MERIDIAN

CIVIL ENGINEERING CONSULTANCY

LAND AT ST MARY CHURCH HALL
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DISCHARGE OF CONDITION

JUNE 2026

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April 2026

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Client : Woodmans Group

Rev	Date	Prepared by	Checked by	Approved by
-	21/05/26	GH	SL	MN
P1	17/06/26	GH	SL	MN
P2	08/09/26	MN		
P3	21/10/26	MN		

P3 – Updated section on attenuation crate management and maintenance

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1.0 INTRODUCTION

1.1 Meridian Civil Engineering Consultancy LTD (MCEC) has been instructed by Woodmans Group to prepare a Detailed Drainage for Discharge of Condition for the development at Land at St Marys Church Hall 25 East Street and 1 and 1a New Road Shoreham-By-Sea, West Sussex. Planning ref: AWDM/0082/26 with Adur District Council.

1.2 The proposals are for change of use to provide a mixed use with a new church/community hall and parish office, and 7 no. residential units (comprising 5 houses and 2 flats). Includes partial demolition at rear, replacement roof and new rear roof extensions, rear extension, new glazing and door/window openings and removal of shopfronts. Currently the site is an existing building wholly hard surfaced including external areas.

1.3 This detailed design has been produced to address planning condition 7 and 8 relating to planning permission AWDM/0082/26. SuDS are provided in the form of permeable areas to amenity areas. No specific attenuation is proposed as the proposed drained area is less than existing. The principle of this strategy, submitted as part of the approved planning application, has been used to inform this detailed design. The conditions can be seen as extracted below:

1.4 Condition 7 relating to drainage states:

Construction shall not begin until a detailed surface water drainage scheme for the site has been submitted to and approved in writing by the Local Planning Authority. The surface water drainage scheme must prioritise the use of source control Sustainable Drainage Systems (SuDS) in consideration of the Non-Statutory Technical Standards for SuDS and demonstrate no increase in flood risk as a result of the Proposed Development with sufficient supporting evidence provided to Ref: AWDM/0082/26 support its viability including supporting calculations for the 100% AEP (1 in 1 year), 3.33% AEP (1 in 30 year), 3.33% AEP (1 in 30 year) plus climate change, the 1% AEP (1 in 100 year) and the 1% AEP (1 in 100) plus climate change critical storms. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed.

***Reason:** To ensure the flood risk is adequately addressed and not increased in accordance with the NPPF and Policy 36 of the Adur Local Plan.*

1.5 Condition 8 relating to drainage states:

The development hereby approved shall not be occupied until details of the maintenance and management of the sustainable drainage scheme have been submitted to and approved in writing by the Local Planning Authority. The drainage scheme shall be implemented prior to the first occupation of the development hereby approved and thereafter managed and maintained in accordance with the approved details in perpetuity. The Local Planning Authority shall be granted access to inspect the sustainable drainage scheme for the lifetime of the development. The details of the scheme to be submitted for approval shall include:

I. A timetable for its implementation.

II. Details of SuDS feature and connecting drainage structures and maintenance requirement for each aspect including a drawing showing where they are located.

III. A management and maintenance plan for the lifetime of the development which shall include details of design life and the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime. This will include the name and contact details of any appointed management company.

***Reason:** To ensure that the development achieves a high standard of sustainability and to ensure the flood risk is adequately addressed for each new dwelling and not increased in accordance with the NPPF and Policy 36 of the Adur Local Plan*

1.6 MCEC have created a network model to assess the required storage capacities for the proposed development. The rainfall model used for detailed storage calculations is the FEH22 rainfall model. Storms have been modelled up to, and including, the 1in100yr rainfall event with 45% climate change allowance in accordance with best practice. The drainage network model proposed has been designed in accordance with the principles outlined within the approved drainage strategy document at planning. Calculations have been run with a CV of 1.0 as requested by ADCs consultants.

1.7 Proposals show alterations to the rear of the townhouses and plot 5. In accordance with the approved strategy the proposals are for surface water from the altered roofs and rear area to be routed to the existing outfall close to the NW corner.

1.8 This is known to run to the Southern Water public combined sewer in East Street. None of the drainage upstream of the outfall is to be used as it is in too poor condition. In accordance with the approved strategy the proposals show foul water routed to the rear with a connection to the combined outfall.

1.9 Proposals show a reduction in hard surface on this site with introduction of permeable paving and permeable rear garden areas which will help reduce runoff generated from the development.

1.10 Proposals show the rear of the townhouses (plots 1-4) and the whole roof over plot 5 drained by an attenuation tank in the rear of the proposed development. Other roof areas are unaffected by proposals and are to drain as existing. The tank has been modelled with a plan area of $15m^2$ and a depth of 0.3m providing a storage volume of $4.27m^3$. Additionally there is permeable paving to patios shown in the rear yard and this is shown to offer additional storage with a permeable sub base 350mm thk. To be conservative the whole rear yard has been shown to drain to the sewer network but some areas will be landscaped/permeable.

1.11 A hydrobrake is proposed to limit flows to 2l/s for all events up to and including the 1in100 year +45%CC in accordance with requests from southern water. The hydrobrake has been modelled with a design depth of 1.35m and a design aperture of 63mm.

1.12 Following conversations and alterations to the design to accommodate their comments Southern Water have confirmed they are happy with the proposals and have provided a formal Section 106 agreement based on the design.

1.13 Flow drainage calculations for both existing and proposed scenarios are shown in Appendix III. In accordance with the approved strategy, the proposed runoff rate and volume is reduced compared to existing, due to the reduced contributing area and the rear townhouse drained to an attenuation tank and flow controlled by a hydrobrake manhole.

2.0 POLICY COMPLIANCE

2.1 The purpose of this assessment is to demonstrate that the development proposal outlined above can be satisfactorily accommodated without worsening flood risk for the area and without placing the development itself at risk of flooding, as per the:

- National Planning Policy Framework (NPPF)
- The National Planning Policy Guidance (NPPG)
- Adur District Council SFRA
- DEFRA Sustainable drainage systems: non-statutory technical standards
- Ciria SuDS Manual C753

3.0 SUSTAINABLE URBAN DRAINAGE (SUDS) ASSESSMENT

3.1 In accordance with the SuDS management train approach, the use of various SuDS measures to reduce and control surface water flows have been considered in detail for the development.

3.2 The management of surface water has been considered in respect to the SuDS hierarchy below as detailed in the CIRIA 753 'The SUDS Manual', Section 3.2.3

The SUDS Drainage Hierarchy				
			Suitability	Comment
↓	1.	Store rainwater for later use	✓	Rainwater harvesting should be considered by the developer and could be used where feasible in the form of water butts
↓	2.	Use infiltration techniques, such as porous surfaces in non-clay areas	✓	In accordance with the approved strategy it is proposed the external areas are of self-draining permeable construction.
↓	3.	Attenuate rainwater in ponds or open water features for gradual release	x	Insufficient space on site to accommodate open water SuDS features.
↓	4.	Attenuate rainwater by storing in tanks or sealed water features for gradual release	x	Not required.
↓	5.	Discharge rainwater direct to a watercourse	x	Unsuitable as there are no watercourses in a close proximity to the site.
↓	6.	Discharge rainwater to a surface water sewer/drain	x	Unsuitable as there are no surface water sewers in a close proximity to the site.
↓	7.	Discharge rainwater to Combined Sewer	✓	In line with the approved strategy at planning the proposals show the surface water draining to the existing private combined network on site.

Table 1: The SUDS Drainage Hierarchy

3.3 In line with the approved strategy at planning the foul and surface water are to be separate and combine at the last manhole on site and drain to the existing private combined network on site.

3.4 The suitability of SuDS components has been assessed in terms of suitability on site. The following components have been assessed as follows in Table 2, overleaf.

SUITABILITY OF SUDS COMPONENTS		
SuDS Component	**Comment**	**Suitability**
Infiltrating SuDS	It is proposed for the external garden and amenity areas to be self draining, grass or gravel etc. Due to space constraints deeper infiltration SuDS are not feasible on site.	✓
Permeable Pavement	The external areas are proposed to be of permeable construction.	✓
Green / Blue Roofs	Blue / Green roofs are not proposed for this development as not included as part of original consented scheme, and the proposed rooftops are not flat.	x
Rainwater Harvesting	It is recommended that rainwater harvesting is considered by the developer. Rain water butts are shown to amenity areas.	✓
Swales	Unsuitable due to insufficient space on site to implement.	x
Rills and Channels	Unsuitable due to insufficient space on site to implement.	x
Bioretention Systems	Unsuitable due to insufficient space on site to implement.	x
Retention Ponds and Wetlands	Unsuitable due to insufficient space on site to implement.	x
Detention Basins	Unsuitable due to insufficient space on site to implement.	x
Geocellular Systems	In line with the approved strategy at planning no attenuation is proposed due to the location of the existing drainage network and the limited external space on site.	x
Proprietary Treatment Systems	Roof runoff is considered to be largely uncontaminated.	x
Filter Drains and Filter Strips	Unsuitable due to insufficient space on site to implement.	x

Table 2: Suitability of SuDS Components

4.0 SURFACE WATER DRAINAGE STRATEGY

4.1 In accordance with local LLFA Policy for the Management of Surface Water, developments are required to use SuDS to reduce runoff rates to as close as feasible to pre development greenfield rate.

4.2 MCEC have created a network model to assess the hydraulic performance for the proposed development. The rainfall model used for detailed calculations is the FEH22 rainfall model. Storms have been modelled up to, and including, the 1in100yr rainfall event with 45% climate change allowance in accordance with best practice. The drainage network model proposed has been designed in accordance with the approved drainage strategy document at planning. Calculations have been run with a CV of 1.0 as requested by ADCs consultants.

4.3 Proposals show alterations to the rear of the townhouses and plot 5. In accordance with the approved strategy the proposals are for surface water from the replaced roof building to be routed to the existing outfall close to the NW corner.

4.4 This is known to run to the Southern Water public combined sewer in East Street. None of the drainage upstream of the outfall is to be used as it is in too poor condition. In accordance with the approved strategy the proposals show foul water routed to the rear with a connection to the combined outfall.

4.5 Proposals show a reduction in hard surface on this site with introduction of permeable paving and permeable rear garden areas which will help reduce runoff generated from the development.

4.6 Proposals show the rear of the townhouses (plots 1-4) and the whole roof over plot 5 drained by an attenuation tank in the rear of the proposed development. Other roof areas are unaffected by proposals and are to drain as existing. The tank has been modelled with a plan area of 15m^2 and a depth of 0.3m providing a storage volume of 4.27m^3. Additionally there is permeable paving to patios shown in the rear yard and this is shown to offer additional storage with a permeable sub base 350mm thk. To be conservative the whole rear yard has been shown to drain to the sewer network but some areas will be landscaped/permeable.

4.7 A hydrobrake is proposed to limit flows to 1.7l/s for all events up to and including the 1in100 year +45%CC in accordance with requests from southern water. The hydrobrake has been modelled with a design depth of 1.35m and a design aperture of 63mm.

4.8 Following conversations and alterations to the design to accommodate their comments Southern Water have confirmed they are happy with the proposals and have provided a formal Section 106 agreement based on the design. The S106 approval is included in Appendix VI.

4.9 Flow drainage calculations for both existing and proposed scenarios are shown in Appendix III. In accordance with the approved strategy, the proposed runoff rate and volume is reduced compared to existing, due to the reduced contributing area and the rear townhouse drained to an attenuation tank and flow controlled by a hydrobrake manhole.

SURFACE WATER DISCHARGE RATES SUMMARY						
	Area (ha)	Discharge Rates (l/s)				
		1 year	2 year/Q_{BAR}	30 year	100 year	100 year
Greenfield Rates (proposed managed area)	0.025	0.01	0.01	0.01	0.02	-
Existing Rates whole site	0.056	6.4	10.3	26.3	33.2	49.1
Existing Rates (managed areas area)	0.025	2.9	4.5	11.4	14.1	19.7
Proposed Runoff Rates (managed areas)	0.025	0.9	1.2	1.6	1.6	1.7
Betterment over existing rear townhouse	-	69%	73%	86%	89%	91%

Table 3: Calculated Runoff rates

4.10 It can be seen that peak flow from the proposed network will be reduced from existing runoff rates during all events up to and including the 1 in 100-year event + 45% climate change (1%AEP+CC) to an existing sewer on site. As permeable paving/external areas are being introduced to the scheme the overall volume of water drained from the site is also reduced as well as the peak offsite flow.

4.11 The drainage network proposed has been designed in accordance with the approved drainage strategy document at planning. Southern Water have confirmed they are happy with the proposals and have provided a formal Section 106 agreement based on the design. The S106 approval is included in Appendix VI. A proposed storm drainage strategy plan layout is included in Appendix II.

5.0 WATER QUALITTY

5.1 The primary risk to water quality is from the individual rear gardens. This can be treated through the implementation of permeable across the rear garden.

5.2 The plans included in Appendix II show the rear gardens to be of permeable construction to treat the runoff from the garden areas.

5.3 Residential roofs are generally considered very low risk so no formal water quality treatment is proposed.

5.4 The Pollution Hazard Indices are summarised in Table 4 – Summary of Pollution Hazard Indices for different Land Use below (based on Table 26.2 of The SuDS Manual):

POLLUTION HAZARD INDICES FOR DIFFERENT LAND USE CLASSIFICATIONS				
LAND USE	**Pollution Hazard Level**	**Total Suspended Solids**	**Metals**	**Hydrocarbons**
Low use paving (pedestrian areas)	Very Low	0.5	0.4	0.4
Residential Roofs	Very Low	0.2	0.2	0.05
TOTAL POLLUTION HAZARD INDEX		**0.5**	**0.4**	**0.4**

Table 5: Summary of Pollution hazard Indices for different Land Use

5.5 When designing suitable treatment trains to deliver adequate treatment prior to discharging to sewers, watercourse or groundwater, consideration of the treatment properties of each SuDS component specified should be reviewed. With the total mitigation potential of a SuDS treatment train determined by:

$$SuDS_1 + 0.5 * SuDS_2 + 0.5 * SuDS_3 \ldots = Total\ SuDS\ Mitigation\ Index$$

5.6 The Mitigation Indices of the proposed SuDS techniques are summarised in Table 6 below.

INDICATIVE SuDS MITIGATION INDICES FOR DISCHARGES TO SURFACE WATER			
SuDS Component	**Total Suspended Solids**	**Metals**	**Hydrocarbons**
Permeable Pavement	0.7	0.6	0.7
TOTAL SUDS MITIGATION INDEX	**0.7**	**0.6**	**0.7**

Table 6: Indicative SuDS Mitigation Indices.

5.7 It can be seen that the Total SuDS Mitigation Index ≥Pollution Hazard Index for the treatment of runoff at roof level and within the permeable pavement external areas therefore the water treatment provided by this SuDS train is enough to remove the potential pollutants.

6.0 SCHEDULE OF MAINTENANCE

6.1 All onsite SuDS and drainage systems will be privately maintained. In accordance with Condition 8, a full maintenance and management scheme has been produced alongside this report and is included in Appendix IV.

6.2 In addition to a long-term maintenance regime, it is recommended that all drainage elements implemented on site should be inspected following the first rainfall event post-construction and monthly for the first quarter following construction.

6.3 The property owner will be responsible for the management and maintenance of SuDS devices.

6.4 Typical key suds components operation and maintenance activities are provided below.

PROPOSED SCHEDULE OF MAINTENANCE FOR BELOW GROUND DRAINAGE				
Item	**Visual Inspection**	**Cleanse / De-sludge**	**CCTV Survey**	**Comments**
Surface Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Foul Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Gullies/Channels	1 year	1 year	N/A	Cleansing to be carried as necessary
Attenuation Tank	1 year	As required	See comments	Inspect after heavy rainfall and in autumn when leaf fall begins. Cleansing to be carried as necessary
Flow Controls	1 year	As required	2 years (or as required)	Inspect after heavy rainfall and in autumn when leaf fall begins
Permeable Paving	1 year	'Swept' clean of debris every 2 years.	N/A	Refer to block manufacturers guidance for long term maintenance requirements.

Table 6: Proposed schedule of maintenance for below ground drainage

7.0 CONCLUSION

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IV. A timetable for its implementation.

V. Details of SuDS feature and connecting drainage structures and maintenance requirement for each aspect including a drawing showing where they are located.

VI. A management and maintenance plan for the lifetime of the development which shall include details of design life and the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime. This will include the name and contact details of any appointed management company.

***Reason:** To ensure that the development achieves a high standard of sustainability and to ensure the flood risk is adequately addressed for each new dwelling and not increased in accordance with the NPPF and Policy 36 of the Adur Local Plan*

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APPENDIX I Architects Plans



1 **Proposed** 1:100
Site Plan

0 0.5 1.0 2.0 3.0 4.0 5.0 10.0
Scale in metres

1094SM | St Marys
24-25 East Street, Shoreham

key:

APPLICATION & SITE OWNERSHIP BOUNDARY

SITE AREA:
565.5 SQM

rev.	date	notes	drawn	checked
A	19/03/2026	Issued for planning. Revised House 1-4 railings to extend over bin store.	SP	PT
/	27/01/2025	Issued for planning.	SP	PT

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Empire Land and Homes Ltd.

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issued for:
Planning

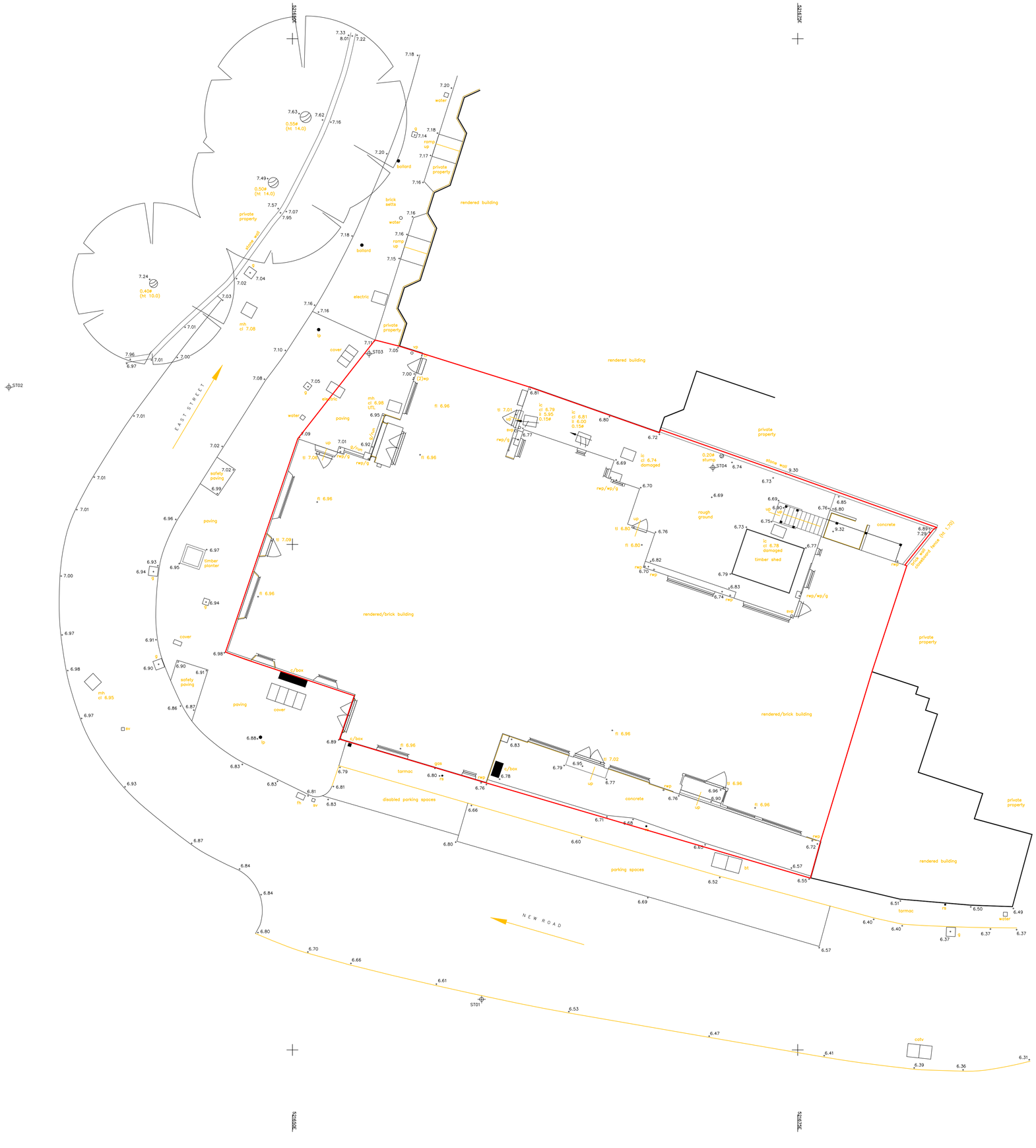
drawn by: SP
checked by: PT

project north:

drawing title:
Proposed
Site Plan

scale @ A1:
1:100

(11)010 A
drawing no. revision


EAST STREET
NEW ROAD
rendered building
rendered/brick building
private property
brick setts
tarmac
concrete
parking spaces
disabled parking spaces
paving
safety paving
timber shed
rough ground
Gimber planter
stone wall
Chestnut fence (ht 1.70)
ST01
ST02
ST03
ST04
ramp up
ramp up
ramp up
ballard
ballard
water
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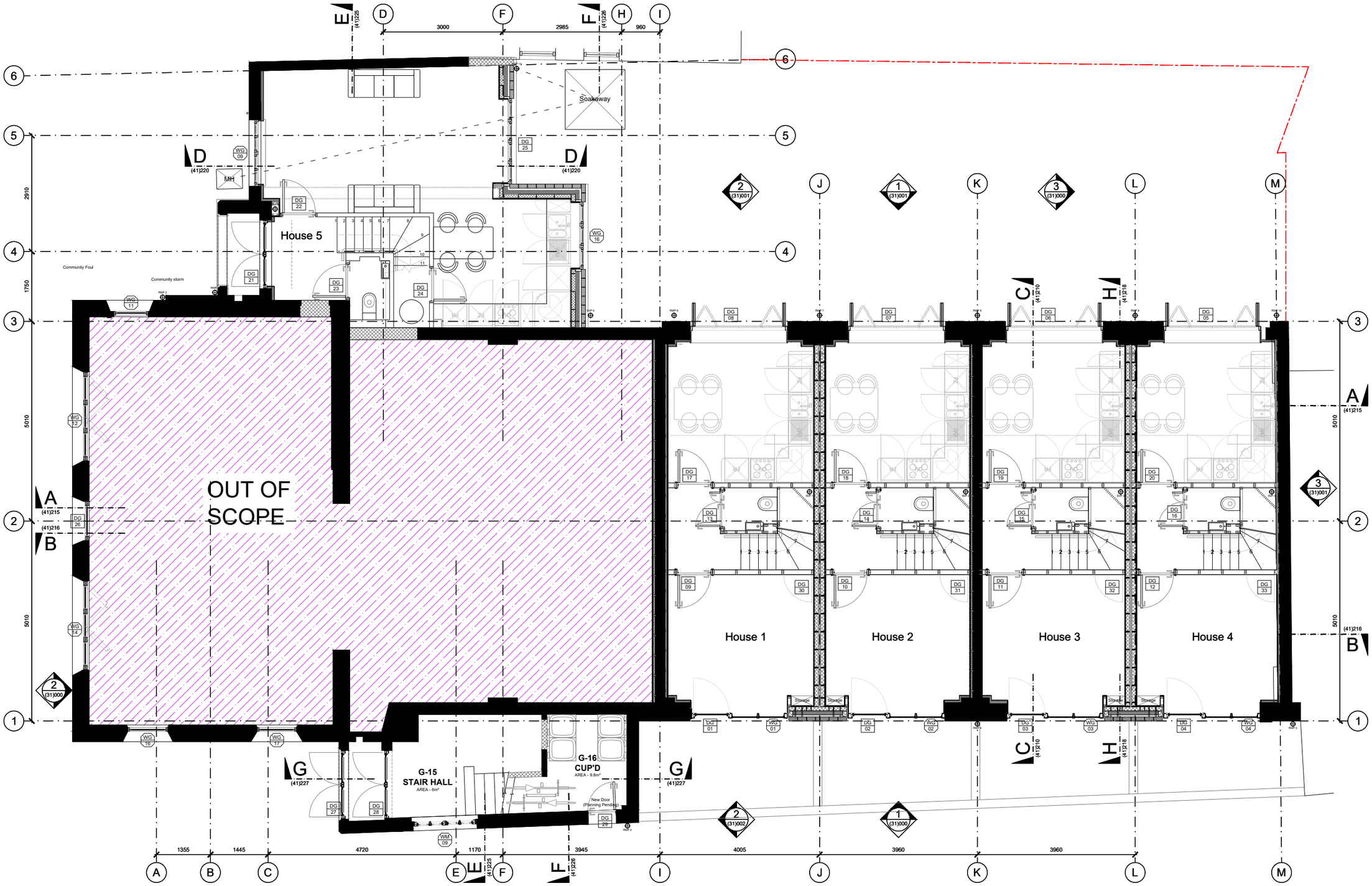
mh cl 6.95
ip
ip
ip



1 **Proposed** 1:50
Ground Floor Plan

0 0.5 1.0 2.0 3.0 4.0 5.0
Scale in metres

1094SM St Marys
24-25 East Street, Shoreham

key:

rev.	date	notes	drawn	checked
B	xx/07/2026	Comments incorporated	SJH	PT
A	07/07/2026	Comments incorporated	SJH	PT
/	09/06/2026	Initial Issue to SE	SP	PT

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client:
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architect:
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tel. 01273 456519
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issued for:
Information

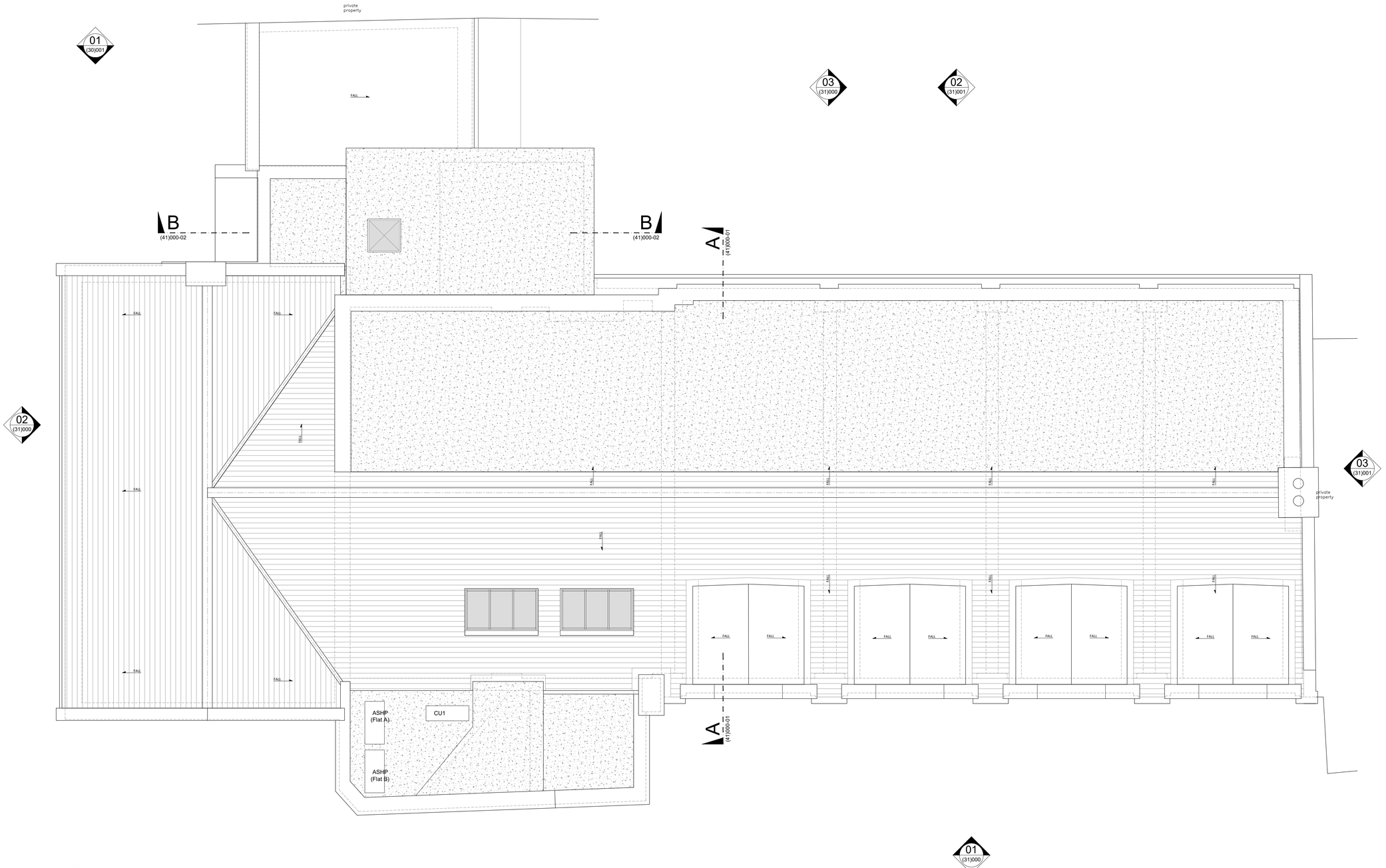
drawn by: SP
checked by: PT

project north:

drawing title:
Proposed
Ground Floor Plan

scale @ A1: 1:50

(21)200 B
drawing no. revision



1 Proposed Roof Plan 1:50

0 0.5 1.0 2.0 3.0 4.0 5.0

Scale in metres

*Roof plan drawn indicatively from measured survey information.

1094SM | St Marys | 24-25 East Street, Shoreham

key:

rev.	date	notes	drawn	checked
B	21/10/2025	Issued for information. Massing adjusted. MEP equipment indicated.	SP	PT
A	19/09/2025	Issued for information.	SP	PT
/	04/09/2025	Issued for information.	SP	PT

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issued for:
Information

drawn by: SP
checked by: PT

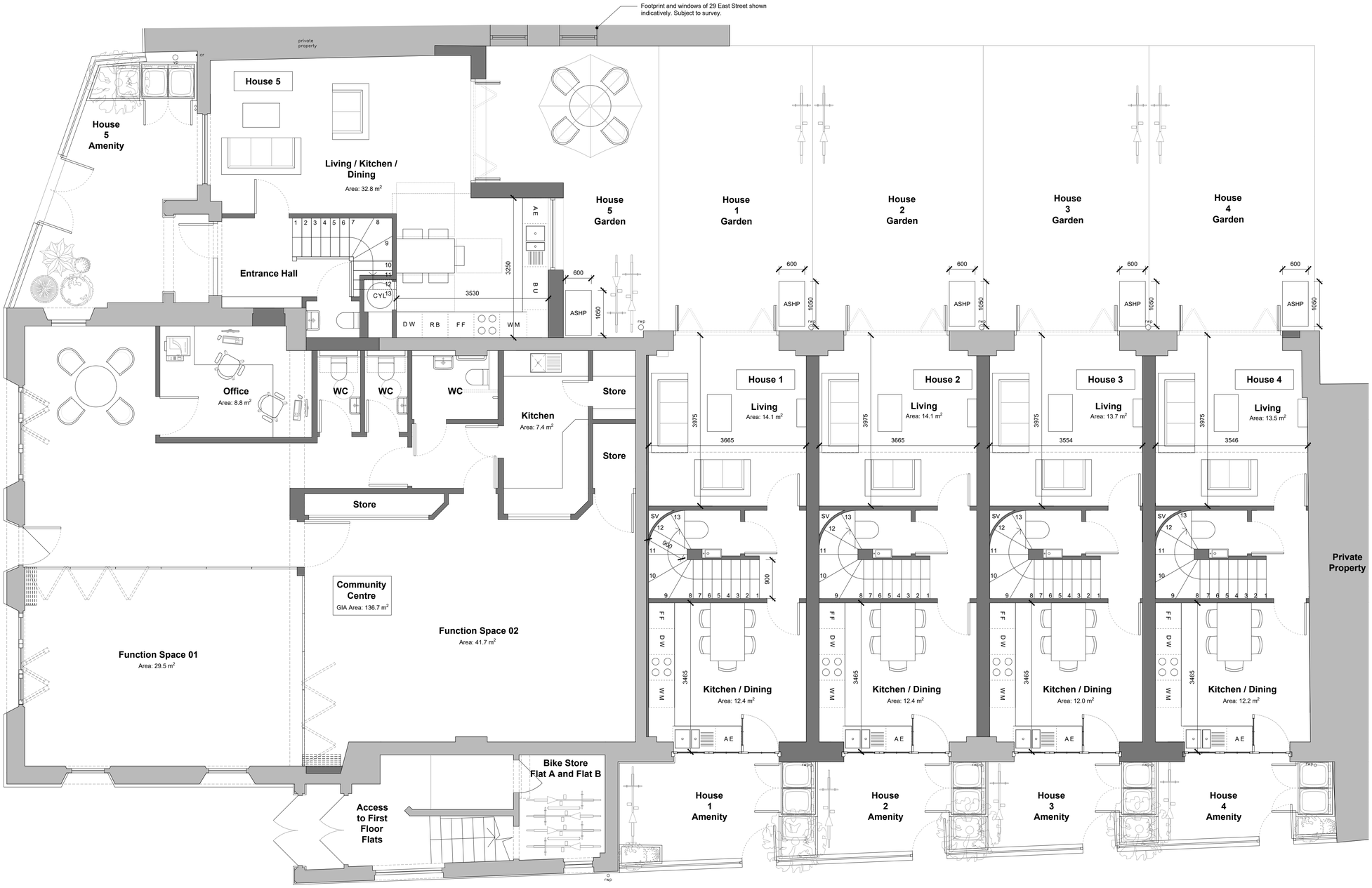
project north:

drawing title:
Proposed Roof Plan

scale @ A1: 1:50

(21)004 B

drawing no. revision



1 **Proposed** 1:50
Ground Floor Plan

0 0.5 1.0 2.0 3.0 4.0 5.0
Scale in metres

1094SM | St Marys
24-25 East Street, Shoreham

key:
- EXISTING WALL
- NEW WALL
- SV SERVICE VOID

rev.	date	notes	drawn	checked
E	19/03/2026	Issued for planning. Revised House 1-4 railings to extend over bin stores.	SP	PT
D	30/10/2025	Issued for planning. Revised rear garden layouts.	SP	PT
C	21/10/2025	Issued for information. Revised furniture layouts & added bifold doors to Houses 1-4. House 05 layout amended.	SP	PT
B	19/09/2025	Issued for information.	SP	PT
A	04/09/2025	Issued for information.	SP	PT
/	28/08/2025	Issued for information.	SP	PT

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Empire Land and Homes Ltd.

architect:
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issued for:
Planning

drawn by: SP
checked by: PT

project north:

drawing title:
Proposed
Ground Floor Plan

scale @ A1:
1:50

(21)000
drawing no.

E
revision

APPENDIX II Proposed Drainage Layout

FOUL WATER MANHOLE SCHEDULE

Node	Cover Level (m)	Depth (m)	Diameter (mm)	Manhole Type	Link	Invert Level (m)	Diameter (mm)	COVER
SVP4	6.960	0.552	150	FW SVP				
					1.000	6.408	100	
1.4	6.960	0.522	250	FW_Standard	1.000	6.286	100	
					1.001	6.286	100	A15 recessed
SVP3	6.960	0.560	150	FW_SVP				
					3.000	6.400	100	
1.5	6.960	0.572	250	FW_Standard	3.000	6.260	100	
					1.001	6.221	100	
					1.002	6.221	100	A15 recessed
SVP2	6.960	0.560	150	FW_SVP				
					3.000	6.400	100	
1.4	6.890	0.527	450	FW_Standard	3.000	6.245	100	
					1.001	6.111	100	
					1.003	6.172	100	A15 recessed
SVP1	6.960	0.560	150	FW_SVP				
					4.000	6.400	100	
1.3	6.890	0.693	450	FW_Standard	4.000	6.285	100	
					1.003	6.120	100	
					1.004	6.129	100	A15 recessed
SVP5	6.810	0.810	450	Default	5.001	6.062	100	
					1.004	6.085	100	
					1.005	6.085	100	
1.1	6.080	1.013		FW_Dummy	1.005	5.950	100	
1.1.1	6.103	0.167	150	FW_Manhole	9.000	6.117	100	
					6.001	6.117	100	A15 recessed
SVP cc	6.080	0.850	150	FW SVP				
					6.000	6.380	100	
C1	7.180	0.743		FW_SVP				
					6.000	6.280	100	
C2	7.180	0.984	450	FW_Standard	6.000	6.250	100	
3			150	FW_Manhole	6.001	6.250	100	A15 recessed
						6.160	100	

SURFACE WATER MANHOLE SCHEDULE

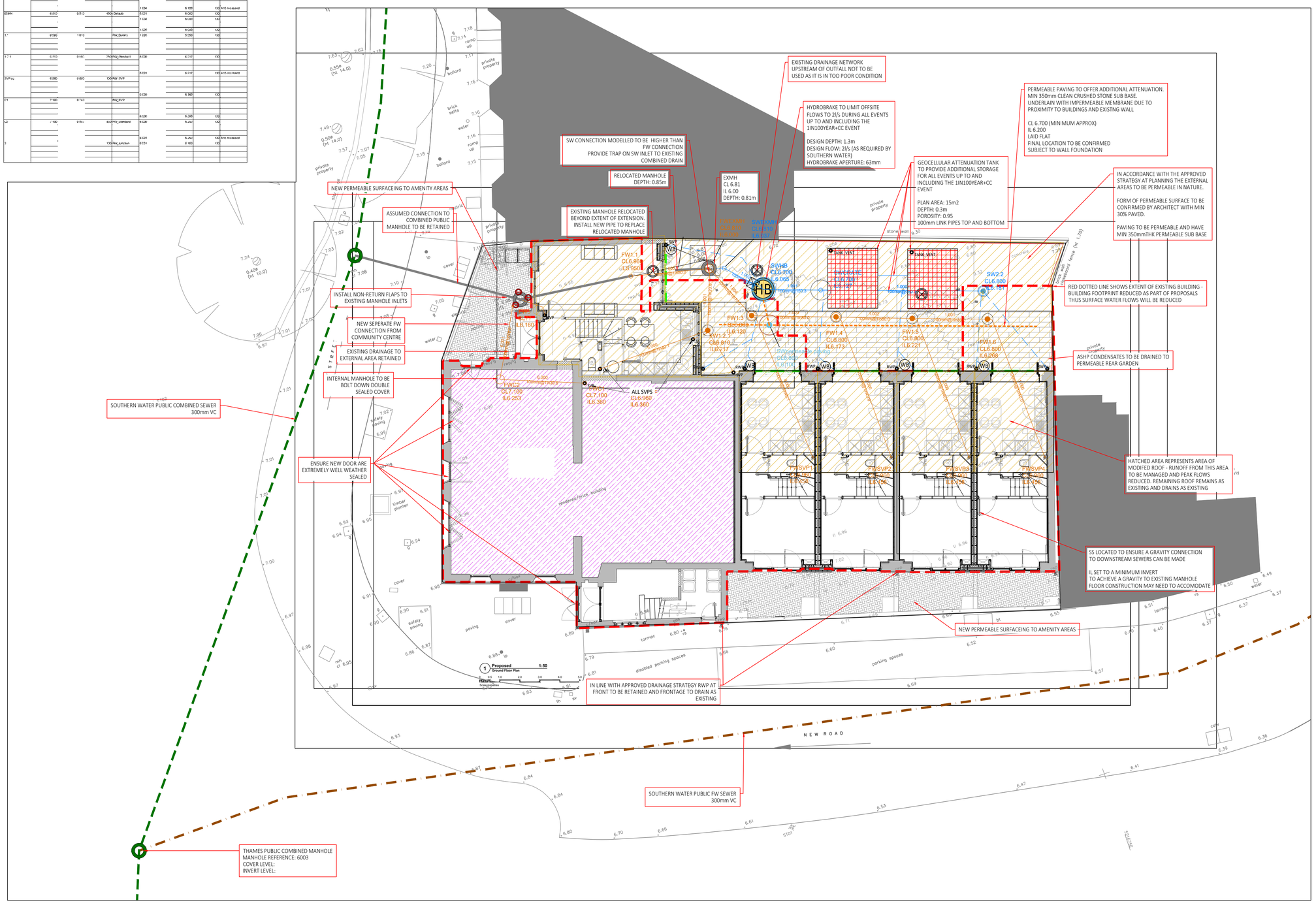
Node	Cover Level (m)	Depth (m)	Diameter (mm)	Node Type	Manhole Type	Link	Invert Level (m)	Diameter (mm)	COVER
C2	7.180	0.828	1219	Manhole	Site Standard				
						1.000	6.352	450	D400
MH	6.730	0.535	1200	Manhole	HYDROBRAKE	2.000	6.080	150	
						1.001	6.136	150	
						1.002	6.086	450	D400
SWMH	6.810	0.779	Location		SW_MANHOLE	1.002	6.031	150	
permeable paving	6.630	0.780	Location		ANOTHER				
						2.000	6.156	150	
CB4/5P	6.730	0.570	Location		SPECIFICATION	1.001	6.127	150	
						1.001	6.127	150	

PROPOSED SCHEDULE OF MAINTENANCE FOR BELOW GROUND DRAINAGE

Item	Visual Inspection	Cleanse / De-sludge	CCTV Survey	Comments
Surface Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Foul Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Gullies/Channels	1 year	1 year	N/A	Cleansing to be carried as necessary
Attenuation Tank	See comments	See comments	See comments	Maintained in accordance with manufacturers recommendation
Flow Controls	1 year	As required		Inspect after heavy rainfall and in autumn when leaf fall begins
Permeable Paving	1 year	'Swept' clean of debris every 2 years.	N/A	Refer to block manufacturers guidance for long term maintenance requirements.

SURFACE WATER DISCHARGE RATES SUMMARY

	Area (ha)	Discharge Rates (l/s) 1 year	2 year/Q_{BAR}	30 year	100 year	100 year +45% CC
Greenfield Rates (proposed managed area)	0.008	0.01	0.01	0.01	0.02	-
Existing Rates (existing roof and hardstanding area)	0.048	5.0	7.9	20.3	25.8	36.7
Existing Rates (existing rear townhouse roof area)	0.008	1.0	1.7	4.4	5.6	7.8
Proposed Runoff Rates (proposed rear townhouse roof area)	0.008	0.4	0.8	2.0	2.0	2.0
Betterment over existing rear townhouse	-	60%	52.9%	54.5%	64.3%	74.4%



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a. MANHOLE COVERS TO BE CLASS D400 IN HIGHWAYS, CLASS B125 IN FOOTWAYS AND VERGES, CLASS A15 IN NON-TRAFFICKED AREAS.
b. MANHOLE COVER AND FRAME TO BE BEDDED AND SURROUNDED IN 1:3 MORTAR.

LEGEND

- PROPOSED SW PIPE RUN
- PROPOSED FW PIPE RUN
- PROPOSED TYPE D SW INSPECTION CHAMBER
- PROPOSED TYPE D FW INSPECTION CHAMBER
- RE PROPOSED SW RODDING EYE
- RWP PROPOSED SW RAINWATER PIPE
- SVP PROPOSED FW SOIL VENT PIPE
- SS PROPOSED FW SOIL STACK
- EXISTING PRIVATE COMBINED RUN - RETAINED
- EXISTING PRIVATE RUN - ABONDONED / DIVERTED
- EXISTING PUBLIC FW RUN - RETAINED
- EXISTING PUBLIC COMBINED RUN - RETAINED
- EXISTING COMBINED PUBLIC INSPECTION CHAMBER / MANHOLE - RETAINED
- EXISTING PRIVATE INSPECTION CHAMBER / MANHOLE - RETAINED
- EXISTING PRIVATE INSPECTION CHAMBER / MANHOLE - ABANDONED / DIVERTED
- FOOTPRINT OF EXISTING BUILDING HARD SURFACE CATCHMENT AREAS - 100% IMPERMEABLE
- PROPOSED PERFORATED SW DRAIN
- PERMEABLE PAVING
- HB PROPOSED HYDROBRAKE MANHOLE
- GEOCELLULAR ATTENUATION - TANKED
- TANK_VENT TANK VENT - EXACT LOCATION TBC

REV:	DESCRIPTION:	BY:	DATE:
02	UPDATED FOR SOUTHERN WATER INTERNAL LAYOUTS UPDATED	GH	17/06/26

STATUS: PRELIMINARY

MERIDIAN
CIVIL ENGINEERING CONSULTANCY

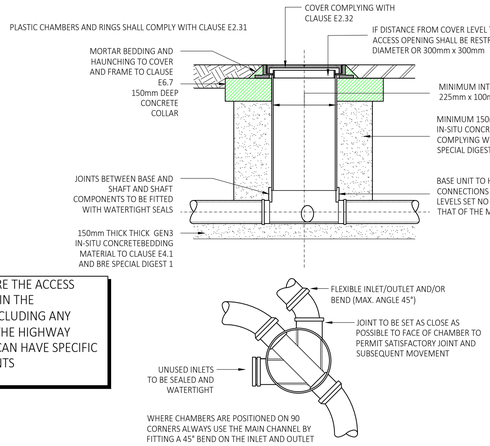
CLIENT: Woodmans

SITE: Land at St Mary Chuch Hall
Shoreham-By-Sea, BN43 5ZQ

TITLE: Surface Water and Foul Water Drainage Design

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
1:100	19/05/26	GH	MN

PROJECT NO:	DRAWING NO:	REVISION:
MC0811	CIV01	P02

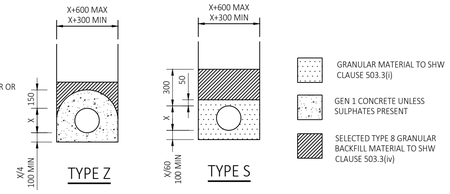


NOTE - WHERE THE ACCESS CHAMBER IS IN THE HIGHWAY(INCLUDING ANY FOOTWAY), THE HIGHWAY AUTHORITY CAN HAVE SPECIFIC REQUIREMENTS

TYPE E TYPICAL INSPECTION CHAMBER DETAIL - FLEXIBLE MATERIAL

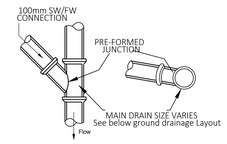
250mmØ WHERE DEPTH TO INVERT <600mm
450mmØ WHERE DEPTH TO INVERT >600mm
FOR 450mmØ > 1.2mDEEP RESTRICT ACCESS TO MAX 350mm

(1:20)



TRENCH AND BEDDING DETAILS

IN TRAFFICKED AREAS:	IN NON-TRAFFICKED AREAS:
TYPE S WHERE COVER >900mm	TYPE S WHERE COVER >600mm
TYPE Z WHERE COVER <900mm	TYPE Z WHERE COVER <600mm



TYPICAL BRANCH CONNECTION

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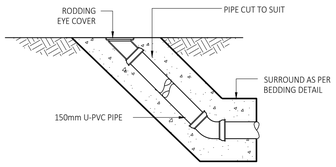
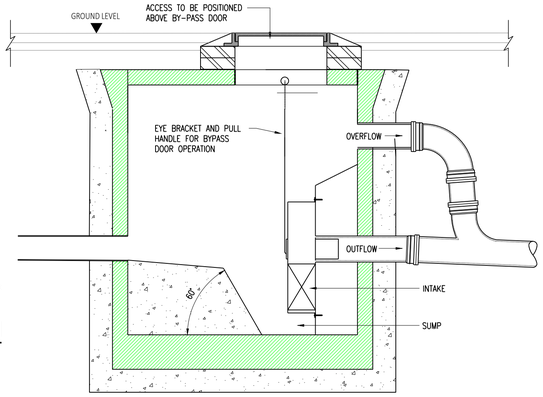


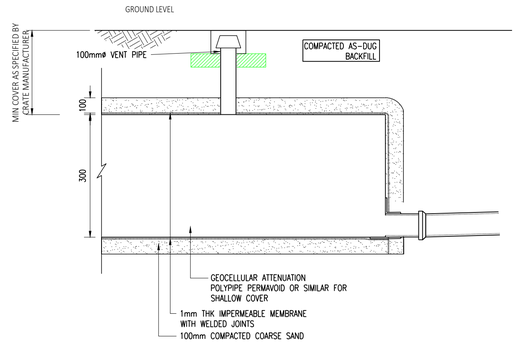
RODDING EYE DETAIL.

(1:20)



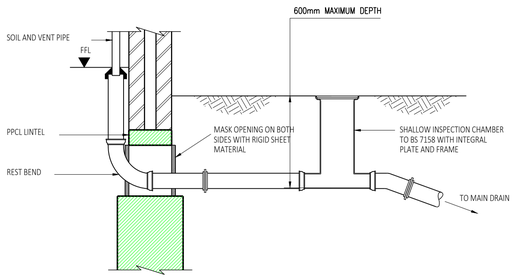
HYDROBRAKE MANHOLE.

(1:20)



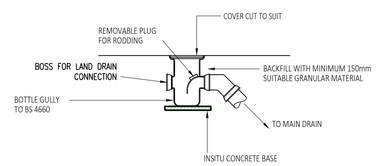
ATTENUATION TANK DETAIL.

(1:20)



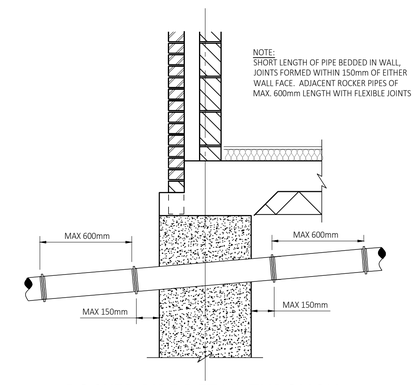
FOUL CONNECTION TO MAIN DRAINAGE.

(1:20)



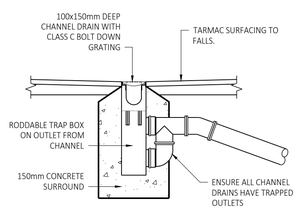
BOTTLE GULLY CONNECTION.

(1:20)



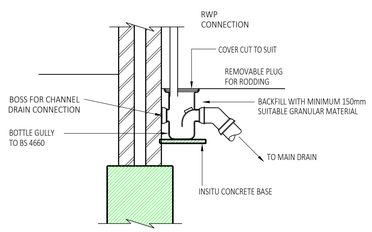
ROCKER PIPE DETAIL THROUGH FOUNDATION

(1:20)



CHANNEL DRAIN

(1:20)



TRAPPED RWP CONNECTION.

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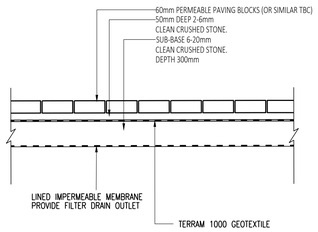

PERMEABLE AMENITY AREAS

(1:20)

1:100 @ A1
0 1m 2m 3m 4m 5m

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REV:	DESCRIPTION:	BY:	DATE:
02	UPDATED FOR SOUTHERN WATER	GH	04/08/26
01	UPDATED FOR SOUTHERN WATER	GH	17/06/26

STATUS: PRELIMINARY

MERIDIAN
CIVIL ENGINEERING CONSULTANCY

CLIENT: Woodmans

SITE: Land at St Mary Chuch Hall
Shoreham-By-Sea, BN43 5ZQ

TITLE: Surface Water and Foul Water Construction Details

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
1:100	19/05/26	GH	MN

PROJECT NO:	DRAWING NO:	REVISION:
MC0811	CIV02	P2

APPENDIX III Calculations

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

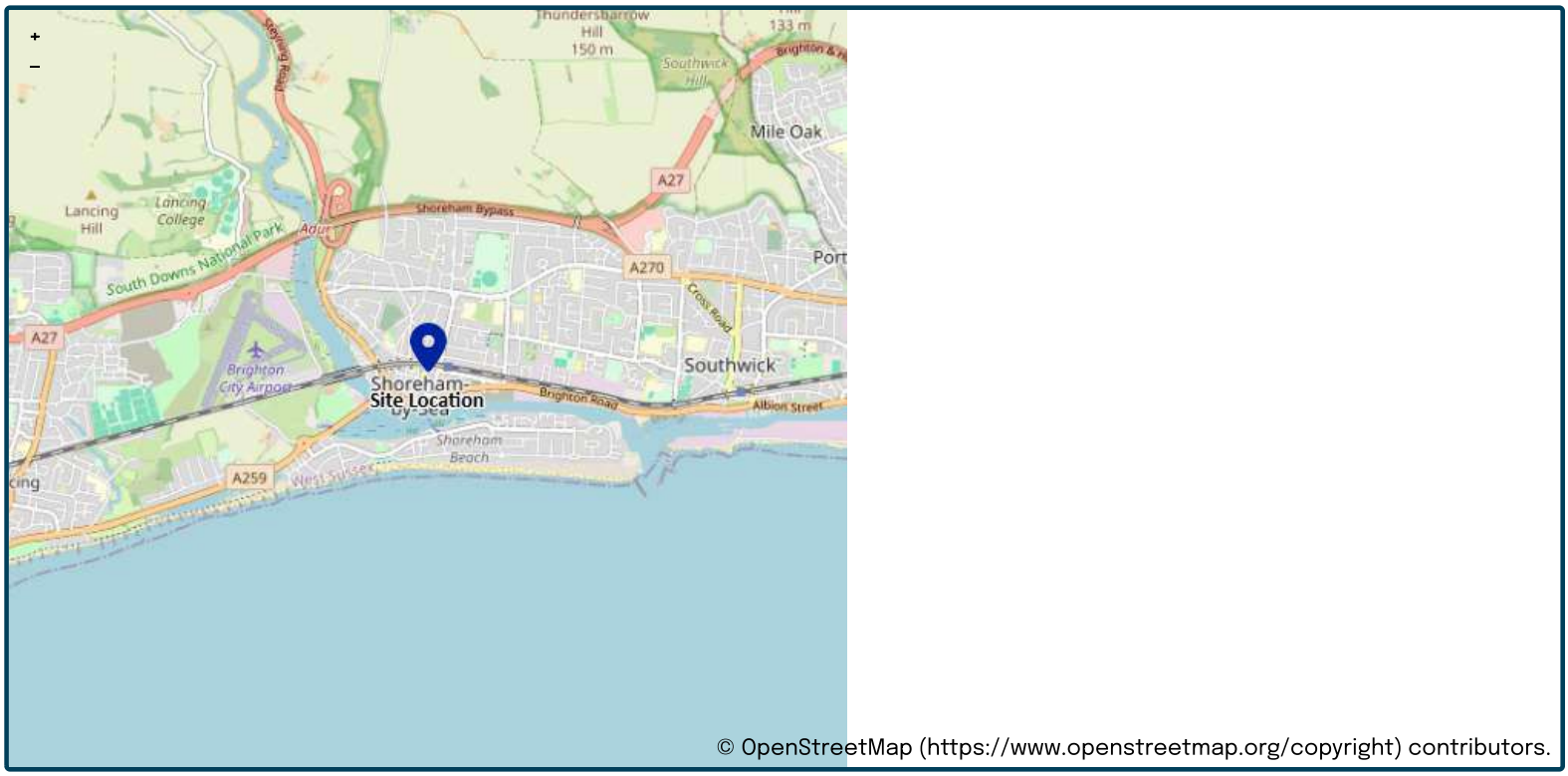
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). 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	21/05/2026
Calculated by	GH
Reference	MC0811
Model version	2.2.3

Location

Site name	Woodmans
Site location	Shoreham



Site easting (British National Grid)	521661
Site northing (British National Grid)	105071

Site details

Total site area (ha)	0.039 ha

Greenfield runoff

Method

Method	FEH statistical (2025)

FEH statistical (2025)

	My value		Map value
SAAR9120 (mm)	779 mm		
BFIHOST19scaled	0.871		
QMed-QBar conversion	1.136		1.136
QMed (l/s)	0.02 l/s		
QBar (FEH statistical 2025) (l/s)	0.03 l/s		

Growth curve factors

	My value		Map value
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	FEH statistical (2025)	
Flow rate 1 year (l/s)	0.02	l/s
Flow rate 2 year (l/s)	0.02	l/s
Flow rate 10 years (l/s)	0.04	l/s
Flow rate 30 years (l/s)	0.1	l/s
Flow rate 100 years (l/s)	0.1	l/s
Flow rate 200 years (l/s)	0.1	l/s

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

Disclaimer

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

Simulation Settings

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

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
2	0	0	0
2	45	0	0
30	0	0	0

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	45	0	0
100	0	0	0
100	45	0	0

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Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	45	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

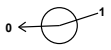
Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)	Invert Level (m)
1			6.700	450	1.409	5.291
ex hard	0.056	5.00	6.700	450	1.350	5.350
OUTFALL			6.700	600	1.438	5.262

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	2.102	35.6	150	SW_Standard	6.700	5.350	1.200	6.700	5.291	1.259
1.001	2.451	84.5	150	SW_Standard	6.700	5.291	1.259	6.700	5.262	1.288

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	ex hard	450	Manhole	Adoptable	1	450	Manhole	Adoptable
1.001	1	450	Manhole	Adoptable	OUTFALL	600	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	66.015	-11.533	6.700	1.409	450	1	1.000	5.291	150
									
						0	1.001	5.291	150
ex hard	68.016	-10.890	6.700	1.350	450				
						0	1.000	5.350	150
OUTFALL	63.566	-11.626	6.700	1.438	600	1	1.001	5.262	150
									

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Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.360	0.069	6.5	0.0109	0.0000	OK
15 minute summer	ex hard	10	5.408	0.058	6.5	0.0093	0.0000	OK
15 minute summer	OUTFALL	10	5.321	0.059	6.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	6.4	0.898	0.333	0.0176	2.8
15 minute summer	ex hard	1.000	1	6.5	0.914	0.216	0.0149	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.382	0.091	10.3	0.0145	0.0000	OK
15 minute summer	ex hard	10	5.430	0.080	10.3	0.0127	0.0000	OK
15 minute summer	OUTFALL	10	5.339	0.077	10.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	10.2	1.005	0.529	0.0249	4.5
15 minute summer	ex hard	1.000	1	10.3	0.989	0.343	0.0218	

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Results for 2 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.409	0.118	14.9	0.0187	0.0000	OK
15 minute summer	ex hard	10	5.457	0.107	15.0	0.0171	0.0000	OK
15 minute summer	OUTFALL	10	5.360	0.098	14.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	14.8	1.094	0.768	0.0332	6.5
15 minute summer	ex hard	1.000	1	14.9	1.052	0.499	0.0298	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.520	0.229	26.5	0.0365	0.0000	SURCHARGED
15 minute summer	ex hard	10	5.629	0.279	26.9	0.0443	0.0000	SURCHARGED
15 minute summer	OUTFALL	11	5.402	0.140	26.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	26.3	1.493	1.360	0.0426	11.7
15 minute summer	ex hard	1.000	1	26.5	1.505	0.886	0.0370	

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Results for 30 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.648	0.357	38.0	0.0568	0.0000	SURCHARGED
15 minute summer	ex hard	11	5.869	0.519	39.0	0.0825	0.0000	SURCHARGED
15 minute summer	OUTFALL	9	5.404	0.142	38.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	38.1	2.167	1.973	0.0427	16.9
15 minute summer	ex hard	1.000	1	38.0	2.161	1.273	0.0370	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.589	0.298	33.2	0.0474	0.0000	SURCHARGED
15 minute summer	ex hard	10	5.757	0.407	33.9	0.0647	0.0000	SURCHARGED
15 minute summer	OUTFALL	9	5.404	0.142	33.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	33.2	1.887	1.718	0.0427	14.7
15 minute summer	ex hard	1.000	1	33.2	1.889	1.112	0.0370	

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Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.791	0.500	47.8	0.0794	0.0000	SURCHARGED
15 minute summer	ex hard	11	6.141	0.791	49.1	0.1258	0.0000	SURCHARGED
15 minute summer	OUTFALL	8	5.404	0.142	48.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	48.0	2.725	2.482	0.0427	21.3
15 minute summer	ex hard	1.000	1	47.8	2.714	1.598	0.0370	

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Simulation Settings

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

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	30	45	0	0
2	0	0	0	100	0	0	0
2	45	0	0	100	45	0	0
30	0	0	0				

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Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	45	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

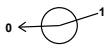
Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)	Invert Level (m)
1			6.700	450	1.359	5.341
ex hard	0.025	5.00	6.700	450	1.300	5.400
OUTFALL			6.700	600	1.388	5.312

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	2.099	35.6	100	SW_Standard	6.700	5.400	1.200	6.700	5.341	1.259
1.001	2.451	84.5	100	SW_Standard	6.700	5.341	1.259	6.700	5.312	1.288

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	ex hard	450	Manhole	Adoptable	1	450	Manhole	Adoptable
1.001	1	450	Manhole	Adoptable	OUTFALL	600	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	66.015	-11.533	6.700	1.359	450	1	1.000	5.341	100
									
						0	1.001	5.341	100
ex hard	68.016	-10.898	6.700	1.300	450				
						0	1.000	5.400	100
OUTFALL	63.566	-11.626	6.700	1.388	600	1	1.001	5.312	100
									

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Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.393	0.052	2.9	0.0082	0.0000	OK
15 minute summer	ex hard	10	5.442	0.042	2.9	0.0067	0.0000	OK
15 minute summer	OUTFALL	10	5.358	0.046	2.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	2.9	0.753	0.435	0.0093	1.3
15 minute summer	ex hard	1.000	1	2.9	0.799	0.283	0.0076	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	5.411	0.070	4.6	0.0111	0.0000	OK
15 minute summer	ex hard	10	5.458	0.058	4.6	0.0093	0.0000	OK
15 minute summer	OUTFALL	10	5.373	0.061	4.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	4.5	0.835	0.688	0.0133	2.0
15 minute summer	ex hard	1.000	1	4.6	0.862	0.448	0.0111	

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Results for 2 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.446	0.105	6.6	0.0166	0.0000	SURCHARGED
15 minute summer	ex hard	10	5.481	0.081	6.7	0.0129	0.0000	OK
15 minute summer	OUTFALL	11	5.394	0.082	6.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	6.5	0.878	0.992	0.0180	2.9
15 minute summer	ex hard	1.000	1	6.6	0.907	0.647	0.0153	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.555	0.214	11.5	0.0340	0.0000	SURCHARGED
15 minute summer	ex hard	11	5.692	0.292	12.0	0.0464	0.0000	SURCHARGED
15 minute summer	OUTFALL	10	5.407	0.095	11.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	11.4	1.460	1.737	0.0190	5.2
15 minute summer	ex hard	1.000	1	11.5	1.469	1.128	0.0164	

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Results for 30 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.696	0.355	16.3	0.0565	0.0000	SURCHARGED
15 minute summer	ex hard	11	5.972	0.572	17.4	0.0910	0.0000	SURCHARGED
15 minute summer	OUTFALL	9	5.407	0.095	16.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	16.0	2.040	2.427	0.0190	7.6
15 minute summer	ex hard	1.000	1	16.3	2.084	1.601	0.0164	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	5.634	0.293	14.3	0.0465	0.0000	SURCHARGED
15 minute summer	ex hard	11	5.847	0.447	15.1	0.0711	0.0000	SURCHARGED
15 minute summer	OUTFALL	9	5.407	0.095	14.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	14.1	1.806	2.149	0.0190	6.6
15 minute summer	ex hard	1.000	1	14.3	1.833	1.408	0.0164	

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Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	12	5.848	0.507	20.2	0.0806	0.0000	SURCHARGED
15 minute summer	ex hard	11	6.259	0.859	21.9	0.1366	0.0000	SURCHARGED
15 minute summer	OUTFALL	8	5.407	0.095	19.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.001	OUTFALL	19.7	2.521	2.999	0.0190	9.6
15 minute summer	ex hard	1.000	1	20.2	2.578	1.980	0.0164	

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Simulation Settings

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

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	30	45	0	0
2	0	0	0	100	0	0	0
2	45	0	0	100	45	0	0
30	0	0	0				

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Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	45	Minimum Backdrop Height (m)	0.200
CV	0.950	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	4.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

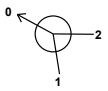
Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)	Invert Level (m)
2.2	0.006	4.00	6.800	450	0.619	6.181
HB	0.019	4.00	6.700	1200	0.635	6.065
EXMH			6.810		0.773	6.037
permeable paving		4.00	6.800		0.700	6.100
CRATE			6.700		0.573	6.127

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.002	2.237	80.0	100	Circular	6.700	6.065	0.535	6.810	6.037	0.673
1.000	8.117	150.3	100	Circular	6.800	6.181	0.519	6.700	6.127	0.473
2.000	1.797	51.3	100	Circular	6.800	6.100	0.600	6.700	6.065	0.535
1.001	2.855	150.3	100	Circular	6.700	6.127	0.473	6.700	6.108	0.492

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.002	HB	1200	Manhole	SW_Standard	EXMH		Junction	
1.000	2.2	450	Manhole	SW_Standard	CRATE		Junction	
2.000	permeable paving		Junction		HB	1200	Manhole	SW_Standard
1.001	CRATE		Junction		HB	1200	Manhole	SW_Standard

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
2.2	76.940	-12.923	6.800	0.619	450				
						0	1.000	6.181	100
HB	65.968	-12.850	6.700	0.635	1200		1	2.000	6.065	100
							2	1.001	6.108	100
							0	1.002	6.065	100
EXMH	64.002	-11.782	6.810	0.773			1	1.002	6.037	100
permeable paving	66.252	-14.624	6.800	0.700						
						0	2.000	6.100	100
CRATE	68.823	-12.876	6.700	0.573			1	1.000	6.127	100
						0	1.001	6.127	100

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Node HB Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	1.002	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0063-2000-1350-2000
Invert Level (m)	6.065	Min Outlet Diameter (m)	0.075
Design Depth (m)	1.350	Min Node Diameter (mm)	1200
Design Flow (l/s)	2.0		

Node CRATE Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	6.127
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	54

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	15.0	15.0	0.300	15.0	19.1	0.301	0.0	19.1

Node permeable paving Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	6.100	Slope (1:X)	999.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	62	Depth (m)	0.450
Safety Factor	2.0	Width (m)	7.300	Inf Depth (m)	
Porosity	0.30	Length (m)	7.300		

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Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	2.2	10	6.211	0.030	0.8	0.0047	0.0000	OK
120 minute summer	HB	72	6.145	0.080	1.5	0.0908	0.0000	OK
120 minute summer	EXMH	72	6.061	0.024	0.9	0.0000	0.0000	OK
120 minute summer	permeable paving	72	6.145	0.045	0.7	0.6421	0.0000	OK
120 minute summer	CRATE	72	6.145	0.018	0.4	0.2596	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	2.2	1.000	CRATE	0.8	0.791	0.164	0.0094	
120 minute summer	HB	1.002	EXMH	0.9	0.581	0.129	0.0034	3.2
120 minute summer	permeable paving	2.000	HB	0.8	0.266	0.090	0.0092	
120 minute summer	CRATE	1.001	HB	0.3	0.241	0.068	0.0052	

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Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	2.2	9	6.216	0.035	1.2	0.0056	0.0000	OK
120 minute summer	HB	74	6.166	0.101	1.9	0.1140	0.0000	SURCHARGED
120 minute summer	EXMH	74	6.065	0.028	1.2	0.0000	0.0000	OK
120 minute summer	permeable paving	74	6.166	0.066	0.9	0.9577	0.0000	OK
120 minute summer	CRATE	74	6.166	0.039	0.7	0.5548	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	2.2	1.000	CRATE	1.2	0.836	0.247	0.0148	
120 minute summer	HB	1.002	EXMH	1.2	0.627	0.170	0.0041	4.9
120 minute summer	permeable paving	2.000	HB	1.4	0.319	0.161	0.0119	
120 minute summer	CRATE	1.001	HB	0.4	0.266	0.081	0.0107	

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Results for 2 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	2.2	9	6.224	0.043	1.8	0.0068	0.0000	OK
120 minute summer	HB	76	6.197	0.132	2.7	0.1497	0.0000	SURCHARGED
120 minute summer	EXMH	76	6.068	0.031	1.4	0.0000	0.0000	OK
120 minute summer	permeable paving	76	6.197	0.097	1.2	1.4442	0.0000	OK
120 minute summer	CRATE	76	6.197	0.070	1.1	1.0034	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	2.2	1.000	CRATE	1.8	0.900	0.369	0.0239	
120 minute summer	HB	1.002	EXMH	1.4	0.662	0.209	0.0048	6.8
120 minute summer	permeable paving	2.000	HB	1.7	0.433	0.206	0.0140	
120 minute summer	CRATE	1.001	HB	0.5	0.253	0.106	0.0189	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	2.2	45	6.281	0.100	2.1	0.0159	0.0000	OK
60 minute summer	HB	44	6.280	0.215	6.6	0.2433	0.0000	SURCHARGED
60 minute summer	EXMH	45	6.070	0.033	1.6	0.0000	0.0000	OK
60 minute summer	permeable paving	44	6.280	0.180	3.4	2.7292	0.0000	SURCHARGED
60 minute summer	CRATE	45	6.280	0.153	3.6	2.1851	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	2.2	1.000	CRATE	2.1	0.590	0.423	0.0635	
60 minute summer	HB	1.002	EXMH	1.6	0.685	0.237	0.0052	8.8
60 minute summer	permeable paving	2.000	HB	-3.4	-0.432	-0.399	0.0141	
60 minute summer	CRATE	1.001	HB	-1.5	0.231	-0.303	0.0223	

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Results for 30 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	2.2	84	6.383	0.202	2.0	0.0321	0.0000	SURCHARGED
120 minute summer	HB	84	6.382	0.317	6.4	0.3586	0.0000	SURCHARGED
60 minute summer	EXMH	43	6.071	0.034	1.7	0.0000	0.0000	OK
120 minute summer	permeable paving	84	6.382	0.282	3.2	4.3254	0.0000	SURCHARGED
120 minute summer	CRATE	84	6.382	0.255	3.1	3.6380	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	2.2	1.000	CRATE	1.8	0.586	0.361	0.0635	
120 minute summer	HB	1.002	EXMH	1.7	0.690	0.244	0.0054	15.8
120 minute summer	permeable paving	2.000	HB	-3.2	-0.413	-0.382	0.0141	
120 minute summer	CRATE	1.001	HB	-1.3	0.232	-0.268	0.0223	

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Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	2.2	48	6.343	0.162	2.7	0.0257	0.0000	SURCHARGED
60 minute summer	HB	47	6.342	0.277	8.5	0.3133	0.0000	SURCHARGED
60 minute summer	EXMH	48	6.071	0.034	1.6	0.0000	0.0000	OK
60 minute summer	permeable paving	48	6.342	0.242	4.5	3.6959	0.0000	SURCHARGED
60 minute summer	CRATE	48	6.342	0.215	4.5	3.0667	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	2.2	1.000	CRATE	2.3	0.667	0.477	0.0635	
60 minute summer	HB	1.002	EXMH	1.6	0.690	0.244	0.0053	11.4
60 minute summer	permeable paving	2.000	HB	-4.5	-0.571	-0.527	0.0141	
60 minute summer	CRATE	1.001	HB	-2.1	-0.270	-0.430	0.0223	

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Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	2.2	59	6.522	0.341	2.7	0.0542	0.0000	FLOOD RISK
60 minute winter	HB	58	6.521	0.456	8.6	0.5160	0.0000	FLOOD RISK
30 minute summer	EXMH	52	6.071	0.034	1.7	0.0000	0.0000	OK
60 minute winter	permeable paving	59	6.521	0.421	4.6	6.5305	0.0000	FLOOD RISK
60 minute winter	CRATE	59	6.521	0.394	4.4	4.2821	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	2.2	1.000	CRATE	2.4	0.709	0.489	0.0635	
60 minute winter	HB	1.002	EXMH	1.7	0.690	0.244	0.0054	16.4
60 minute winter	permeable paving	2.000	HB	-4.6	-0.593	-0.548	0.0141	
60 minute winter	CRATE	1.001	HB	-2.0	-0.256	-0.408	0.0223	

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APPENDIX IV Management and Maintenance Plan

MERIDIAN

CIVIL ENGINEERING CONSULTANCY

LAND AT ST MARY CHURCH HALL
25 EAST STREET AND 1 AND 1A NEW ROAD
SHOREHAM-BY-SEA
WEST SUSSEX
BN43 5ZQ

MANAGEMENT & MAINTENACE PLAN

MAY 2026

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Ref MC0811 Woodmans Shoreham MMP

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4.0	SPILLAGE	8

APPENDICES

APPENDIX I Approved SuDS Scheme

Client : Woodmans Group

Rev	Date	Prepared by	Checked by	Approved by
-	21/05/26	GH	MN	MN
P1	21/10/26	MN		

Please Note:

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1.0 INTRODUCTION

1.1 This document is a management and maintenance plan for the at Land at St Marys Church Hall 25 East Street and 1 and 1a New Road Shoreham-By-Sea, West Sussex.

1.2 This document addresses planning condition 8 relating to SuDS for Planning Reference: AWDM/0082/26 with the Adur District Council.

1.3 Condition 8 states that:

The development hereby approved shall not be occupied until details of the maintenance and management of the sustainable drainage scheme have been submitted to and approved in writing by the Local Planning Authority. The drainage scheme shall be implemented prior to the first occupation of the development hereby approved and thereafter managed and maintained in accordance with the approved details in perpetuity. The Local Planning Authority shall be granted access to inspect the sustainable drainage scheme for the lifetime of the development. The details of the scheme to be submitted for approval shall include:

I. A timetable for its implementation.

II. Details of SuDS feature and connecting drainage structures and maintenance requirement for each aspect including a drawing showing where they are located.

III. A management and maintenance plan for the lifetime of the development which shall include details of design life and the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime. This will include the name and contact details of any appointed management company.

***Reason:** To ensure that the development achieves a high standard of sustainability and to ensure the flood risk is adequately addressed for each new dwelling and not increased in accordance with the NPPF and Policy 36 of the Adur Local Plan*

1.4 The development is for a private property and as such shall be managed at the discretion of their private ownership.

1.5 The drainage remains on private land and there is no possibility of the land being adopted by a third-party authority.

1.6 A long-term maintenance regime should be agreed with the site owners before adoption. In addition to a long-term maintenance regime, it is recommended that all drainage elements implemented on site should be inspected following the first rainfall event post construction and monthly for the first quarter following construction.

2.0 SUSTAINABLE DRAINAGE (SUDS) FEATURES CHECKLIST

2.1 SuDS techniques include landscape features and control structures to manage runoff as it flows to site outfalls. The following lists the features which may be found on a site.

- Filter strips are grass verges that allow runoff to flow through vegetation to a swale, wetland, infiltration area or other SuDS technique.
- Permeable surfaces as permeable block paving, porous Asphalt, gravel or free draining soils that allow rain to percolate through the surface into underlying drainage layers. They must be protected from silt, sand, compost, mulch, etc.
- Inlets and outlets structures are often conveyance pipes protected with mesh guards. They must be free from obstruction at all times to allow free flow through the SuDS.
- SuDS flow control structures are usually small orifices in control chamber, slots or V notches in weirs. They are usually near the surface so are accessible and easy to maintain. They may be in baskets, in small chambers or in the open.
- Inspection Chambers and rodding eyes are used on bends or where pipes come together. They allow cleaning of the system if necessary.
- Overflows can be below ground through gratings and chambers or over grass weirs in the open They must be kept clear at all times to protect areas from flooding.
- Flood routes (exceedance routes) allow water volumes exceeding the capacity of the SUDS system to escape from the site without causing damage to property. This route must be clear of obstructions at all times.

2.2 SuDS design usually avoids below ground structures such as gully pots, oil separators and other sumps, which are a wildlife hazard, often ineffective and expensive to maintain. SuDS design also reduces pipework, manholes and interceptors. However, water may be conveyed in surface features like rills and channels with changes in level managed in spouts or cascades. These hard landscape features require standard landscape maintenance.

3.0 MANAGEMENT AND MAINTENANCE PLAN

GENERAL MAINTENCE MAINTENANCE	
Maintenance activities comprise Regular Maintenance Occasional Tasks Remedial Work	**Frequency**
Generally **Litter** Collect all litter or other debris and remove from site at each site visit. **Avoid** use of weedkillers and pesticides to prevent chemical pollution **Avoid** de-icing agents wherever possible to allow bio-remediation of pollutants in permeable surfaces. **Protect** all permeable, porous and infiltration surfaces from silt, sand, mulch and other fine particles.	Monthly
REGULAR MAINTENANCE	
LITTER MANAGEMENT	
Pick up all litter in SuDS and Landscape areas and remove from site	monthly
GRASS MAINTENANCE – all cuttings to wildlife piles	
Mow all grass verges, paths and amenity at 35-50mm with 75mm max. Leaving grass in situ	As required or monthly
Mow all dry swales, dry SuDS basins and margins to low flow channels and other SuDS features at 100mm with 150mm max. Cut wet swales or basins annually as wildflower areas	4-8 visits as required Annually
Wildflower areas strimmed to 50mm in Sept or at end of school holidays Or Wildflower areas strimmed to 50mm on 3-year rotation 30% each year	1 visit annually 1 Visit Annually
Inspect monthly, remove silt from slab aprons and debris. Strim 1m round for access	12 visits monthly
HARD SURFACES	
Sweep all paving regularly. Sweep and suction brush permeable paving in autumn after leaf fall.	1 visit

INLETS, OUTLETS, CONTROLS AND INSPECTION CHAMBERS	
Regular Maintenance	**Frequency**
Inlets, outlets and surface control structures	
Inspect surface structures removing obstructions and silt as necessary. Check there is no physical damage.	Monthly
Strim vegetation 1m min. surround to structures and keep hard aprons free from silt and debris	Monthly
Inspection chambers and below ground control chambers	
Remove cover and inspect ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn	Annually
Occasional Maintenance	
Check topsoil levels are 20mm above edges of baskets and chambers to avoid mower damage	As necessary
Remedial work	**Frequency**
Unpack stone in basket features and unblock or repair and repack stone as design detail as necessary.	As required
Repair physical damage if necessary.	As required

GEOCELLULAR FEATURES	
Regular Maintenance	**Frequency**
Inspection chambers and below ground control chambers	
Remove cover and inspect ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn	Annually
Occasional Maintenance	
Check topsoil levels are 20mm above edges of baskets and chambers to avoid mower damage	As necessary

Remedial work	**Frequency**
Unpack stone in basket features and unblock or repair and repack stone as design detail as necessary. Repair physical damage if necessary.	As required As required
Occasional Tasks	**Frequency**
Dispersion pipe Where there is a build up of silt in the tank at inlets, i.e. 50mm or more above the design level then high pressure jet and remove debris to ensure dispersion pipe performs as required.	As required
Remedial work	**Frequency**
Infiltration Basin Where the infiltration basin is compacted then reinstate by removal of silt and de- compaction of the surface by scarifying, spiking or the use of hollow tines to the basin area.	As required
WATER BUTTS	
Regular inspection and cleaning of inlets, outlets of silts and other debris to prevent clogging. Clear leaves from gutter (particularly in autumn) to prevent blockages and bacterial growth.	Annually As required
PLANTING AND EXISTING VEGETATION	
Regular Maintenance	**Frequency**
Grass maintenance	
Amenity Grass - Mow all grass verges, paths and amenity grass at 35-50mm with 75mm max. All cuttings to remain in situ Rough grass – Mow at 75-100mm but not to exceed 150mm All cuttings to wildlife piles Wildflower areas strimmed to 50mm in Sept-Oct or Wildflower areas strimmed to 50mm July and Sept or Wildflower areas strimmed to 50mm on 3-year rotation 30% each year All cuttings to wildlife piles	16 visits 4 - 8 visits 1 visit 2 visits 1 visit

Ornamental tree & shrub planting. Weed all shrub beds as detailed spec as necessary. Cut back planting from lights, paths and visibility sight lines in late autumn and as necessary. Cut hedges slightly tapered back from base with flat top at specified height. Do not mulch planting adjacent to permeable/ porous paving surfaces. Remove stakes and ties from trees when no longer needed for support and within 3 years of planting. Protect from strimmer damage and remove competitive growth until well established.	4 visits
Native trees & shrub planting. Prune to shape in year 1. Protect trees from strimmer damage and remove competitive growth until well established. Remove stakes and ties from trees when no longer needed for support and within 3 years from planting.	1 visit
Existing trees Check existing trees for safety.	1 visit
Remedial	**Frequency**
Replace trees and shrubs which fail in the first five years after planting. Carry out tree surgery as necessary.	As Required

PROPOSED SCHEDULE OF MAINTENANCE FOR BELOW GROUND DRAINAGE				
Item	**Visual Inspection**	**Cleanse / De-sludge**	**CCTV Survey**	**Comments**
Surface Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Foul Water Drainage System (pipework, chambers etc.)	5 years	10 years	10 years	Cleansing to be carried as necessary
Gullies/Channels	1 year	1 year	N/A	Cleansing to be carried as necessary
Attenuation Tank	1 year	As required	See comments	Inspect after heavy rainfall and in autumn when leaf fall begins. Cleansing to be carried as necessary
Flow Controls	1 year	As required	2 years (or as required)	Inspect after heavy rainfall and in autumn when leaf fall begins
Permeable Paving	1 year	'Swept' clean of debris every 2 years.	N/A	Refer to block manufacturers guidance for long term maintenance requirements.

Table 1: Schedule of Maintenance for Below Ground Drainage

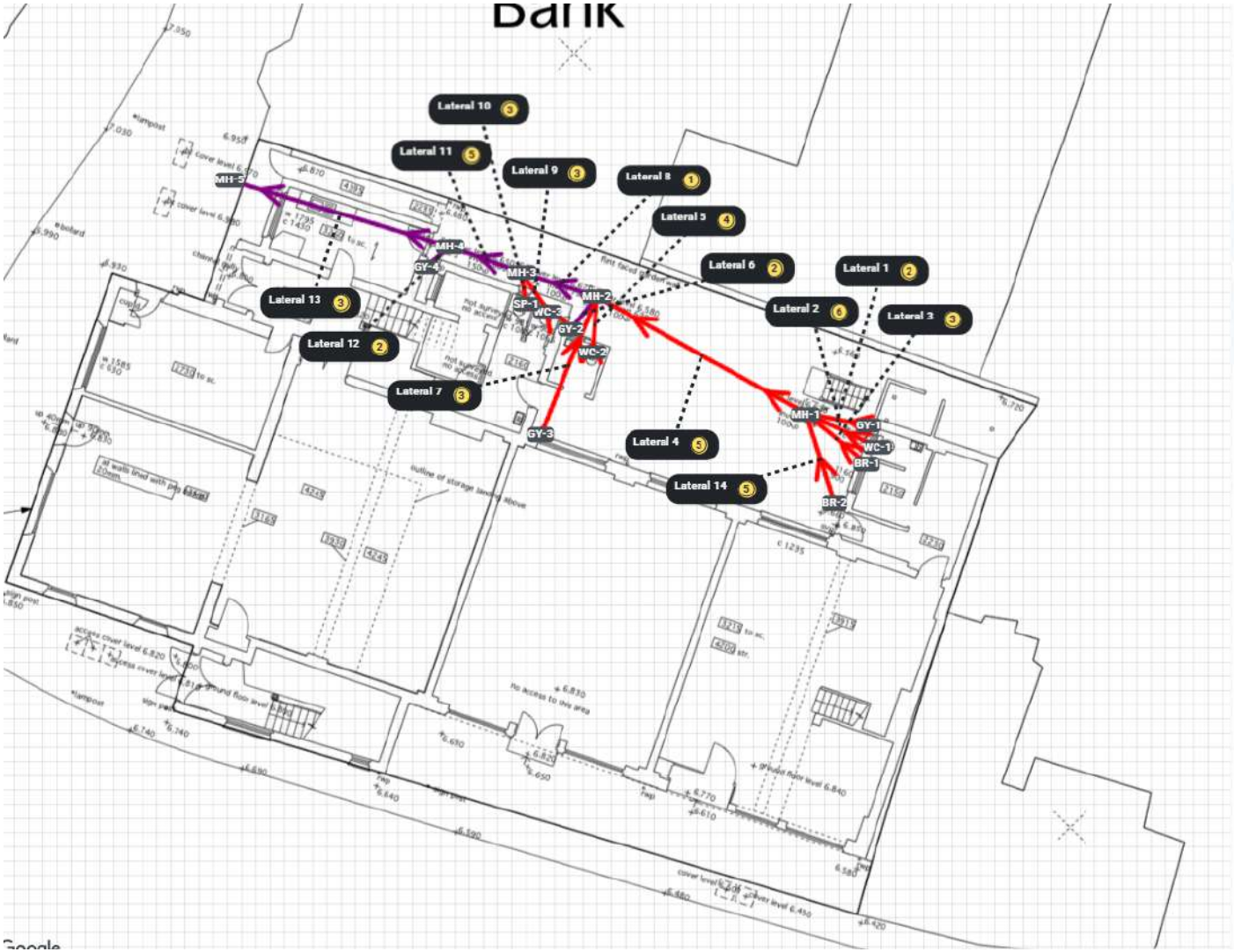
4.0 SPILLAGE

SPILLAGE – EMERGENCY ACTION

4.1 Most spillages on development sites are of compounds that do not pose a serious risk to the environment if they enter the drainage in a slow and controlled manner with time available for natural breakdown in a treatment system. Therefore, small spillages of oil, milk or other known organic substances should be removed where possible using soak mats as recommended by the Environment Agency with residual spillage allowed to bio-remediate in the drainage system.

4.2 In the event of a serious spillage, either by volume or of unknown or toxic compounds, then isolate the spillage with soil, turf or fabric and block outlet pipes from chamber(s) downstream of the spillage with a bung(s). (A bung for blocking pipes may be made by wrapping soil or turf in a plastic sheet or close woven fabric.) Contact the Environment Agency immediately.

APPENDIX V CCTV Survey



C1016241

Happy Drains

Tel:

Email: Lees@happydrains.co.uk

14	35.10 m	35.00 m
Number of sections	Total length of sewer network	Total length of inspections
1	60	14
Total abandoned inspections	Number of section inspection photos	Number of section inspection videos

Site location

25 East Street, Shoreham-by-Sea, West Sussex, BN43 5ZQ, United Kingdom

Sections

- SECTIONS (14)
- NODES (15)
- DOCUMENTS/VIDEOS
- REPORT ELEMENTS (0)
- SITE PHOTOS 5

Foul

Combined

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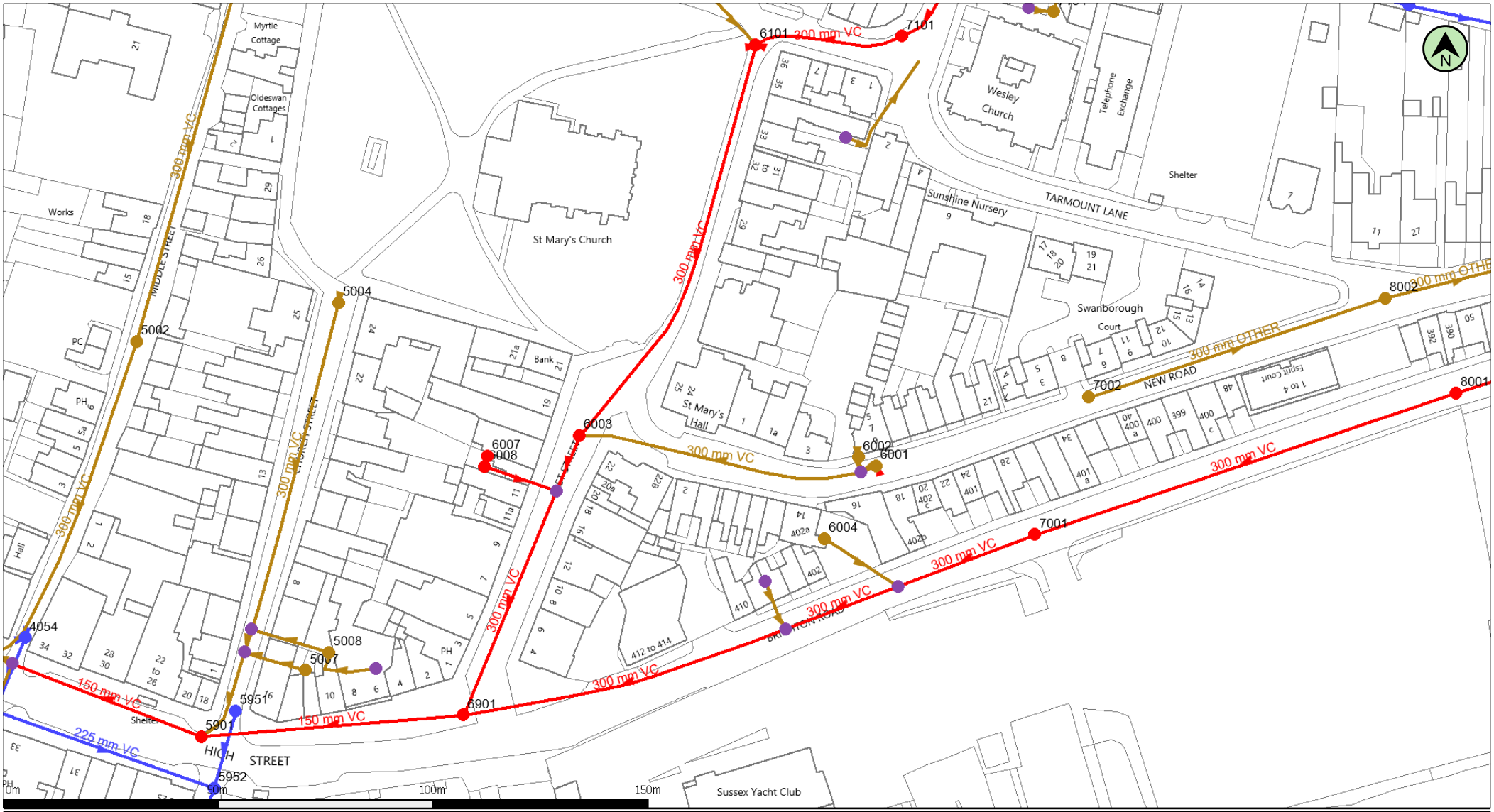
APPENDIX VI Southern Water Sewer Records and S106 approval

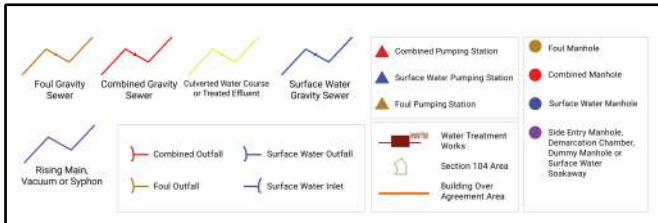


(c) Crown copyright and database rights 2025 Ordnance Survey AC0000808122 | Date: 20/08/25 | Scale: 1:1250 | Map Centre: 521667,105070 | Data updated: 23/07/25 | Our Ref: 1856222 - 1 | Wastewater Plan A4 Powered by digdat

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 2025 Ordnance Survey AC0000808122 .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.



kdaines@gtacivils.co.uk

14008/FVV

WATER for LIFE from Southern Water.

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
5901	C	0.00	0.00	-
6003	C	6.63	0.00	-
6007	C	0.00	0.00	-
6008	C	0.00	0.00	-
6101	C	6.76	2.56	-
6901	C	0.00	0.00	-
7001	C	3.88	0.00	-
7101	C	6.27	2.67	-
8001	C	3.66	1.56	-
5002	F	6.35	2.15	-
5004	F	6.84	0.00	-
5007	F	0.00	0.00	-
5008	F	0.00	0.00	-
6001	F	6.20	0.00	-
6002	F	6.31	0.00	-
6004	F	0.00	0.00	-
7002	F	0.00	0.00	-
7104	F	0.00	0.00	-
8002	F	0.00	0.00	-
4054	S	5.89	0.00	-
5951	S	0.00	0.00	-
5952	S	0.00	0.00	-
8153	S	0.00	0.00	-

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert

from Southern Water

Mark Naumann
Sussex Innovation Centre
Science park Square
Brighton
East Sussex
BN1 9SB

Your ref
25436

Our ref
DSA000053466

Date
06 August 2026

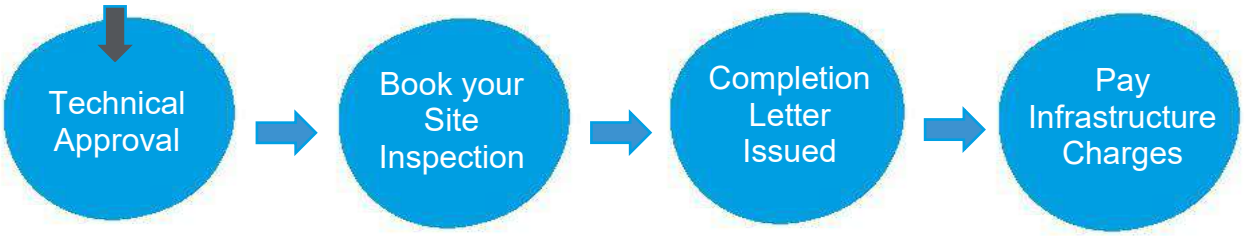
Contact
Tel 07510 379242

Dear Mr Naumann,

Application to Connect to the Public Sewerage System - Section 106.

Location: Woodmans Shoreham, 25 East Street, Shoreham-By-Sea, BN43 6RA

You are here



What happens next?

1. This is your technical approval.
2. Construction of the wastewater connection begins. Once completed, ensure you book a site inspection, so we know the connection is in line with your application.
3. Once the site inspection has confirmed the work is satisfactory, a completion letter will be issued. See the Essential Sewer Connection Information document to find out why this letter is important.
4. Your infrastructure charge invoice will be issued (if applicable*).

How to book your site Inspection

To progress, select the **'Accept'** option on the Get Connected customer dashboard. Or, if you have further questions, please select the '**Query**' option. If you do not wish to progress with the application, then please select the '**Withdraw**' option.

Now you have received our approval, you will need to arrange with your contractor to carry out your works on site to connect into our sewer. Once the connection has been made it is a mandatory requirement for the point of connection to be inspected by one of our Assistant Adoption Managers.

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To arrange this inspection, please select **'Ready for Inspection'** on your Get Connected customer dashboard. Once this has been selected, please contact **Malcolm Penny** our Assistant Adoption Manager for this area on **07922860784** and request an inspection giving at least two full working days' notice.

Once we are happy that your connection to the public sewer complies with our requirements and have passed our inspection, we will send you a completion letter within 7 working days. It's important to ensure your connection is inspected to prevent any risk of disconnection at a later date.

Technical Approval

We are pleased to advise that your Section 106 application to connect **Foul & Surface Water** to the **Combined** sewer, as shown on your drawing **MC0811 CIV01** Rev **P02** dated **17/06/26**, is approved by Southern Water. Our approval means we are satisfied with your connection method. Please note approval is valid for 2 years from date of issue and **should plans need to be revised please contact** Sewerconnections@southernwater.co.uk

Connections to existing/new Southern Water assets (i.e., manholes) and the arrangement of Southern Water assets (i.e., pipe junctions within manholes) should always be in accordance with the new Design and Construction Guidance manual ("the Code") and Southern Water's guidance documentation. water.org.uk/sewerage-sector-guidance-approved-documents/

This Section 106 approval does not confirm that public sewer network capacity is available at your location for the proposed development. The availability of capacity may be assessed through the Pre-Planning Enquiry application.

Please note that your connection should not proceed if:

- There are unapproved changes to your submitted plan or to the intended connection point. Any unapproved changes may lead to us disconnecting your connection under Section 109 of the Water Industry Act 1991.
- The relevant Planning Authority has set out conditions relating to the site's drainage and those conditions have not yet been discharged.
- You have not consulted our Health and Safety Advisory that can be viewed at the following link Health and Safety - Southern Water
- You have not obtained the necessary Building Regulations Approvals or, if relevant, obtained a Highway Authority Road Opening License.
- Landowner consent has not been obtained where your connection is to be made through another Party's land.

Yours sincerely,

Vicky Pearce

Vicky Pearce
Technical Coordinator - Wastewater
Developer Services
07510 379242
Sewerconnections@southernwater.co.uk

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southernwater.co.uk

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WATER for LIFE

from Southern Water

Essential Sewer Connection Information

1. Site Inspection Checklist
2. What happens if the sewer connection is not inspected?
3. Adoption of a sewer
4. Infrastructure charges
5. Enforcement Policy

1. Site Inspection Checklist

We have prepared a site inspection checklist so that inspection of your sewer connection can be passed first time southernwater.co.uk/media/3028/ds-site-inspection-checklist.pdf

2. What happens if the sewer connection is not inspected and a completion letter is not issued?

Incidences where construction of the sewer connection has been completed but a site inspection has not been requested then the sewer connection application is not completed. You will need to request for a site inspection to finalise the application. If the sewer connection has not been built as per the designs submitted then we will ask you to rectify.

3. Adoption of a sewer

When a new development is planned, the developer can construct the sewers using approved materials and to a standard, which makes them suitable for adoption by Southern Water when construction is complete.

An adoption agreement can be entered into under Section 104 of the Water Industry Act 1991, prior to the sewers being built. This is the most desirable arrangement and if all new developments were covered by such adoption agreements, there would be few, if any, new private sewers on housing estates. However, there are many kilometres of existing private sewers that were built without an adoption agreement in place.

Section 102 of the Water Industry Act 1991 provides for the adoption of such sewers to be considered. It is important to draw a distinction between sewers, drains, and lateral drains:

- Sewers are pipes carrying sewage from more than one property
- Drains are pipes carrying sewage from only one property to the curtilage of the building or premises
- Lateral drains are those pipes which extend from the curtilage of a single building to the point of connection with an existing public of private sewer

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To start the process of having the private sewer adopted, please visit our website and fill in the S102 Adoption Form.

4. Infrastructure charges

New developments increase the load on our networks and may require investment in upstream network reinforcement. This investment is funded through the Infrastructure Charge where the cost of network reinforcement is levied per property at the time of final connection.

* In addition to the sewer connection application charge, a charge for sewerage infrastructure is levied on each dwelling connecting onto the sewerage system. Non domestic properties will be individually assessed according to the number of appliances/fittings producing wastewater. Infrastructure charges are applicable even if the connection is made via a private sewer providing that the private sewer ultimately discharges into the public system.

There are three scenarios:

1. Water and wastewater connections are made within Southern Waters supply area. Infrastructure charges will be included in you water connection quote.

2. Water connections are made within another water company's supply zone and Wastewater is within the Southern Water supply area. Infrastructure charges will be invoiced following connection of the meters as advised by each water company.

3. You already have a water connection and require a wastewater connection in the Southern Water supply area. Infrastructure charges will be invoiced directly following completion of the wastewater connection.

For information and our current Connection Charges please refer to section 2 of the Southern Water Charging Arrangements Connection charging arrangements (southernwater.co.uk)

5. Enforcement Policy

It is an offence to not comply with the requirements of a S106 Water Industry Act 1991, which are detailed in the body of the letter. This can result in prosecution and a fine and/or removal of the illegal connection.

Please contact the Developer Services Team via the Get Connected customer dashboard / on 0330 303 0119 should you require any further advice.

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