0.000	12.520	0.0	0.000		1.910
Cellular Storage (1)	FEH: 30 years: +40 %: 720 mins: Winter	63.030	63.030	0.265	0.265	0.5	6.282	0.000	5.402	0.0	0.000		11.888
Cellular Storage (2)	FEH: 30 years: +40 %: 960 mins: Winter	63.009	63.009	0.214	0.214	0.6	4.583	0.000	0.000	0.0	2.297	680	28.592

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				

Status
OK
OK
OK
OK

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026		
	Designed by: Chris Gray	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	84 North Street: Guildford GU1 4AU		





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. Resident 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 (%)
Porous Paving	FEH: 100 years: +45 %: 240 mins: Winter	63.295	63.183	0.274	0.168	5.1	20.516	0.000	19.479	0.0	0.000		50.974
Cellular Storage	FEH: 100 years: +45 %: 1440 mins: Winter	63.129	63.129	0.414	0.414	0.7	17.092	4.532	19.208	0.0	0.000		-36.248
Cellular Storage (1)	FEH: 100 years: +45 %: 960 mins: Winter	63.140	63.140	0.375	0.375	0.5	8.789	1.650	7.481	0.0	0.000		-23.266
Cellular Storage (2)	FEH: 100 years: +45 %: 1440 mins: Winter	63.129	63.129	0.334	0.334	0.5	7.034	0.608	0.000	0.1	3.762		-9.601

Land at Hilgay Cottage, Burgess Hill:	Date: 06/03/2026			
	Designed by: Chris Gray	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase			
84 North Street: Guildford GU1 4AU				

Status
OK
Flood
Flood
Flood

Appendix E

Southern Water Wastewater Plan



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Date: 26/03/24

Scale: 1:1250

Map Centre: 531836,118278

Data updated: 12/01/24

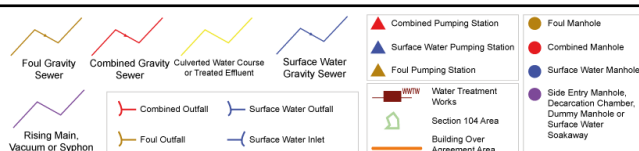
Our Ref: 1431133 - 1

Wastewater Plan A4

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2024 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.



cgray@motion.co.uk

Hilgay Cottage



Appendix F

Drainage Management and Maintenance Plan



Land Adjacent To Hilgay Cottage, Birchwood
Grove Road,
Burgess Hill, West Sussex, RH15 0DL

Drainage Management & Maintenance Plan

For

Remmus Designer Homes

Document Control Sheet

Land Adjacent To Hilgay Cottage, Birchwood Grove Road,
Burgess Hill, West Sussex, RH15 0DL

Remmus Designer Homes

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
06/02/2026	Final	Chris Gray	Jason Morgans
09/02/2026	Final B	Chris Gray	Jason Morgans



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2.0	Maintenance Categories	3
3.0	The Surface Water Drainage System	4
4.0	General Maintenance Principles	5
5.0	Inspection and Maintenance Frequency of Components	7

1.0 Introduction

- 1.1 This document sets out the principles for the long-term management and maintenance of the proposed surface water drainage system at the Land Adjacent To Hilgay Cottage Development.
- 1.2 The purpose of this document is to ensure that Remmus Designer Homes or their agents have a robust inspection and maintenance plan going forwards. This ensures the optimum operation of the surface water drainage system and that it will be continually maintained for the lifetime of the development. This will contribute to reducing the risk of surface water flooding both on- and off-site.
- 1.3 All those responsible for maintenance should follow relevant health and safety legislation for all activities listed within this report (including lone working, if relevant). Method statements and risk assessments should always be undertaken and made available, if requested.
- 1.4 This document has been produced by Motion on behalf of their client, Remmus Designer Homes. This document describes the typical management and maintenance tasks that are known at the outline design stage (maintenance frequencies and typical tasks, for example). These have been drawn from industry guidance such as CIRIA C753 - The SuDS Manual – and manufacturer's own guidance.
- 1.5 Maintenance is considered as a construction activity under the CDM Regulations 2015. Under the CDM Regulations, it is a requirement that a competent person be appointed to carry out a required role. CDM defines a competent person as an individual with sufficient knowledge of the specific tasks to be undertaken, as well as sufficient experience and ability to carry out their duties in relation to the task in a way that secures health and safety on site.
- 1.6 In recognition of the requirements of the CDM Regulations 2015, this surface water management and maintenance plan expects that the maintenance work will be carried out by a competent person who must have prior knowledge of the drainage components and SuDS systems on site.
- 1.7 There are limitations on what this document can prescribe at this time. At this stage this document cannot name the specific individuals who will carry out the maintenance and what equipment is to be used. Related to this, this document is unable to provide method statements for exactly how maintenance practices will be carried out. These can only be determined at the time of the maintenance being carried out and the exact maintenance need. Therefore, this is to be the responsibility of Remmus Designer Homes and/or the individuals carrying out the work. We urge those who are carrying out the maintenance to record this information and make it available to the Local Planning Authority (LPA), if required to do so. This drainage management and maintenance plan needs to be a living document that is owned and maintained by the adopting Remmus Designer Homes. The intention of the report is to set out the principles for the long-term management and maintenance of the proposed surface water drainage system at the Land Adjacent To Hilgay Cottage Development.

2.0 Maintenance Categories

2.1 There are three categories of maintenance activities referred to in this report. These are:

Regular maintenance (including inspections and monitoring)

- ▶ Regular maintenance consists of basic tasks done on a frequent and predictable schedule, including inspections, vegetation management, and litter, silt and debris removal.

Occasional maintenance

- ▶ Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example).

Remedial maintenance

- ▶ Remedial maintenance comprises of intermittent tasks that may be required to rectify faults associated with the system. The likelihood of faults can be minimised by correct installation, regular inspection and timely maintenance. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events and, as such, timings are difficult to predict.
- ▶ This document should be read in conjunction with the design drawings of the drainage system, so that the location and type of each feature can be recognised and understood.

3.0 The Surface Water Drainage System

- 3.1 The proposed surface water drainage system is made up of a number of components. These include:
- ▶ Pervious paving
 - ▶ Geocellular soakaways
 - ▶ Catchpit Manholes / Silt Traps / Linear Drainage Channel Sump Units
 - ▶ Water Butts
 - ▶ Manholes
 - ▶ Pipes / Linear Drainage Channels.
- 3.2 All components should be installed in accordance with the manufacturer's instructions and to the levels/arrangement as defined on the designer's drawings. Not doing so will invalidate any warranty provided by the manufacturer.
- 3.3 All maintenance and cleaning must be carried out in accordance with manufacturer's recommendations and by competent and suitably qualified staff, as defined in the CDM regulations 2015.

4.0 General Maintenance Principles

- 4.1 All surface water drainage systems, whether piped gravity systems, Sustainable Drainage Systems (SuDS), or flow control devices and pumps, require regular maintenance to keep them working at optimum efficiency and capacity. The maintenance of the surface water drainage system on the development should be carried out alongside other regular maintenance tasks on site.
- 4.2 Timely and adequate maintenance will increase the lifespan of all the drainage components. Inadequate maintenance will do the reverse. Therefore, the projected lifespan and anticipated replacement date of each drainage component cannot be forecast at the time of this document being produced.
- 4.3 Remmus Designer Homes and/or their agents are responsible for the maintenance of the surface water drainage system.
- 4.4 Construction activities can create and discharge significant quantities of sediment that will quickly clog the surface water drainage system. Therefore, construction-stage sediment removal is required immediately post-construction. This may require several cleans of the system during the first year after installation. The construction site manager should assess this and carry out cleaning as necessary.
- 4.5 Catchpit manholes/silt traps will be specified upstream of the SuDS. They will remove gross solids and the majority of silts. It is important that any debris build-up in the catchpit manholes/silt traps is removed at regular intervals. This will reduce the risk of the Pervious paving becoming silted up. It will maintain its design capacity and function.
- 4.6 Cleaning should also take place after large storms when there have been increased surface water flows and visible entrainment and deposition of debris.
- 4.7 An increased frequency of inspection and maintenance should be programmed into the autumn and winter months in acknowledgement that:
 - ▶ Leaf fall from deciduous trees in autumn will result in an increased amount of leaf litter and an elevated blockage risk of drainage infrastructure.
 - ▶ Increased rainfall during winter months will result in greater quantities of water moving through the drainage system and a greater input of silt and other debris.
- 4.8 Table 4.1, below, gives an overview of typical maintenance tasks and the frequency with which they need to be undertaken. Section 5 – Inspection and Maintenance Frequency of Components – will assign typical maintenance frequencies and tasks to the specific components used within the surface water drainage system used on the development.

Table 4.1: Typical maintenance tasks and frequencies

Activity	Indicative Frequency	Typical Tasks
Routine/regular maintenance	Monthly to annually	▶ Litter picking ▶ Silt removal ▶ Inspection of all inlets, outlets and control structures ▶ Weed removal and invasive plant control
Occasional maintenance	Annually up to 25 years	▶ Silt control around components ▶ Vegetation management around components ▶ Sweeping of pavement areas to remove surface silt ▶ Silt removal from catchpits, cellular storage structures
Remedial maintenance	As required	▶ Inlet/outlet repairs ▶ Erosion repairs ▶ Reinstatement of edgings ▶ Reinstatement following pollution ▶ Removal of silt build-up and leaf litter after storms ▶ Repair of vandalism ▶ Replacement of any blocked filter membranes/materials

5.0 Inspection and Maintenance Frequency of Components

- 5.1 Table 5.1 below lists each of the components used within the site's surface water drainage system. It suggests an indicative maintenance frequency for each component and ascribes typical maintenance tasks to them.
- 5.2 This list is not exhaustive, nor is it prescriptive. As mentioned in Section 3, additional, unscheduled maintenance may be required following adverse weather conditions or after autumn leaf falls. Additional maintenance tasks may be required to adequately clean and maintain individual components.
- 5.3 The list of components should be cross-referenced with the designer's drawings so that the location of each component can be identified.
- 5.4 It is the responsibility of Remmus Designer Homes and/or their agents to ensure that all necessary maintenance activities are carried out in a timely manner and that the design performance of each drainage component is preserved.
- 5.5 If there is any uncertainty regarding the correct and safe methods of cleaning, or what equipment should be used, the manufacturer should be consulted.
- 5.6 Upon completion of maintenance activities, a record should be kept of the work carried out. This should be retained and an annual maintenance report should be compiled, which should include the following:
- ▶ Observations resulting from inspections
 - ▶ Maintenance and operation activities undertaken during the year
 - ▶ Recommendations for inspections and maintenance programmes for the following year
- 5.7 On the last page is a table with suggested information should be recorded and included with the maintenance plan. As mentioned in the introduction to this document, this should be a living document and regularly updated, as required.
- 5.8 The Local Planning Authority Mid Sussex District Council may request to check and sign off any maintenance activities. Therefore, it is recommended that the LPA is contacted prior to any scheduled routine maintenance. Also, with reference to Table 5.1, the annual maintenance report, including a completed version of the table on the last page, should be offered to the LPA for their records and approval.

Table 5.1: Maintenance Frequency and Task for Drainage Components

Activity	Indicative Frequency	Anticipated Tasks
Pipes / Linear Drainage Channels	As required. It is recommended that the rate of sediment accumulation is inspected monthly and after storm events to establish the appropriate frequency of sediment removal.	▶ Identify any pipes/channels that may not be operating properly and employ a competent, qualified contractor to inspect using CCTV. ▶ If the pipe/channel is blocked with silt or debris, the pipe/channel should be jetted clean from an upstream access point. All silt and debris should be captured and removed at a downstream access point. ▶ Clear perforated pipework of blockages ▶ Inspect once clean. ▶ If any other defects are encountered (cracks, displaced joints), appropriate solutions should be discussed with a competent and qualified contractor. These services are usually provided

		by the same companies that offer CCTV surveys and pipe jetting services.
Manholes	Annually	▶ Inspect/identify any damage or areas that are not operating correctly. ▶ Remove silt, litter, leaves and other detritus. ▶ Inspect once clean.
Catchpit Manholes / Silt Traps / Linear Drainage Channel Sump Units	As required. It is recommended that the rate of sediment accumulation is inspected monthly and after storm events to establish the appropriate frequency of sediment removal.	▶ Inspect/identify any damage or areas that are not operating correctly ▶ Remove silt, litter, leaves and other detritus. ▶ Inspect once clean.
Geocellular soakaways	Every three months for the first year, then annually thereafter	▶ Contact manufacturer for instruction on approved and safe inspection and maintenance practices ▶ Inspect/identify any areas that are not operating correctly ▶ Remove debris from catchment surface ▶ Remove sediment from pre-treatment structures ▶ Check for silt build-up and flush and remove as required (in accordance with manufacturer's instructions). ▶ Inspect once clean. ▶ See Table 21.3 of CIRIA C753 for more information. ▶ Most geocellular units have a 60 year creep limited life expectancy, so they should be planned for replacement by 2081 (approx.).
Water Butts	Annually in Autumn to Winter	▶ Remove falling leaves and seeds from guttering or those that have found their way into the water butt. ▶ Water may stagnate slightly. If so, use a water butt cleaning disc into the tank. ▶ In autumn and winter, drain water off every 10 days (or less) to make sure that water butts don't overflow and that water is kept moving. This will stop larvae and flies from using the water butt. ▶ Use safe products such as vinegar to clean the outside of the tank and the inside of the lid and be careful not to contaminate water with chemicals. ▶ At least once a year, completely empty the water butt and scrub it out with warm soapy water and then rinse thoroughly. This is best done at a time when the water butt is already nearly empty (end of summer) or when it can readily refill (winter).
Pervious paving	Once a year after autumn leaf fall, or reduced frequency as required, based on site-specific observations of	▶ Remove litter including leaf litter and debris from surface and agitate surface to ensure no vegetation or moss is allowed to establish and grow.

	clogging or manufacturer's recommendations.	▶ Locally refill with the correct aggregate once a year or as appropriate ▶ Remove weeds from the surface through the application of glyphosate-based weed killers ▶ Stabilise and mow contributing and adjacent areas. ▶ Inspect once clean. ▶ See Table 20.15 of CIRIA C753 for more information. ▶ Major oil spills have the potential to contaminate the surface and the underlying crushed stone. In the event of a major oil spill, the area of crushed stone that is affected should be removed, cleaned and reinstalled.
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Date	Component requiring maintenance	Issues prompting maintenance	Scheduled maintenance (Y/N)	Maintenance carried out	Additional works required (Y/N). If yes, please detail	Next scheduled date of inspection and maintenance