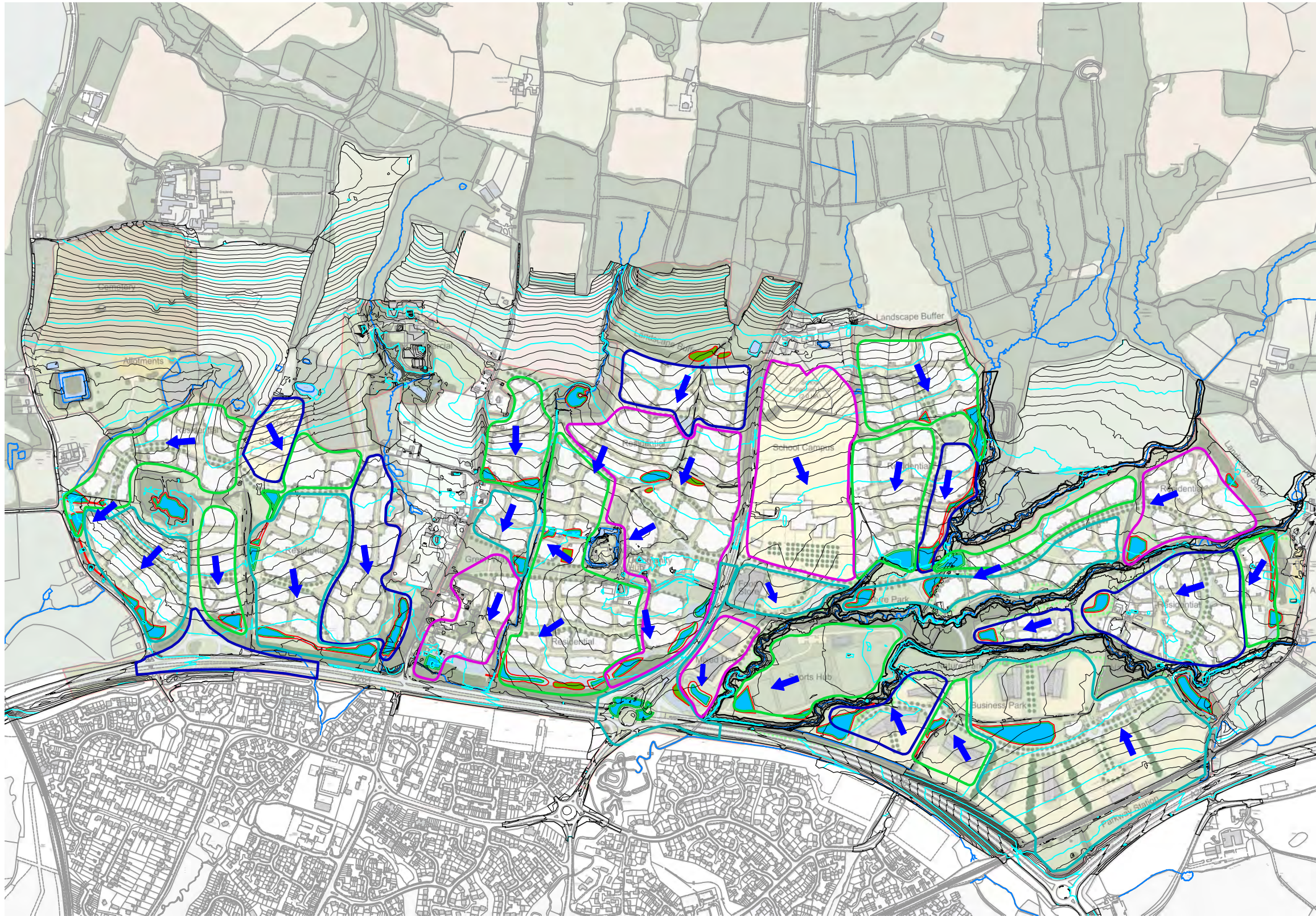


Appendix D

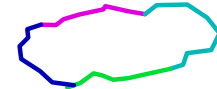
Approved Site-Wide Surface Water Strategy



NOTES

1. DRAWING BASED ON BDB DESIGN MASTERPLAN
DRG. No. 2153A-160.

KEY

-  1 IN 100 YEAR PLUS CLIMATE CHANGE
FLOOD EXTENT
-  CATCHMENT AREAS
-  SURFACE WATER FLOW DIRECTION

D	REVISION TO POND LAYOUTS IN CENTRAL AREA	23.01.20	JHW	IJF	
C	REDRAWN TO SUIT PHASE 1 MASTERPLAN AND MOAT FARM AREA	25.10.19	RMLM	IJF	
B	REDRAWN TO SUIT NEW MASTERPLAN 2153A-160	21.06.19	JC	IJF	
A	REDRAWN TO SUIT NEW MASTERPLAN 2153-150N	03.02.16	JW	IJF	
Mark	Revision	Date	Drawn	Chkd	Appd

SCALING NOTE: Do not scale this drawing - any errors or omissions shall be reported to Stantec without delay.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status

FOR PLANNING

LAND NORTH OF HORSHAM
SUDS FEATURES AND CATCHMENTS



Legal & General
STRATEGIC LAND NORTH OF HORSHAM LTD

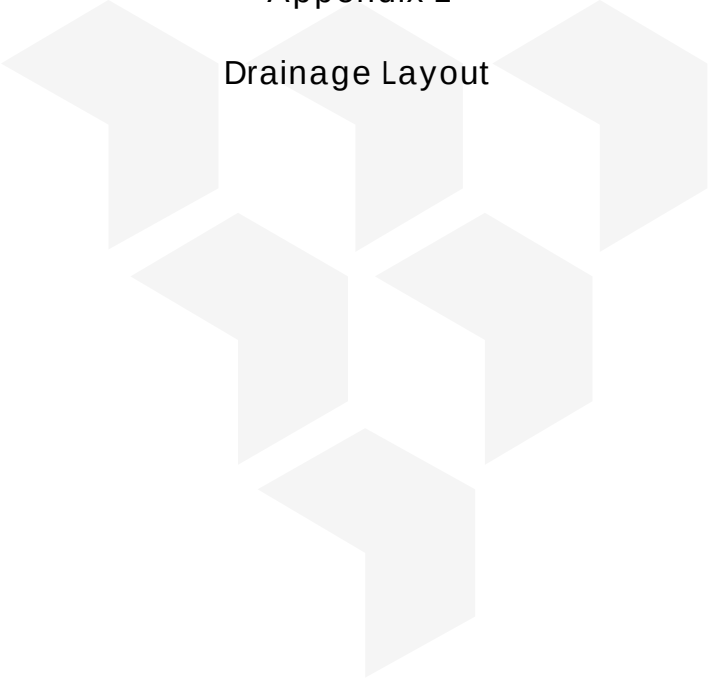


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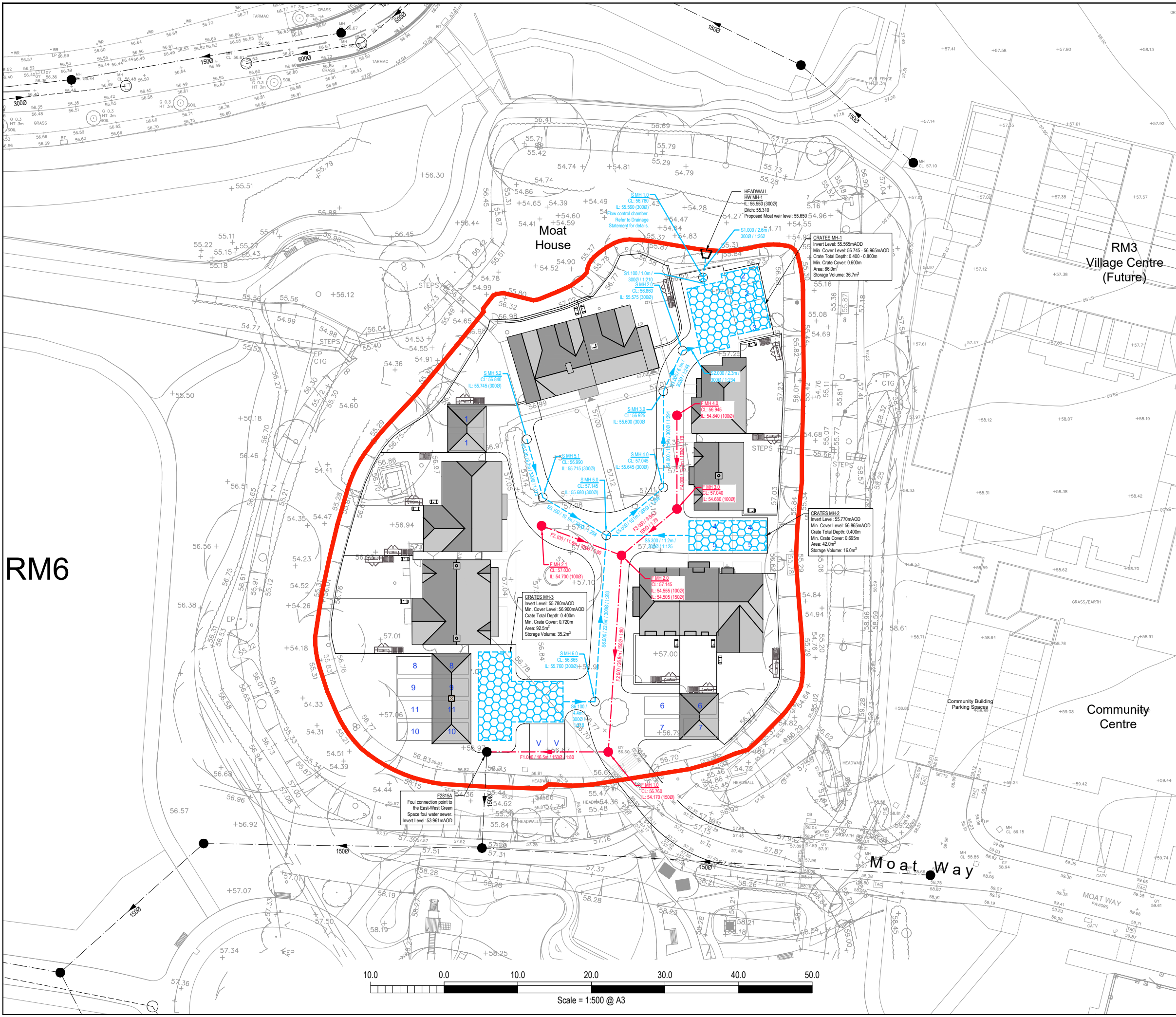
READING
Tel: 01189 500 761

Date of 1st Issue 03.09.15	Designed JW	Drawn JW
A3 Scale nts	Checked IJF	Approved
Drawing Number 25216/2007/SK08		Revision D



Appendix E

Drainage Layout



RM6

- NOTES**
1. This drawing is to be read in conjunction with all relevant documents and specifications.
 2. Dimensions scaleable for planning purposes only.
 3. This drawing has been prepared for information purposes only and must not be used for tender or construction purposes.
 4. Architect's layout taken from OSP Architecture (drawing ref. 25057 - P201).
 5. Final location of headwall to be confirmed following detailed design.
 6. Cover levels are for reference only, refer to the detailed levels drawing for levels information.

- KEY**
- Application boundary
 - Proposed private foul water sewer
 - Proposed private surface water sewer
 - Existing foul / surface water sewer approved / constructed under East-West Green Space / Southern Loop Road S104 Agreements
 - Proposed foul water manhole / inspection chamber
 - Proposed surface water manhole / inspection chamber
 - Proposed private geo-cellular attenuation crates
 - Proposed flow control chamber with restricted discharge rate
 - Proposed headwall fully dressed in Horsham stone / Sussex sandstone



P3	Minor text amendments.	23.07.2026	JD	CS
P2	Updated following client comments & latest site layout.	20.07.2026	JD	CS
P1	First issue.	10.07.2026	JD	CS
Rev.	Description	Date	By	Chkd



Survey > Plan > Engineer

 Civil Engineering

 Structural Engineering

 Transport Planning

 Highways Engineering

 Building Surveying

 Geomatics

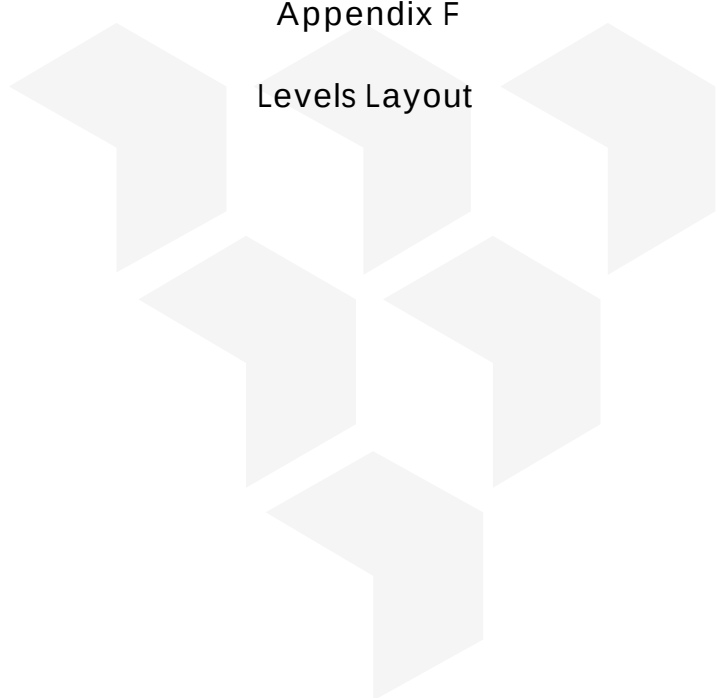
Hertfordshire

Oxfordshire

Cambridgeshire

Bristol

Client:	Legal & General (Strategic Land North Horsham) Ltd		
Project:	Mowbray (Land North of Horsham)		
Title:	Moathouse (RM Area 11) Drainage Layout		
Engineer:	J. Dunesby	Date:	July 2026
Director:	J. Birch	Scale:	1:500 @ A3
Status:	PLANNING		
Drawing No.	MOW-GLA-MH-PH1-1201		Rev P3



Appendix F

Levels Layout



RM6

- NOTES**
1. This drawing is to be read in conjunction with all relevant documents and specifications.
 2. Dimensions scaleable for planning purposes only.
 3. This drawing has been prepared for information purposes only and must not be used for tender or construction purposes.
 4. Architect's layout taken from OSP Architecture (drawing ref. 25057 - P201).
 5. Proposed finished floor levels to be confirmed following detailed design and are subject to change by ± 300 .
 6. Finished floor levels have been designed with consideration of M4(2) requirements.
 7. Proposed levels and gradients to be confirmed following detailed design.

KEY

- Application boundary
- 57.000 Proposed major road contours
- 56.900 Proposed minor road contours
- FFL 57.150 Finished floor level



P2	Updated following client comments & latest site layout.	23.07.2026	JD	CS
P1	First issue.	10/07/2026	JD	CS
Rev.	Description	Date	By	Chkd

 **Glanville**
Survey > Plan > Engineer

 Civil Engineering
 Structural Engineering
 Transport Planning
 Highways Engineering
 Building Surveying
 Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : Legal & General (Strategic Land North Horsham) Ltd	
Project : Mowbray (Land North of Horsham)	
Title : Moathouse (RM Area 11) Levels Layout	
Engineer : J. Dunesby	Date : July 2026
Director : J. Birch	Scale : 1:500 @ A3
Status : PLANNING	
Drawing No. MOW-GLA-MH-PH1-1101	Rev P2

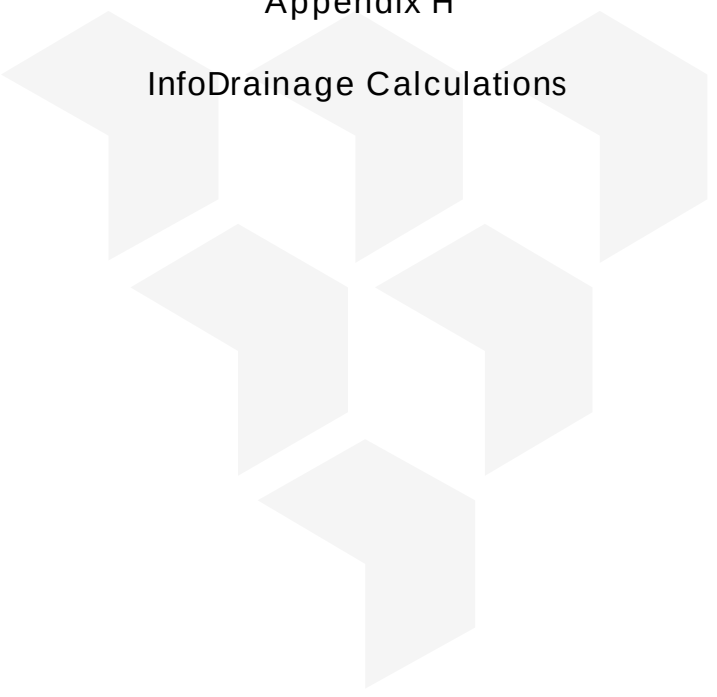
Appendix G

Brownfield Run-Off Rate Calculations

Engineer: J. Duresby Checked/Approved: C. Salt Revision: —

$$= 10.5 \text{ L/s}$$

Existing
Discharge Rates
for 1:2, 1:30,
& 1:100 yr
Storm Events



Appendix H

InfoDrainage Calculations

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_CRATES MH-3_2

Type : Catchment Area

Area (ha)	0.007
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 3.0_2

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 2.0_2

Type : Catchment Area

Area (ha)	0.007
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_CRATES MH-3_3

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_S MH 5.2_1

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_S MH 2.0_1

Type : Catchment Area

Area (ha)	0.002
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_CRATES MH-3_1

Type : Catchment Area

Area (ha)	0.016
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_CRATES MH-2

Type : Catchment Area

Area (ha)	0.007
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_S MH 6.0_3

Type : Catchment Area

Area (ha)	0.005
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_S MH 6.0_1

Type : Catchment Area

Area (ha)	0.014
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_S MH 5.1_2

Type : Catchment Area

Area (ha)	0.012
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 3.0_1

Type : Catchment Area

Area (ha)	0.004
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_S MH 5.0_2

Type : Catchment Area

Area (ha)	0.017
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_CRATES MH-1

Type : Catchment Area

Area (ha)	0.012
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0



IMP_S MH 2.0_3

Type : Catchment Area

Area (ha)	0.017
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2		





IMP_S MH 5.2_2

Type : Catchment Area

Area (ha)	0.003
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 6.0_2

Type : Catchment Area

Area (ha)	0.003
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 4.0

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Inflows Storm Phase: Phase	Revision: Rev 2			



IMP_S MH 5.0_1

Type : Catchment Area

Area (ha)	0.013
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	10



IMP_S MH 5.1_1

Type : Catchment Area

Area (ha)	0.009
-----------	-------

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100
Urban Creep (%)	0

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
Report Details: Type: Junctions Storm Phase: Phase		Revision: Rev 2			

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
S MH 4.0	Manhole	518796.913	133823.603	57.045	1.400	55.645	Circular	1.200
S MH 6.0	Manhole	518787.633	133794.530	56.865	1.105	55.760	Circular	1.200
S MH 5.1	Manhole	518780.529	133822.283	56.990	1.275	55.715	Circular	1.200
HW MH-1	Manhole	518802.629	133854.746	56.730	1.180	55.550	Circular	1.200
S MH 1.0	Manhole	518802.314	133852.142	56.780	1.220	55.560	Circular	1.200
S MH 2.0	Manhole	518799.514	133842.224	56.860	1.285	55.575	Circular	1.200
S MH 5.0	Manhole	518789.160	133817.109	57.145	1.465	55.680	Circular	1.200
S MH 3.0	Manhole	518796.913	133836.687	56.925	1.325	55.600	Circular	1.200
S MH 5.2	Manhole	518778.392	133830.175	56.840	1.095	55.745	Circular	1.200

Name	Lock
S MH 4.0	None
S MH 6.0	None
S MH 5.1	None
HW MH-1	None
S MH 1.0	None
S MH 2.0	None
S MH 5.0	None
S MH 3.0	None
S MH 5.2	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S MH 4.0	Inlet	S5.000 IMP_S MH 4.0	(None)	No Restriction
S MH 6.0	Inlet	S6.200 IMP_S MH 6.0_1 IMP_S MH 6.0_3 IMP_S MH 6.0_2	(None)	No Restriction
S MH 5.1	Inlet	S5.200 IMP_S MH 5.1_2 IMP_S MH 5.1_1	(None)	No Restriction
HW MH-1	Inlet	S1.000	(None)	No Restriction
S MH 1.0	Inlet	S1.100	(None)	No Restriction
S MH 2.0	Inlet	S3.000 IMP_S MH 2.0_2 IMP_S MH 2.0_3 IMP_S MH 2.0_1	(None)	No Restriction
S MH 5.0	Inlet	S5.100 S5.300 S6.000 IMP_S MH 5.0_2 IMP_S MH 5.0_1	(None)	No Restriction
S MH 3.0	Inlet	S4.000 IMP_S MH 3.0_2 IMP_S MH 3.0_1	(None)	No Restriction
S MH 5.2	Inlet	IMP_S MH 5.2_1 IMP_S MH 5.2_2	(None)	No Restriction

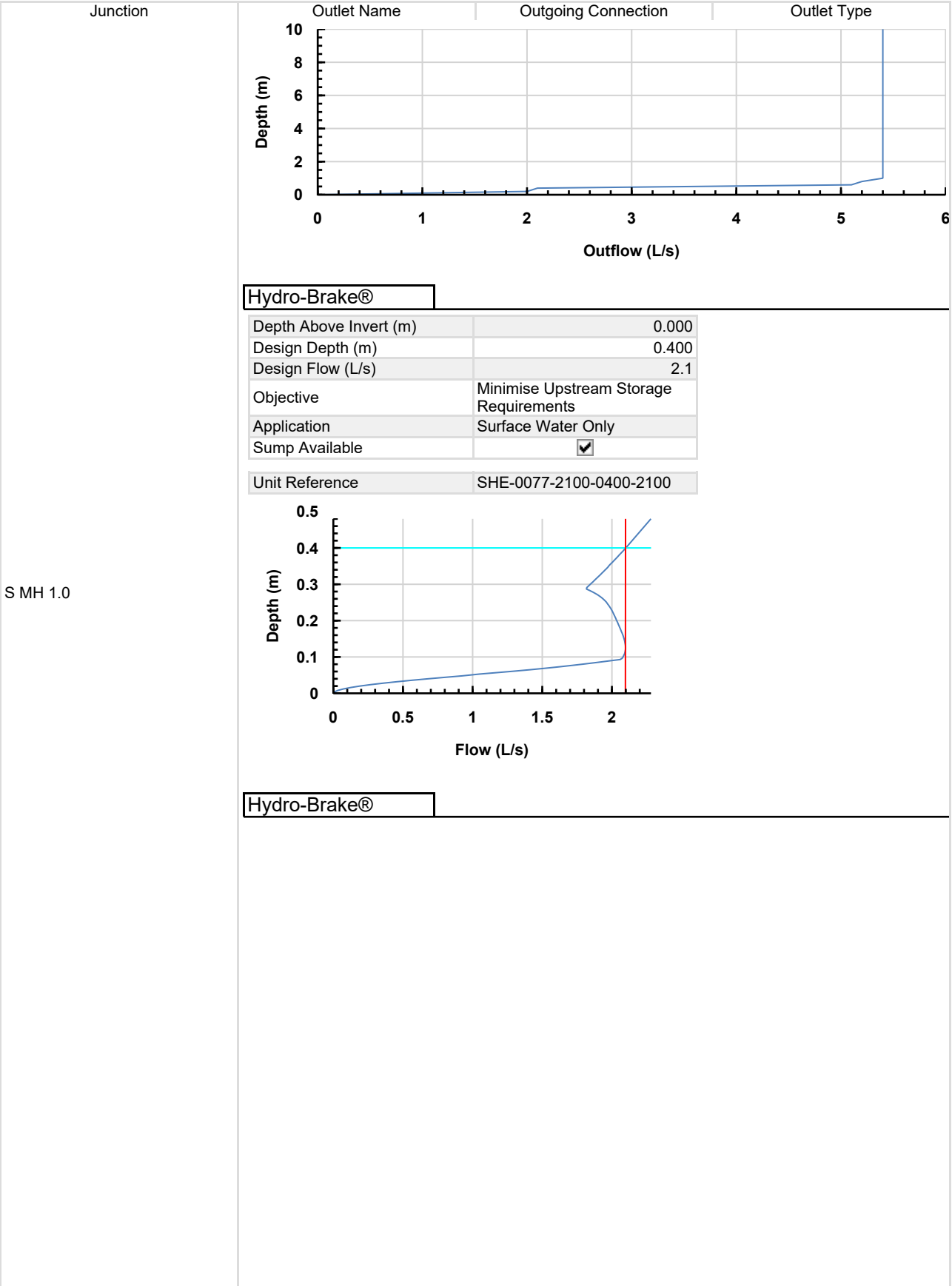
Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S MH 4.0	Outlet	S4.000	Free Discharge
S MH 6.0	Outlet	S6.000	Free Discharge
S MH 5.1	Outlet	S5.100	Free Discharge
	Outlet	S1.000	Multiple
	Invert Level (m)	55.560	
	Combined Outflow		

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Junctions Storm Phase: Phase	Revision: Rev 2		

I

DRN



Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Junctions Storm Phase: Phase	Revision: Rev 2		



Junction	Outlet Name	Outgoing Connection	Outlet Type
	Depth Above Invert (m)	0.400	
	Design Depth (m)	0.400	
	Design Flow (L/s)	2.9	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☒	
	Unit Reference	SHE-0089-2900-0400-2900	
S MH 2.0	Outlet	S2.000	Free Discharge
S MH 5.0	Outlet	S5.000	Free Discharge
S MH 3.0	Outlet	S3.000	Free Discharge
S MH 5.2	Outlet	S5.200	Free Discharge

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Stormwater Controls Storm Phase: Phase	Revision: Rev 2		



CRATES MH-1

Type : Cellular Storage

Dimensions

Exceedance Level (m)	56.365
Depth (m)	0.800
Base Level (m)	55.565
Number of Crates Long	193
Number of Crates Wide	1
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	0.5
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	36.670

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S2.000
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	IMP_CRATES MH-1
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	S1.100
Outlet Type	Free Discharge

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Stormwater Controls Storm Phase: Phase	Revision: Rev 2		



CRATES MH-2

Type : Cellular Storage

Dimensions

Exceedance Level (m)	56.180
Depth (m)	0.400
Base Level (m)	55.770
Number of Crates Long	21
Number of Crates Wide	4
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	0.5
Crate Width (m)	1
Crate Height (m)	0.4
Total Volume (m³)	15.970

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	IMP_CRATES MH-2
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	S5.300
Outlet Type	Free Discharge

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Stormwater Controls Storm Phase: Phase	Revision: Rev 2		



CRATES MH-3

Type : Cellular Storage

Dimensions

Exceedance Level (m)	56.190
Depth (m)	0.400
Base Level (m)	55.780
Number of Crates Long	185
Number of Crates Wide	1
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	35.160

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	IMP_CRATES MH-3_1 IMP_CRATES MH-3_2 IMP_CRATES MH-3_3
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	S6.200
Outlet Type	Free Discharge

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
Report Details: Type: Connections Storm Phase: Phase		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
		Revision: Rev 2			

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
S6.000	22.630	Pipe	282.877		0.6	300	56.865	55.760
S5.100	10.063	Pipe	287.518		0.6	300	56.990	55.715
S6.200	4.354	Pipe	217.701		0.6	300	56.190	55.780
S1.100	1.048	Pipe	209.679		0.6	300	56.365	55.565
S1.000	2.624	Pipe	262.364		0.6	300	56.780	55.560
S3.000	6.117	Pipe	244.678		0.6	300	56.925	55.600
S2.000	2.341	Pipe	234.097		0.6	300	56.860	55.575
S5.300	11.230	Pipe	124.781		0.6	300	56.180	55.770
S5.000	10.114	Pipe	288.972		0.6	300	57.145	55.680
S4.000	13.084	Pipe	290.765		0.6	300	57.045	55.645
S5.200	8.177	Pipe	272.555		0.6	300	56.840	55.745

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Flow Restriction (L/s)	Culvert Type	Culvert Entrance	Wall Thickness (mm)
S6.000	57.145	55.680		None		(None)	(None)	0
S5.100	57.145	55.680		None		(None)	(None)	0
S6.200	56.865	55.760		None		(None)	(None)	0
S1.100	56.780	55.560		None		(None)	(None)	0
S1.000	56.730	55.550		None	5.4	(None)	(None)	0
S3.000	56.860	55.575		None		(None)	(None)	0
S2.000	56.365	55.565		None		(None)	(None)	0
S5.300	57.145	55.680		None		(None)	(None)	0
S5.000	57.045	55.645		None		(None)	(None)	0
S4.000	56.925	55.600		None		(None)	(None)	0
S5.200	56.990	55.715		None		(None)	(None)	0

Name	Material	Trench Width (mm)	Bedding Material	Surrounding Material
S6.000		0		
S5.100		0		
S6.200		0		
S1.100		0		
S1.000		0		
S3.000		0		
S2.000		0		
S5.300		0		
S5.000		0		
S4.000		0		
S5.200		0		

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
Report Details: Type: Manhole Schedule Storm Phase: Phase		Revision: Rev 2			

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
S MH 4.0	57.045 55.645	Diameter / Length: 1.200	{1} S5.000	Pipe	55.645	Diam/Width:300	Manhole
E:518796.913	1.400						
N:133823.603			{a} S4.000	Pipe	55.645	Diam/Width:300	Not Applicable
S MH 6.0	56.865 55.760	Diameter / Length: 1.200	{1} S6.200	Pipe	55.760	Diam/Width:300	Manhole
E:518787.633	1.105						
N:133794.530			{a} S6.000	Pipe	55.760	Diam/Width:300	Not Applicable
S MH 5.1	56.990 55.715	Diameter / Length: 1.200	{1} S5.200	Pipe	55.715	Diam/Width:300	Manhole
E:518780.529	1.275						
N:133822.283			{a} S5.100	Pipe	55.715	Diam/Width:300	Not Applicable
HW MH-1	56.730 55.550	Diameter / Length: 1.200	{1} S1.000	Pipe	55.550	Diam/Width:300	Manhole
E:518802.629	1.180						
N:133854.746							Not Applicable
S MH 1.0	56.780 55.560	Diameter / Length: 1.200	{1} S1.100	Pipe	55.560	Diam/Width:300	Manhole
E:518802.314	1.220						
N:133852.142			{a} S1.000	Pipe	55.560	Diam/Width:300	Not Applicable

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
Report Details: Type: Manhole Schedule Storm Phase: Phase		Revision: Rev 2			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S MH 2.0	56.860 55.575	Diameter / Length: 1.200	{1} S3.000	Pipe	55.575	Diam/Width:300	Manhole
E:518799.514 N:133842.224	1.285		{a} S2.000	Pipe	55.575	Diam/Width:300	Not Applicable
S MH 5.0	57.145 55.680	Diameter / Length: 1.200	{1} S5.100	Pipe	55.680	Diam/Width:300	Manhole
E:518789.160 N:133817.109	1.465		{2} S5.300 {3} S6.000	Pipe Pipe	55.680 55.680	Diam/Width:300 Diam/Width:300	
			{a} S5.000	Pipe	55.680	Diam/Width:300	Not Applicable
S MH 3.0	56.925 55.600	Diameter / Length: 1.200	{1} S4.000	Pipe	55.600	Diam/Width:300	Manhole
E:518796.913 N:133836.687	1.325		{a} S3.000	Pipe	55.600	Diam/Width:300	Not Applicable
S MH 5.2	56.840 55.745	Diameter / Length: 1.200					Manhole
E:518778.392 N:133830.175	1.095		{a} S5.200	Pipe	55.745	Diam/Width:300	Not Applicable

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
Report Details: Type: Inflow Summary Storm Phase: Phase		Revision: Rev 2			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
IMP_CRATE S MH-1	CRATES MH -1		Time of Concentration	0.012	100	0	100	0.012
IMP_CRATE S MH-2	CRATES MH -2		Time of Concentration	0.007	100	0	100	0.007
IMP_CRATE S MH-3_1	CRATES MH -3		Time of Concentration	0.016	100	0	100	0.016
IMP_CRATE S MH-3_2	CRATES MH -3		Time of Concentration	0.007	100	10	110	0.007
IMP_CRATE S MH-3_3	CRATES MH -3		Time of Concentration	0.006	100	0	100	0.006
IMP_S MH 2.0_1	S MH 2.0		Time of Concentration	0.002	100	0	100	0.002
IMP_S MH 2.0_2	S MH 2.0		Time of Concentration	0.007	100	10	110	0.007
IMP_S MH 2.0_3	S MH 2.0		Time of Concentration	0.017	100	10	110	0.019
IMP_S MH 3.0_1	S MH 3.0		Time of Concentration	0.004	100	0	100	0.004
IMP_S MH 3.0_2	S MH 3.0		Time of Concentration	0.006	100	10	110	0.007
IMP_S MH 4.0	S MH 4.0		Time of Concentration	0.006	100	0	100	0.006
IMP_S MH 5.0_1	S MH 5.0		Time of Concentration	0.013	100	10	110	0.014
IMP_S MH 5.0_2	S MH 5.0		Time of Concentration	0.017	100	10	110	0.019
IMP_S MH 5.1_1	S MH 5.1		Time of Concentration	0.009	100	0	100	0.009
IMP_S MH 5.1_2	S MH 5.1		Time of Concentration	0.012	100	10	110	0.013
IMP_S MH 5.2_1	S MH 5.2		Time of Concentration	0.006	100	0	100	0.006
IMP_S MH 5.2_2	S MH 5.2		Time of Concentration	0.003	100	10	110	0.004
IMP_S MH 6.0_1	S MH 6.0		Time of Concentration	0.014	100	0	100	0.014
IMP_S MH 6.0_2	S MH 6.0		Time of Concentration	0.003	100	10	110	0.004
IMP_S MH 6.0_3	S MH 6.0		Time of Concentration	0.005	100	0	100	0.005
TOTAL		0.0		0.172				0.181

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026		
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Network Design Criteria Storm Phase: Phase	Revision: Rev 2		



Flow Options

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

Pipe Options

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

Manhole Options

Apply Offset	☐
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Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Outfall Details Storm Phase: Phase	Revision: Rev 2			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
HW MH-1	Free Discharge			

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Title: Rainfall Analysis Criteria	Revision: Rev 2			

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

Rainfall

FEH	Type: FEH
Site Location	GB 518600 133700 TQ 18600 33700
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	20.000

Storm Durations

Duration (mins)	Run Time (mins)
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
Report Details: Type: Junctions Summary Storm Phase: Phase		Revision: Rev 2			



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

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
S MH 4.0	FEH: 2 years: +0 %: 60 mins: Summer	57.04 5	55.64 5	55.823	0.178	9.7	0.202	0.000	9.2	15.513	OK
S MH 6.0	FEH: 2 years: +0 %: 60 mins: Summer	56.86 5	55.76 0	55.823	0.063	3.4	0.072	0.000	3.4	6.413	OK
S MH 5.1	FEH: 2 years: +0 %: 60 mins: Summer	56.99 0	55.71 5	55.823	0.108	3.6	0.123	0.000	3.3	4.476	OK
HW MH-1	FEH: 2 years: +0 %: 180 mins: Summer	56.73 0	55.55 0	55.586	0.036	2.1	0.000	0.000	2.1	36.293	OK
S MH 1.0	FEH: 2 years: +0 %: 180 mins: Summer	56.78 0	55.56 0	55.852	0.292	2.3	0.330	0.000	2.1	36.330	OK
S MH 2.0	FEH: 2 years: +0 %: 60 mins: Summer	56.86 0	55.57 5	55.823	0.248	13.1	0.281	0.000	12.5	20.300	OK
S MH 5.0	FEH: 2 years: +0 %: 60 mins: Summer	57.14 5	55.68 0	55.823	0.143	10.3	0.162	0.000	9.0	16.409	OK
S MH 3.0	FEH: 2 years: +0 %: 60 mins: Summer	56.92 5	55.60 0	55.823	0.223	10.6	0.252	0.000	9.7	16.511	OK
S MH 5.2	FEH: 2 years: +0 %: 60 mins: Summer	56.84 0	55.74 5	55.823	0.078	1.2	0.089	0.000	1.0	1.418	OK

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026		
		Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Junctions Summary Storm Phase: Phase		Revision: Rev 2		





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

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
S MH 4.0	FEH: 30 years: +0 %: 60 mins: Winter	57.045	55.645	55.986	0.341	12.2	0.385	0.000	11.0	17.685	Surcharged
S MH 6.0	FEH: 30 years: +0 %: 60 mins: Winter	56.865	55.760	55.986	0.226	10.7	0.256	0.000	3.3	14.990	OK
S MH 5.1	FEH: 30 years: +0 %: 60 mins: Summer	56.990	55.715	55.986	0.271	8.1	0.306	0.000	7.5	9.474	OK
HW MH-1	FEH: 30 years: +0 %: 180 mins: Winter	56.730	55.550	55.594	0.044	3.3	0.000	0.000	3.3	44.038	OK
S MH 1.0	FEH: 30 years: +0 %: 180 mins: Winter	56.780	55.560	56.012	0.452	3.3	0.511	0.000	3.3	44.081	Surcharged
S MH 2.0	FEH: 30 years: +0 %: 60 mins: Summer	56.860	55.575	55.986	0.411	19.2	0.465	0.000	18.4	27.610	Surcharged
S MH 5.0	FEH: 30 years: +0 %: 60 mins: Winter	57.145	55.680	55.986	0.306	16.1	0.346	0.000	11.3	27.257	Surcharged
S MH 3.0	FEH: 30 years: +0 %: 60 mins: Summer	56.925	55.600	55.986	0.386	12.9	0.436	0.000	11.5	19.836	Surcharged
S MH 5.2	FEH: 30 years: +0 %: 60 mins: Summer	56.840	55.745	55.986	0.241	2.7	0.272	0.000	2.3	2.934	OK

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Junctions Summary Storm Phase: Phase	Revision: Rev 2			



FEH: 100 years: Increase Rainfall (%): +20: Critical Storm Per Item: Rank By: Max. Outflow

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
S MH 4.0	FEH: 100 years: +20 %: 60 mins: Winter	57.045	55.645	56.136	0.491	10.9	0.555	0.000	9.8	29.181	Surcharged
S MH 6.0	FEH: 100 years: +20 %: 60 mins: Summer	56.865	55.760	56.133	0.373	29.1	0.422	0.000	3.5	28.291	Surcharged
S MH 5.1	FEH: 100 years: +20 %: 60 mins: Summer	56.990	55.715	56.133	0.418	12.7	0.473	0.000	12.1	14.942	Surcharged
HW MH-1	FEH: 100 years: +20 %: 360 mins: Winter	56.730	55.550	55.605	0.055	5.2	0.000	0.000	5.2	119.774	OK
S MH 1.0	FEH: 100 years: +20 %: 240 mins: Winter	56.780	55.560	56.164	0.604	5.2	0.684	0.000	5.2	89.468	Surcharged
S MH 2.0	FEH: 100 years: +20 %: 60 mins: Winter	56.860	55.575	56.135	0.560	16.2	0.634	0.000	15.5	44.617	Surcharged
S MH 5.0	FEH: 100 years: +20 %: 60 mins: Winter	57.145	55.680	56.136	0.456	25.1	0.516	0.000	10.1	46.552	Surcharged
S MH 3.0	FEH: 100 years: +20 %: 60 mins: Summer	56.925	55.600	56.133	0.533	11.6	0.603	0.000	10.4	32.386	Surcharged
S MH 5.2	FEH: 100 years: +20 %: 60 mins: Summer	56.840	55.745	56.133	0.388	4.2	0.439	0.000	3.6	4.600	Surcharged

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026		
		Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Revision: Rev 2		





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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Status
CRATES MH-1	FEH: 2 years: +0 %: 240 mins: Summer	55.854	55.854	0.289	0.289	7.8	13.277	0.000	0.000	2.2	43.628		OK
CRATES MH-2	FEH: 2 years: +0 %: 240 mins: Summer	55.855	55.855	0.085	0.085	3.3	3.378	0.000	0.000	0.5	3.890		OK
CRATES MH-3	FEH: 2 years: +0 %: 240 mins: Summer	55.855	55.855	0.075	0.075	3.1	6.571	0.000	0.000	1.0	8.677		OK

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Revision: Rev 2			



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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Status
CRATES MH-1	FEH: 30 years: +0 %: 180 mins: Winter	56.012	56.012	0.447	0.447	7.9	20.513	0.000	0.000	3.3	44.496	70	OK
CRATES MH-2	FEH: 30 years: +0 %: 180 mins: Winter	56.013	56.013	0.243	0.243	3.9	9.678	0.000	0.000	0.6	5.263	60	OK
CRATES MH-3	FEH: 30 years: +0 %: 180 mins: Winter	56.013	56.013	0.233	0.233	8.3	20.439	0.000	0.000	1.4	12.669	50	OK

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model		Date: 23/07/2026			
		Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Revision: Rev 2			



**FEH: 100 years: Increase Rainfall (%): +20: Critical Storm Per Item: Rank By:
Max. Resident Volume**

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Status
CRATES MH-1	FEH: 100 years: +20 %: 180 mins: Winter	56.166	56.166	0.601	0.601	9.8	27.587	0.000	0.000	5.2	73.343	185	OK
CRATES MH-2	FEH: 100 years: +20 %: 180 mins: Winter	56.167	56.167	0.397	0.397	5.2	15.850	0.000	0.000	1.1	9.296	175	OK
CRATES MH-3	FEH: 100 years: +20 %: 180 mins: Winter	56.167	56.167	0.387	0.387	11.7	34.036	0.000	0.000	2.5	21.875	160	OK

Appendix I

InfoDrainage Calculations – Surcharged Outfall

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall		Date: 23/07/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
		Revision: Rev 2			

Flow Options

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

Pipe Options

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

Manhole Options

Apply Offset	☐
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Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall		Date: 23/07/2026			
Report Details: Type: Outfall Details Storm Phase: Phase		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
		Revision: Rev 2			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
HW MH-1	Fixed Surcharged Level	☐	55.850	
FEH : 100 years: +20 %: 60 mins: Summer			55.850	
FEH : 100 years: +20 %: 60 mins: Winter			55.850	
FEH : 100 years: +20 %: 120 mins: Summer			55.850	
FEH : 100 years: +20 %: 120 mins: Winter			55.850	
FEH : 100 years: +20 %: 180 mins: Summer			55.850	
FEH : 100 years: +20 %: 180 mins: Winter			55.850	
FEH : 100 years: +20 %: 240 mins: Summer			55.850	
FEH : 100 years: +20 %: 240 mins: Winter			55.850	
FEH : 100 years: +20 %: 360 mins: Summer			55.850	
FEH : 100 years: +20 %: 360 mins: Winter			55.850	
FEH : 100 years: +20 %: 480 mins: Summer			55.850	
FEH : 100 years: +20 %: 480 mins: Winter			55.850	
FEH : 100 years: +20 %: 600 mins: Summer			55.850	
FEH : 100 years: +20 %: 600 mins: Winter			55.850	
FEH : 100 years: +20 %: 720 mins: Summer			55.850	
FEH : 100 years: +20 %: 720 mins: Winter			55.850	
FEH : 100 years: +20 %: 960 mins: Summer			55.850	
FEH : 100 years: +20 %: 960 mins: Winter			55.850	
FEH : 100 years: +20 %: 1440 mins: Summer			55.850	
FEH : 100 years: +20 %: 1440 mins: Winter			55.850	
FEH : 100 years: +20 %: 2160 mins: Summer			55.850	
FEH : 100 years: +20 %: 2160 mins: Winter			55.850	
FEH : 100 years: +20 %: 2880 mins: Summer			55.850	
FEH : 100 years: +20 %: 2880 mins: Winter			55.850	
FEH : 100 years: +20 %: 4320 mins: Summer			55.850	
FEH : 100 years: +20 %: 4320 mins: Winter			55.850	
FEH : 100 years: +20 %: 5760 mins: Summer			55.850	
FEH : 100 years: +20 %: 5760 mins: Winter			55.850	
FEH : 100 years: +20 %: 7200 mins: Summer			55.850	
FEH : 100 years: +20 %: 7200 mins: Winter			55.850	
FEH : 100 years: +20 %: 8640 mins: Summer			55.850	
FEH : 100 years: +20 %: 8640 mins: Winter			55.850	

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall			Date: 23/07/2026			
Report Details: Type: Outfall Details Storm Phase: Phase			Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
			Revision: Rev 2			
FEH : 100 years: +20 %: 10080 mins: Summer					55.850	
FEH : 100 years: +20 %: 10080 mins: Winter					55.850	

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall	Date: 23/07/2026			
Report Title: Rainfall Analysis Criteria	Designed by: J. Dunesby <table border="1"> <tr> <td>Checked by: C. Salt</td> <td>Approved By: C. Salt</td> </tr> </table>		Checked by: C. Salt	Approved By: C. Salt
Checked by: C. Salt	Approved By: C. Salt			
	Revision: Rev 2			

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

Rainfall		
FEH		Type: FEH
Site Location	GB 518600 133700 TQ 18600 33700	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period	
Return Period (years)	Increase Rainfall (%)
100.0	20.000

Duration (mins)	Run Time (mins)
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Junctions Summary Storm Phase: Phase	Revision: Rev 2			



FEH: 100 years: Increase Rainfall (%): +20: Critical Storm Per Item: Rank By: Max. Outflow

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
S MH 4.0	FEH: 100 years: +20 %: 8640 mins: Summer	57.045	55.645	55.990	0.345	49.4	0.390	0.000	53.6	276.467	Surcharged
S MH 6.0	FEH: 100 years: +20 %: 8640 mins: Summer	56.865	55.760	55.979	0.219	21.4	0.248	0.000	25.4	135.566	OK
S MH 5.1	FEH: 100 years: +20 %: 60 mins: Summer	56.990	55.715	56.160	0.445	12.7	0.503	0.000	12.1	14.845	Surcharged
HW MH-1	FEH: 100 years: +20 %: 8640 mins: Summer	56.730	55.550	55.850	0.300	10.5	0.000	0.000	9.4	373.740	OK
S MH 1.0	FEH: 100 years: +20 %: 60 mins: Summer	56.780	55.560	56.159	0.599	5.1	0.678	0.000	4.9	27.508	Surcharged
S MH 2.0	FEH: 100 years: +20 %: 8640 mins: Summer	56.860	55.575	55.980	0.405	54.8	0.458	0.000	53.8	349.139	Surcharged
S MH 5.0	FEH: 100 years: +20 %: 8640 mins: Summer	57.145	55.680	55.983	0.303	42.5	0.343	0.000	49.3	290.753	Surcharged
S MH 3.0	FEH: 100 years: +20 %: 8640 mins: Summer	56.925	55.600	55.980	0.380	53.7	0.430	0.000	54.5	299.740	Surcharged
S MH 5.2	FEH: 100 years: +20 %: 2160 mins: Winter	56.840	55.745	56.033	0.288	2.3	0.326	0.000	10.1	14.873	OK

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model Surcharged Outfall	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Revision: Rev 2			



**FEH: 100 years: Increase Rainfall (%): +20: Critical Storm Per Item: Rank By:
Max. Resident Volume**

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Status
CRATES MH-1	FEH: 100 years: +20 %: 480 mins: Summer	56.262	56.262	0.697	0.697	8.8	31.950	0.000	0.000	5.0	124.798	305	OK
CRATES MH-2	FEH: 100 years: +20 %: 480 mins: Summer	56.262	56.262	0.492	0.492	3.4	19.242	3.258	0.000	1.2	16.202	295	Flood
CRATES MH-3	FEH: 100 years: +20 %: 480 mins: Summer	56.262	56.262	0.482	0.482	7.5	41.492	6.300	0.000	3.0	37.914	280	Flood

Appendix J

Phase 1 SuDS Management and Maintenance Plan

Mowbray, North Horsham, West Sussex (Phase 1) Phase 1 – SuDS Management and Maintenance Plan

1.0 Site and Drainage Description

- 1.1 The wider Mowbray development at North Horsham is currently under construction with various applications for the approval of reserved matters for individual infrastructure elements and sub-phases, both under consideration and determined.
- 1.2 This SuDS Management and Maintenance Plan relates to the drainage infrastructure proposed as part of Phase 1 of the development.
- 1.3 Surface water run-off generated by the Phase 1 of the development will be discharged to the existing network of watercourses running through and around Phase 1, utilising attenuation provided by basins and geo-cellular attenuation crates located across the phase and serving various land parcels.
- 1.4 Foul effluent generated by the residential parcels will be conveyed by gravity sewer networks, which will gravitate flows to the various pump stations proposed.
- 1.5 This plan should be read alongside the accompanying drainage reports for the various applications submitted for individual infrastructure elements and residential parcels located across Phase 1. This SuDS Management and Maintenance Plan does not constitute a complete maintenance schedule and should be developed at the appropriate design stage, taking into account advice and recommendations from system manufacturers and installers. Appropriate health and safety measures should also be put in place.

2.0 Management Responsibilities

- 2.1 The proposed surface water pipe network and associated drainage infrastructure serving the development parcels of Phase 1 are to be adopted by the sewerage undertaker, which will have the responsibility to keep them maintained. There are some exceptions to this where small sections of proposed surface water drainage infrastructure will remain private. The accompanying drainage reports for the various applications submitted for individual infrastructure elements and development parcels should be referred to.
- 2.2 Gullies, gully connections and other surface water drainage infrastructure solely serving highway land are to be adopted by West Sussex County Council (WSCC) in its role as highway authority. Surface water drainage infrastructure adopted by WSCC will be their responsibility to maintain.
- 2.3 Foul water drainage infrastructure constructed as part of Phase 1 and serving the residential parcels are to be adopted by the sewerage undertaker and will have the responsibility to keep them maintained.
- 2.4 All attenuation basins and geo-cellular attenuation crates will remain private and be the responsibility of a management company to maintain.

3.0 Maintenance Activities

- 3.1 This section details the type and frequency of maintenance activities for the drainage infrastructure which will be implemented as part of Phase 1 of the Mowbray development.

Conventional Pipe Network / Inspection Chambers / Catchpits / Gullies

- 3.2 Piped network components require regular inspection and maintenance to ensure that the individual components continue to operate as designed, both in terms of hydraulic capacity and potential pollutant removal. All gullies, inspection chambers and catchpits will therefore be inspected and cleaned regularly, with typical maintenance activities detailed in Table 1.

Table 1: Conventional Pipe Network / Inspection Chambers / Gullies – Typical Maintenance Activities

Maintenance Schedule	Maintenance Activity	Inspection Frequency
Regular Maintenance	Inspect and identify any features that are not operating correctly. If required, take remedial action.	Monthly (for first three months), then six monthly
	Remove debris from catchment surface / gratings (where it may cause risk to performance).	Quarterly and after large storms
	Inspect and remove sediment, debris, and silt from gullies, silt traps, and catchpit chambers.	Annually, or as required
	Inspect pipework for blockages, root ingress, displaced joints, or other signs of differential settlement.	Annually, or as required
Remedial Actions	Clear pipework of blockages, root ingress, repair joints or repair other signs of differential settlement.	As required
	Replacement of gullies / pipe system.	As required
	Repair / rehabilitation of gratings, inlets and outlets.	As required
Monitoring	Inspect / check all gratings, manholes, gullies, and catchpits to ensure that they are in good condition and operating as designed.	Annually and after large storm events
Structure Rehabilitation / Repair	Regular maintenance and monitoring to identify if repair and / or replacement of features or pipe system is required.	As required

Attenuation Basin

- 3.3 Attenuation basins are landscaped depressions which surface water is attenuated within prior to being discharged to the network of watercourses running through and around Phase 1 of the Mowbray development. To ensure the effective operation of the basins with limited erosion and silt accumulation, regular inspection and maintenance is required including the typical maintenance activities detailed in Table 2.

Table 2: Attenuation Basins – Typical Maintenance Activities

Maintenance Schedule	Maintenance Activity	Inspection Frequency
Regular Maintenance	Mow grass access paths and verges surrounding basins, at 35mm-50mm minimum and 75mm maximum.	Monthly (during growing season), or as required
	Mow rough grass areas for occasional access or habitat reasons at 100mm and 150mm maximum with cutting removed to wildlife piles.	As required
	Manage other vegetation and remove nuisance plants.	Monthly (for first three months, then as required)
	Inspect for signs of clogging and remove any litter / debris found.	Monthly, or as required
	Inspect and clear inlets, outlets, and overflows of any blockages.	Annually, or as required
	Inspect inlets and pre-treatment systems for silt accumulation; establish appropriate silt removal frequencies.	Monthly (for first year), then annually, or as required
	Inspect banksides for evidence of physical damage and repair as appropriate.	Annually, or as required
	Cut (trim) wetland vegetation at 100mm and remove cuttings.	Annually, or as required
	Reseed areas of poor vegetation growth.	As required
	Prune and trim any trees and remove cuttings.	Every 2 years, or as required
Occasional Maintenance	Where silt accumulates on apron or area in front of inlet or outlet then remove and spread above design profile of SuDS. Where silt accumulates more than 150mm in base of basins undertake a phased removal of silt subject to Client approval. Remove silt but not more than 30% of basin area at any one time and to an agreed depth. Retain as much representative existing vegetation as possible to ensure rapid re-colonisation of open areas. Stack excavated material adjacent to basin to allow dewatering of silt. Undertake silt removal during September-October to minimise damage to protected wildlife and ensure re-growth of aquatic vegetation before winter. Spread excavated material on site above SUDS design profile.	Every 3 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial Actions	Repair erosion or other damage by reseedling or re-turfing.	As required

Geo-Cellular Attenuation Crates

- 3.4 Geo-cellular attenuation crates are below ground structures utilised to attenuate surface water run-off. To ensure both the effective operation and hydraulic capacity of the attenuation crates is maintained, regular inspection and maintenance is required including the typical maintenance activities detailed in Table 3.

Table 3: Geo-Cellular Attenuation Crates (Wavin or Similar)* - Typical Maintenance Activities

Maintenance Schedule	Maintenance Activity	Inspection Frequency
Regular maintenance	Initial inspection and identify any areas that are not operating correctly and either clean or replacement inlets, outlets, overflows, and/or vents.	Monthly for 3 months, then annually
	Inspect / check all inlets, outlets, vents, and overflows to ensure that they are in good condition and operating as designed.	Annually
	Remove sediment from pre-treatment structures and/or internal forebays.	Annually, or as required

*Refer to manufacturer's guidance for specific maintenance instructions.

Inlet / Outlets / Controls

- 3.5 Headwalls, flow control chambers and outfalls direct the flow in and control the flow rate out of the proposed attenuation basins and geo-cellular attenuation crates across Phase 1. To prevent surface water exceedance, regular inspection and maintenance of these structures are required to remove potential blockages and ensure the intended design flow rates are achieved. Typical maintenance activities for these structures are included in Table 4.

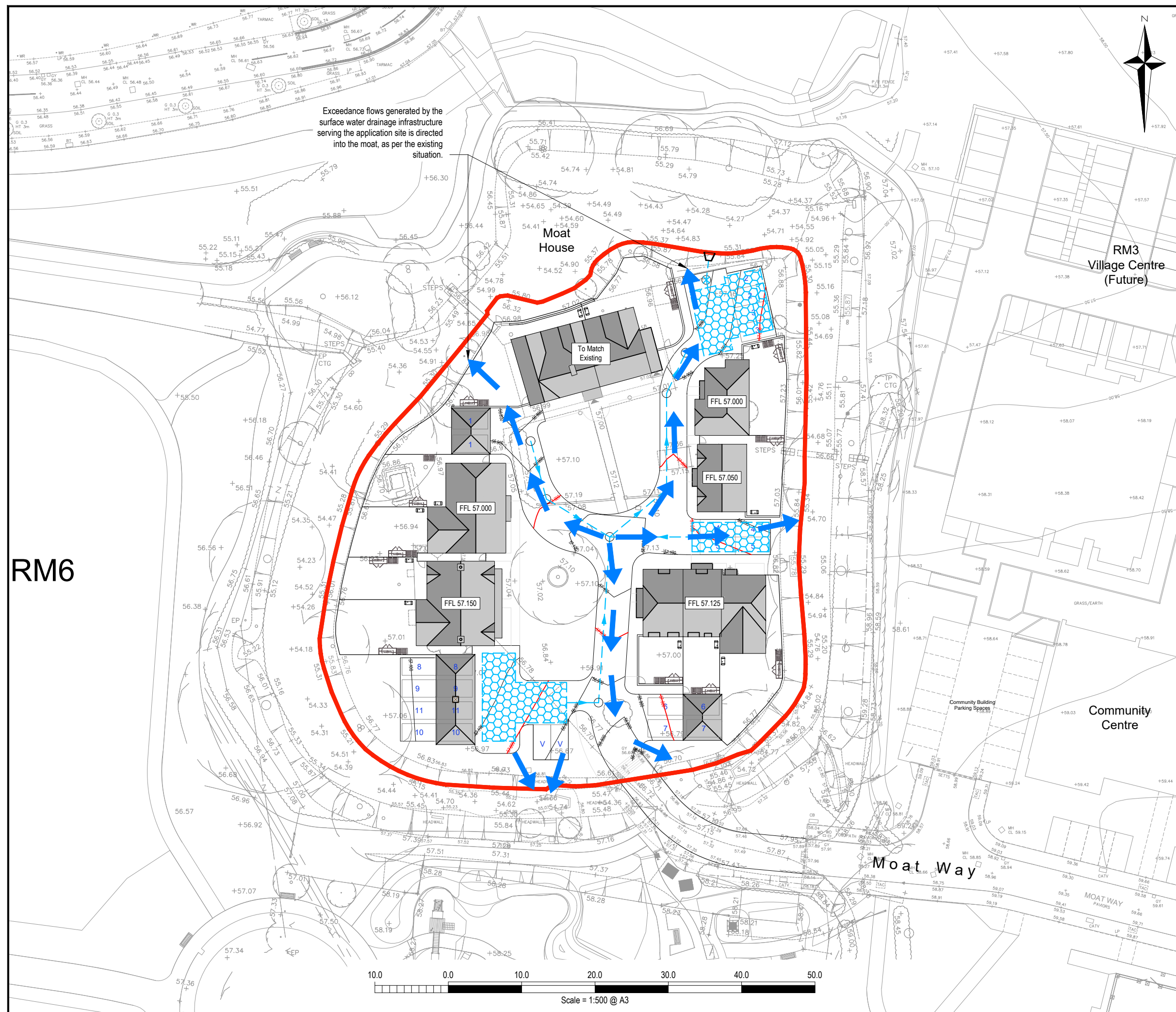
Table 4: Inlets / Outlets / Flow Control Devices* – Typical Maintenance Activities

Maintenance Schedule	Maintenance Activity	Inspection Frequency
Regular Maintenance	Inspect control chamber and remove any sediment, debris, and silt to ensure water is flowing freely.	Quarterly, or as required
	Inspect chamber and incoming / outgoing pipework for blockage or root ingress.	Six monthly, or as required
	Inspect surface structures for physical damage.	Quarterly, or as required
	Cut (Strim) vegetation 1m minimum from the surround of structures.	Six monthly (spring and autumn)
	Remove debris and silt from hard head wall aprons.	Quarterly, or as required
	Inspect and clear headwall grills.	Quarterly, or as required
	Undertake general inspection after Autumn leaf fall.	Annually
Occasional Maintenance	Check topsoil levels are 20mm above chamber edges to avoid mower damage.	As required
Remedial Actions	Clear chamber and incoming / outgoing pipework of blockages.	As required
	Repair physical damage or replace missing grills or controls.	As required

*Refer to manufacturer's guidance for specific maintenance instructions

Appendix K

Exceedance Flow Route Plan



- ## NOTES
1. This drawing is to be read in conjunction with all relevant documents and specifications.
 2. Dimensions scaleable for planning purposes only.
 3. This drawing has been prepared for information purposes only and must not be used for tender or construction purposes.
 4. Architect's layout taken from OSP Architecture (drawing ref. 25057 - P201).
 5. Final location of headwall to be confirmed following detailed design.
 6. Cover levels are for reference only, refer to the detailed levels drawing for levels information.
 7. No flooding occurs in the 1 in 100yr + CC storm event (design event). This plan shows exceedance flows in the event of system blockage or a flood event exceeding the 1 in 100yr + CC event. Refer to the InfoDrainage calculations accompanying the Drainage Statement report.

- KEY**
-  Application boundary
 -  Proposed private surface water sewer
 -  Proposed surface water manhole / inspection chamber
 -  Proposed private geo-cellular attenuation crates
 -  Proposed flow control chamber with restricted discharge rate
 -  Proposed headwall fully dressed in Horsham stone / Sussex sandstone
 -  Proposed major road contours
 -  Proposed minor road contours
 -  Finished floor level
 -  Exceedance flow path

P2	Updated following client comments & latest site layout.	23.07.2026	JD	CS
P1	First issue.	10.07.2026	JD	CS
Rev.	Description	Date	By	Chkd

Client : Legal & General (Strategic Land North Horsham) Ltd	
Project : Mowbray (Land North of Horsham)	
Title : Moathouse (RM Area 11) Exceedance Flow Route Plan	
Engineer : J. Dunesby	Date : July 2026
Director : J. Birch	Scale : 1:500 @ A3
Status :	PLANNING
Drawing No. MOW-GLA-MH-PHI-1202	Rev P2

Appendix L

InfoDrainage Calculations – 1 in 100 year +40% Climate Change Design Event

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model 1 in 100yr + 40% CC		Date: 23/07/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase		Designed by: J. Dunesby	Checked by: C. Salt		Approved By: C. Salt
		Revision: Rev 2			

Flow Options

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

Pipe Options

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

Manhole Options

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

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model 1 in 100yr + 40% CC	Date: 23/07/2026			
Report Details: Type: Outfall Details Storm Phase: Phase	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Revision: Rev 2				

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
HW MH-1	Free Discharge			

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model 1 in 100yr + 40% CC	Date: 23/07/2026	
Report Title: Rainfall Analysis Criteria	Designed by: J. Dunesby Checked by: C. Salt Approved By: C. Salt	
	Revision: Rev 2	

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

Rainfall

FEH	Type: FEH
Site Location	GB 518600 133700 TQ 18600 33700
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model 1 in 100yr + 40% CC	Date: 23/07/2026			
	Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt	
Report Details: Type: Junctions Summary Storm Phase: Phase	Revision: Rev 2			



FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Outflow

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
S MH 4.0	FEH: 100 years: +40 %: 60 mins: Winter	57.045	55.645	56.224	0.579	12.3	0.655	0.000	11.2	29.531	Surcharged
S MH 6.0	FEH: 100 years: +40 %: 120 mins: Winter	56.865	55.760	56.268	0.508	13.5	0.574	0.000	5.4	45.551	Surcharged
S MH 5.1	FEH: 100 years: +40 %: 60 mins: Summer	56.990	55.715	56.222	0.507	14.9	0.573	0.000	14.3	17.607	Surcharged
HW MH-1	FEH: 100 years: +40 %: 360 mins: Winter	56.730	55.550	55.605	0.055	5.2	0.000	0.000	5.2	134.640	OK
S MH 1.0	FEH: 100 years: +40 %: 120 mins: Winter	56.780	55.560	56.267	0.707	5.4	0.800	0.000	5.2	58.682	Surcharged
S MH 2.0	FEH: 100 years: +40 %: 60 mins: Summer	56.860	55.575	56.221	0.646	16.6	0.731	0.000	16.2	48.230	Surcharged
S MH 5.0	FEH: 100 years: +40 %: 60 mins: Winter	57.145	55.680	56.224	0.544	27.9	0.615	0.000	11.3	52.438	Surcharged
S MH 3.0	FEH: 100 years: +40 %: 60 mins: Winter	56.925	55.600	56.224	0.624	12.8	0.705	0.000	11.6	32.817	Surcharged
S MH 5.2	FEH: 100 years: +40 %: 60 mins: Summer	56.840	55.745	56.222	0.477	4.9	0.539	0.000	4.3	5.421	Surcharged

Project: Mowbray (Land North of Horsham) Mouthouse (RM Area 11) - Hydraulic Model 1 in 100yr + 40% CC				Date: 23/07/2026				
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: J. Dunesby	Checked by: C. Salt	Approved By: C. Salt		
				Revision: Rev 2				

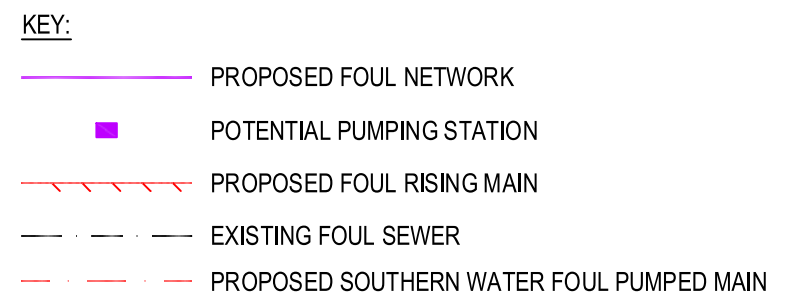


**FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By:
Max. Resident Volume**

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Status
CRATES MH-1	FEH: 100 years: +40 %: 180 mins: Winter	56.276	56.276	0.711	0.711	11.6	32.610	0.000	0.000	5.3	84.984		OK
CRATES MH-2	FEH: 100 years: +40 %: 180 mins: Winter	56.277	56.277	0.507	0.507	6.2	19.818	3.833	0.000	1.5	11.393		Flood
CRATES MH-3	FEH: 100 years: +40 %: 180 mins: Winter	56.277	56.277	0.497	0.497	13.8	42.759	7.568	0.000	2.5	26.359		Flood

Appendix M

Approved Site-Wide Foul Water Strategy



SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

LAND NORTH OF HORSHAM

PLANNING APPLICATION

INDICATIVE FOUL DRAINAGE NETWORK



Legal & General
STRATEGIC LAND NORTH HORSHAM LTD



READING
Tel: 0118 950 0761

Location	Peak Pumped Flow	
PS1	32.7	Excludes PS4 flow
SW Faygate pumped flow	8.0	
PS2	8.0	
PS3	9.3	
PS4	8.0	
PS5	8.0	
Rusper Road South Gravity outfall	56.7	

File Location: I:\25216 north horsham\civils\cad\dwg\sketches\25216-2007-sk06_rev_a.dwg

Hertfordshire

|

Oxfordshire

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Cambridgeshire

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