



Proposed Care Home - Hedge End, Boorley Green, Botley

Foul and Surface Water Drainage Strategy
August 2026

Project No. 0044

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Contents

1.	INTRODUCTION	3
2.	EXISTING SITE	3
3.	SURFACE WATER DRAINAGE STRATEGY.....	4
4.	EFFECTS OF DEVELOPMENT ON OTHER SITES	7
5.	FOUL DRAINAGE STRATEGY	8
6.	CONCLUSIONS AND RECOMMENDATIONS	8

APPENDIX A - Proposed Site Plan

APPENDIX B - Planning Approved Drainage Strategy

APPENDIX C - Surface Water SUDS Calculations

APPENDIX D - Surface Water Maintenance Management Plan

APPENDIX E - Proposed Drainage Layout

Revision History

Rev	Date	Purpose/Status	Comments
-	Oct 2025	Information	First Issue
A	Aug 2026	Information	Updated to suit latest scheme

1. INTRODUCTION

- 1.1. AFA Consulting Engineers Ltd have been commissioned by Hedge End Care Home Limited to prepare a Foul and Surface Water Drainage Strategy report for a Care Home development at Boorley Green, Botley.
- 1.2. This report will provide detailed layout and construction details for disposal of foul and surface water from the development.
- 1.3. This report has been prepared for the use of Hedge End Care Home Limited. No other third party may rely upon or reproduce the contents of this report without the written approval of AFA Consulting Engineers Ltd. If any unauthorised third party comes into the possession of this report, they rely on it entirely at their own risk and AFA do not owe them any Duty of Care or Skill.

2. EXISTING SITE

- 2.1. The site lies in a approximately 0.1 km west of the developed part of Boorley Green town as shown in figure 1 and the site plan in Appendix A. The site is considered an irregular shaped parcel of land approximately 0.6 hectares.
- 2.2. The topography of the site slopes towards the west side and is part of a larger development.



Figure 1 – Site Location Plan

3. SURFACE WATER DRAINAGE STRATEGY

- 3.1. There are no existing buildings on site and no records of the existing drainage connection on site.
- 3.2. The proposed development is for the construction of a Care Home with associated amenity facilities, car parking and external landscaping, including residents' gardens. Refer to (Appendix A) for proposed site plan.
- 3.3. The site is part of a wider development as indicated within the drainage strategy report in Appendix B. Attenuation storage is provided within the wider site and the Care Home site is supplied with an unrestricted 300mm diameter surface water connection for discharge of surface water.
- 3.4. The proposed development comprises impermeable areas including:

Car Parking Spaces, Access Road, Hardstanding	2680m ²
Building	1563 m ²
TOTAL	4243m²

- 3.5. The drainage network including has been designed to accommodate rainfall events up to 1 in 100 years with 40% climate change allowance within the drainage network with no surface flooding on a non-restricted discharge rate. Supporting calculations are attached for 1 in 2, 1 in 30 and 1 in 100-year events. (Appendix C)
- 3.6. To deal with the residual risk of blockage to all onsite drainage features, the care home operator will ensure maintenance of all drainage systems in line with the requirements in Ciria C753 the SuDS Manual.
- 3.7. A copy of the detailed Maintenance Management Plan is shown in (Appendix D). This will ensure that over the lifetime of the proposed development the drainage system will be properly maintained to ensure proper functionality. A summary schedule of proposed maintenance is shown below.

Maintenance Schedule					
Item	Visual Inspection	Cleanse / De-sludge	CCTV Survey	Responsibility	Comments
Surface Water Drainage System (pipework, chambers etc.)	1 years	10 years	10 years	Building Owner	Cleansing to be carried as necessary
Gullies / Channels / Rainwater Stacks	Monthly	1 years	N/A	Building Owner	Cleansing to be carried as necessary
Catch Pit	Monthly	As Required	N/A	Building Owner	Cleansing to be carried as necessary
Foul Chamber	Annually	Following any blockage event	N/A	Building Owner	Storage chamber to be jetted clear following any blockage event
Foul Drainage System (pipework, chambers etc.)	1 year	10 years	10 years	Building Owner	Cleansing to be carried as necessary

Table 3.2 – Maintenance Schedule

4. EFFECTS OF DEVELOPMENT ON OTHER SITES

4.1. The system has been designed to ensure that there is no risk of flooding over a range of storm durations for up to 1 in 100 years plus a 40% allowance for climate change. This will ensure that the risk of flooding to adjacent sites will not be increased. The site is part of a wider development which has been designed to accommodate rainfall events up to 1 in 100 years.

5. FOUL DRAINAGE STRATEGY

- 5.1. A part of the wider development a 150mm diameter foul sewer is provided for connection of foul drainage within White Stork Road.
- 5.2. The site levels allow for the foul drainage to be discharged via gravity.
- 5.3. The proposed foul drainage layout is shown in Appendix E.

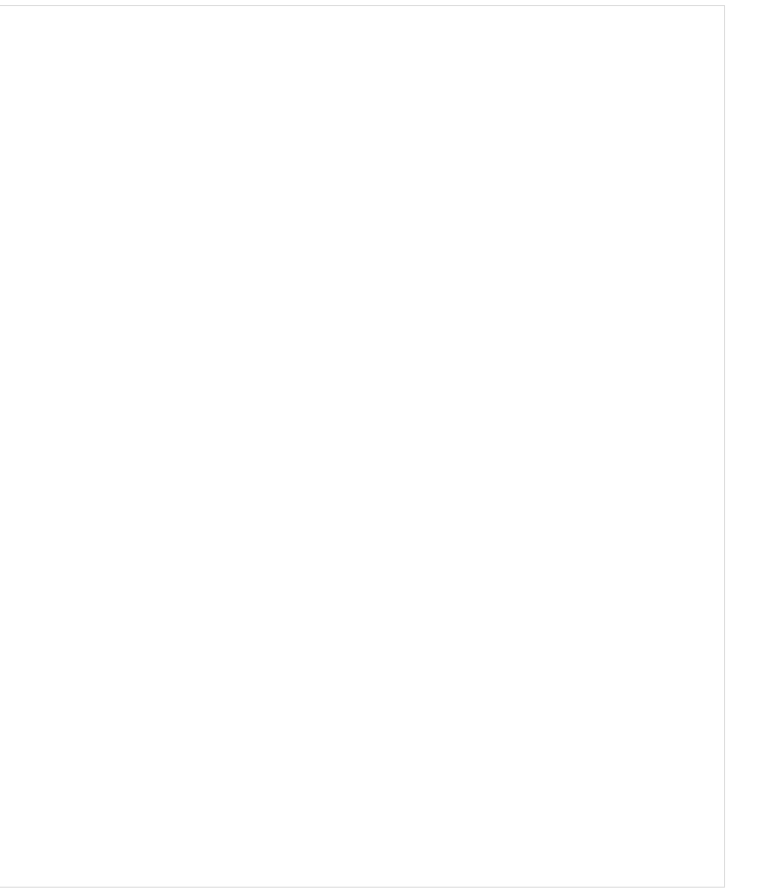
6. CONCLUSIONS AND RECOMMENDATIONS

- 6.1. The drainage solution is designed following the strategy of the wider development as indicated with the planning stage drainage strategy within appendix B.
- 6.2. The drainage network has been designed to accommodate rainfall events up to 1 in 100 year rainfall event over a range of storm durations with 40% allowance for climate change. Full Calculations are contained within Appendix C.
- 6.3. A copy of the proposed foul drainage layout and surface water drainage layout is shown in Appendix E.
- 6.4. A 150mm diameter foul sewer connection is provided within White Stork Road which was installed as part of the wider development.
- 6.5. The proposed foul and surface drainage solution should be approved by the local authority prior to commencing any drainage works on site.

**APPENDIX A
PROPOSED SITE PLAN**



Notes:
This drawing is to be read in conjunction with all other relevant architectural drawings.
Drawing not to be scaled, use figured dimensions only. All dimensions to be checked on site by the contractor prior to the commencement of any work or specialist production drawing. Any discrepancies to be notified to Hay Associates and further instructions obtained before work is commenced.
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B 2 no. car parking spaces added 21.06.2025
A Issued for information 03.12.2025
Rev. Note: Date:

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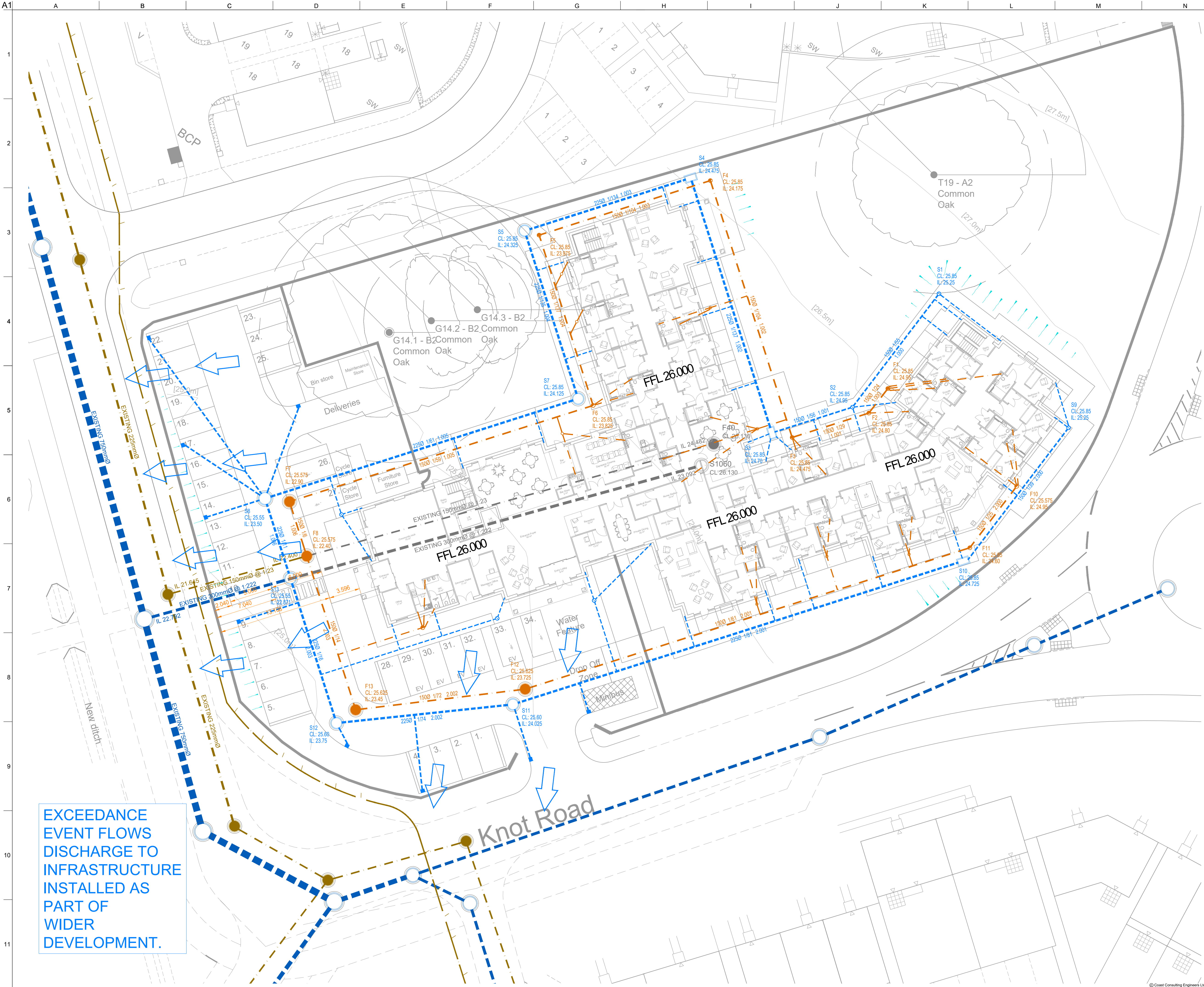
Title Pre App - Proposed Site Plan

Scale @ A1 As indicated sta Dec 2025 Drawn by LH Checked by MH

Project No. H228 Drawing No. PRE-08 Revision B Status PLANNING

APPENDIX B

Planning Approved Drainage Strategy



EXCEEDANCE
EVENT FLOWS
DISCHARGE TO
INFRASTRUCTURE
INSTALLED AS
PART OF
WIDER
DEVELOPMENT.



EXISTING SURFACE WATER SEWER



EXISTING SURFACE WATER DRAIN



EXISTING SURFACE WATER DRAIN TO BE REMOVED



RODDING EYE WITH INVERT LEVEL



300mmØ SHALLOW INSPECTION CHAMBER, 600mm TO INVERT LEVEL, MAXIMUM 3 INCOMING CONNECTIONS



450mmØ INSPECTION CHAMBER, NON MAN ENTRY (>1.2m) WITH INVERT LEVEL



PRIVATE P.V.C.U 100mmØ (UNLESS OTHERWISE NOTED) DRAINAGE PIPE



FOR LIGHT VEHICLE LOADING WITH HEEL GUARD



PROPOSED HIGHWAY GULLY



PRE CAST CONCRETE MAN-HOLE RING, SIZE TO SUIT DEPTH AND DIAMETER OF INCOMING DRAINS.



EXISTING FOUL WATER SEWER



EXISTING FOUL WATER DRAIN



EXISTING FOUL WATER DRAIN TO BE REMOVED



300mmØ SHALLOW INSPECTION CHAMBER, 600mm TO INVERT LEVEL, MAXIMUM 3 INCOMING CONNECTIONS



450mmØ INSPECTION CHAMBER, NON MAN ENTRY (>1.2m) WITH INVERT LEVEL



PRIVATE P.V.C.U 100mmØ (UNLESS OTHERWISE NOTED) DRAINAGE PIPE



450mmØ CONNECTION CHAMBER, NON MAN ENTRY (>1.2m) WITH INVERT LEVEL



PRE CAST CONCRETE MAN-HOLE RING, SIZE TO SUIT DEPTH AND DIAMETER OF INCOMING DRAINS.



EXCEEDANCE EVENT FLOW PATH



EXCEEDANCE EVENT FLOW PATH

P3	05.08.24	Exceedance event flow paths added	KR	RH	PL
P2	02.08.24	Revised to suit updated layout	KR	RH	PL
P1	20.11.23	Preliminary Issue	KR	RH	PL
Issue	Date	Description	By	Chkd	Appd

7 Silverton Court, Northumberland Business Park, NE23 7RY 0191 5977879					
Client					
Halebourne Group					
Job Title					
Hedge End Boorley Green, Botley					
Drawing Title					
Drainage Strategy Layout					
Scale at A1					
1:200					
Drawing Status					
PRELIMINARY					
Job No		Drawing No		Issue	
23094		DS01		P3	

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APPENDIX C
Surface Water SUDS Calculations

Hedge End Carehome:	Date: 13/06/2025		
	Designed by: JF	Checked by: GB	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	AFA Consulting Engineers:		



Catchment Area

Type : Catchment Area

Area (ha)	0.021
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Catchment Area (1)

Type : Catchment Area

Area (ha)	0.024
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Catchment Area (2)

Type : Catchment Area

Area (ha)	0.029
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Catchment Area (3)

Type : Catchment Area

Area (ha)	0.024
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details:	AFA Consulting Engineers:			
Type: Inflows Storm Phase: Phase				

 Catchment Area (4)

Type : Catchment Area

Area (ha)	0.024
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (5)

Type : Catchment Area

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

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (6)

Type : Catchment Area

Area (ha)	0.039
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (7)

Type : Catchment Area

Area (ha)	0.015
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details:	AFA Consulting Engineers:			
Type: Inflows				
Storm Phase: Phase				

 Catchment Area (8)

Type : Catchment Area

Area (ha)	0.051
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (9)

Type : Catchment Area

Area (ha)	0.048
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (10)

Type : Catchment Area

Area (ha)	0.042
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

 Catchment Area (11)

Type : Catchment Area

Area (ha)	0.018
-----------	-------

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Hedge End Carehome:	Date: 13/06/2025		
	Designed by: JF	Checked by: GB	Approved By:
Report Details: Type: Junctions Storm Phase: Phase	AFA Consulting Engineers:		



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
SIC02	Manhole	127.620	65.341	25.922	0.522	25.400	Circular	0.600
SMH09	Manhole	68.807	55.815	25.750	0.970	24.780	Circular	1.000
SMH07	Manhole	37.435	77.239	25.805	3.022	22.783	Circular	1.200
SMH05	Manhole	37.534	84.412	25.781	1.538	24.243	Circular	1.200
SMH04	Manhole	72.660	86.413	25.844	1.253	24.591	Circular	1.000
SMH03	Manhole	74.790	106.592	25.950	1.158	24.792	Circular	1.000
SMH02	Manhole	93.686	106.902	25.922	0.975	24.947	Circular	1.000
SMH01	Manhole	94.144	85.211	25.925	0.762	25.163	Circular	1.000
SIC03	Manhole	95.235	76.999	25.933	0.533	25.400	Circular	0.600
SIC01	Manhole	117.972	85.178	25.888	0.488	25.400	Circular	0.600
SIC04	Manhole	57.755	66.282	25.958	0.558	25.400	Circular	0.600
SMH08	Manhole	39.959	55.846	25.659	1.163	24.496	Circular	1.200
SMH10	Manhole	110.872	55.838	25.932	0.720	25.212	Circular	1.200
SMH11	Manhole	36.853	105.735	25.235	0.735	24.500	Circular	1.200

Name	Lock
SIC02	None
SMH09	None
SMH07	None
SMH05	None
SMH04	None
SMH03	None
SMH02	None
SMH01	None
SIC03	None
SIC01	None
SIC04	None
SMH08	None
SMH10	None
SMH11	None

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
SIC02	Inlet	Catchment Area (1)	(None)	No Restriction
SMH09	Inlet	SMH10-SMH09	(None)	No Restriction
	Inlet (1)	Catchment Area (8)	(None)	No Restriction
	Inlet (2)	Catchment Area (7)	(None)	No Restriction
SMH07	Inlet	SMH08-SMH07	(None)	No Restriction
	Inlet (1)	SMH05-SMH07	(None)	No Restriction
	Inlet (2)	Catchment Area (10)	(None)	No Restriction
SMH05	Inlet	SMH04-SMH05	(None)	No Restriction
	Inlet (1)	SMH11-SMH05	(None)	No Restriction
SMH04	Inlet	SMH03-SMH04	(None)	No Restriction
	Inlet (1)	Catchment Area (6)	(None)	No Restriction
SMH03	Inlet	SMH02-SMH03	(None)	No Restriction
SMH02	Inlet	SMH01-SMH02	(None)	No Restriction
	Inlet (2)	Catchment Area (5)	(None)	No Restriction
SMH01	Inlet	Catchment Area (4)	(None)	No Restriction
	Inlet (1)	SIC03-SMH01	(None)	No Restriction
	Inlet (2)	SIC01-SMH01	(None)	No Restriction
SIC03	Inlet	Catchment Area (2)	(None)	No Restriction
SIC01	Inlet	Catchment Area	(None)	No Restriction
SIC04	Inlet	Catchment Area (11)	(None)	No Restriction
SMH08	Inlet	SMH09-SMH08	(None)	No Restriction
	Inlet (1)	SIC04-SMH08	(None)	No Restriction
SMH10	Inlet	SIC02-SMH10	(None)	No Restriction
	Inlet (1)	Catchment Area (3)	(None)	No Restriction
SMH11	Inlet	Catchment Area (9)	(None)	No Restriction

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details:	AFA Consulting Engineers:			
Type: Junctions Storm Phase: Phase				

Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SIC02	Outlet	SIC02-SMH10	Free Discharge
SMH09	Outlet	SMH09-SMH08	Free Discharge
SMH05	Outlet	SMH05-SMH07	Free Discharge
SMH04	Outlet	SMH04-SMH05	Free Discharge
SMH03	Outlet	SMH03-SMH04	Free Discharge
SMH02	Outlet	SMH02-SMH03	Free Discharge
SMH01	Outlet	SMH01-SMH02	Free Discharge
SIC03	Outlet	SIC03-SMH01	Free Discharge
SIC01	Outlet	SIC01-SMH01	Free Discharge
SIC04	Outlet	SIC04-SMH08	Free Discharge
SMH08	Outlet	SMH08-SMH07	Free Discharge
SMH10	Outlet	SMH10-SMH09	Free Discharge
SMH11	Outlet	SMH11-SMH05	Free Discharge

Hedge End Carehome:	Date: 13/06/2025		
	Designed by: JF	Checked by: GB	Approved By:
Report Details: Type: Connections Storm Phase: Phase	AFA Consulting Engineers:		



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)
SMH09-SMH08	28.848	Pipe	101.577		0.6	225	25.750	24.780
SIC04-SMH08	20.630	Pipe	22.821		0.6	150	25.958	25.400
SMH08-SMH07	21.542	Pipe	12.575		0.6	225	25.659	24.496
SIC03-SMH01	8.284	Pipe	34.953		0.6	150	25.933	25.400
SIC01-SMH01	23.829	Pipe	100.544		0.6	150	25.888	25.400
SMH01-SMH02	21.696	Pipe	100.447		0.6	150	25.925	25.163
SMH02-SMH03	18.898	Pipe	121.923		0.6	225	25.922	24.947
SMH03-SMH04	20.291	Pipe	100.951		0.6	225	25.950	24.792
SMH04-SMH05	35.183	Pipe	101.101		0.6	225	25.844	24.591
SMH05-SMH07	7.174	Pipe	4.914		0.6	225	25.781	24.243
SIC02-SMH10	19.256	Pipe	102.425		0.6	150	25.922	25.400
SMH10-SMH09	42.064	Pipe	97.371		0.6	150	25.932	25.212
SMH11-SMH05	21.334	Pipe	83.013		0.6	225	25.235	24.500

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Culvert Type	Culvert Entrance
SMH09-SMH08	25.659	24.496		None	(None)	(None)
SIC04-SMH08	25.659	24.496		None	(None)	(None)
SMH08-SMH07	25.805	22.783		None	(None)	(None)
SIC03-SMH01	25.925	25.163		None	(None)	(None)
SIC01-SMH01	25.925	25.163		None	(None)	(None)
SMH01-SMH02	25.922	24.947		None	(None)	(None)
SMH02-SMH03	25.950	24.792		None	(None)	(None)
SMH03-SMH04	25.844	24.591		None	(None)	(None)
SMH04-SMH05	25.781	24.243		None	(None)	(None)
SMH05-SMH07	25.805	22.783		None	(None)	(None)
SIC02-SMH10	25.932	25.212		None	(None)	(None)
SMH10-SMH09	25.750	24.780		None	(None)	(None)
SMH11-SMH05	25.781	24.243		None	(None)	(None)

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details: Type: Manhole Schedule Storm Phase: Phase	AFA Consulting Engineers:			

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
SIC02	25.922 25.400	Diameter / Length: 0.600					Manhole
E:127.620 N:65.341	0.522		{a} SIC02-SMH10	Pipe	25.400	Diam/Width:150	Not Applicable
SMH09	25.750 24.780	Diameter / Length: 1.000	{1} SMH10-SMH09	Pipe	24.780	Diam/Width:150	Manhole
E:68.807 N:55.815	0.970		{a} SMH09-SMH08	Pipe	24.780	Diam/Width:225	Not Applicable
SMH07	25.805 22.783	Diameter / Length: 1.200	{1} SMH08-SMH07	Pipe	22.783	Diam/Width:225	Manhole
E:37.435 N:77.239	3.022		{2} SMH05-SMH07	Pipe	22.783	Diam/Width:225	
							Not Applicable
SMH05	25.781 24.243	Diameter / Length: 1.200	{1} SMH04-SMH05	Pipe	24.243	Diam/Width:225	Manhole
E:37.534 N:84.412	1.538		{2} SMH11-SMH05	Pipe	24.243	Diam/Width:225	
			{a} SMH05-SMH07	Pipe	24.243	Diam/Width:225	Not Applicable
SMH04	25.844 24.591	Diameter / Length: 1.000	{1} SMH03-SMH04	Pipe	24.591	Diam/Width:225	Manhole
E:72.660 N:86.413	1.253		{a} SMH04-SMH05	Pipe	24.591	Diam/Width:225	Not Applicable

Hedge End Carehome:	Date: 13/06/2025			
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Report Details:	AFA Consulting Engineers:			
Type: Manhole Schedule Storm Phase: Phase				

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
SMH03	25.950 24.792	Diameter / Length: 1.000	{1} SMH02-SMH03	Pipe	24.792	Diam/Width:225	Manhole
E:74.790 N:106.592	1.158		{a} SMH03-SMH04	Pipe	24.792	Diam/Width:225	Not Applicable
SMH02	25.922 24.947	Diameter / Length: 1.000	{1} SMH01-SMH02	Pipe	24.947	Diam/Width:150	Manhole
E:93.686 N:106.902	0.975		{a} SMH02-SMH03	Pipe	24.947	Diam/Width:225	Not Applicable
SMH01	25.925 25.163	Diameter / Length: 1.000	{1} SIC03-SMH01	Pipe	25.163	Diam/Width:150	Manhole
E:94.144 N:85.211	0.762		{2} SIC01-SMH01	Pipe	25.163	Diam/Width:150	
			{a} SMH01-SMH02	Pipe	25.163	Diam/Width:150	Not Applicable
SIC03	25.933 25.400	Diameter / Length: 0.600					Manhole
E:95.235 N:76.999	0.533		{a} SIC03-SMH01	Pipe	25.400	Diam/Width:150	Not Applicable
SIC01	25.888 25.400	Diameter / Length: 0.600					Manhole
E:117.972 N:85.178	0.488		{a} SIC01-SMH01	Pipe	25.400	Diam/Width:150	Not Applicable
SIC04	25.958 25.400	Diameter / Length: 0.600					Manhole
E:57.755 N:66.282	0.558		{a} SIC04-SMH08	Pipe	25.400	Diam/Width:150	Not Applicable

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details: Type: Manhole Schedule Storm Phase: Phase	AFA Consulting Engineers:			

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
SMH08	25.659 24.496	Diameter / Length: 1.200	{1} SMH09-SMH08	Pipe	24.496	Diam/Width:225	Manhole
E:39.959 N:55.846	1.163		{2} SIC04-SMH08	Pipe	24.496	Diam/Width:150	
			{a} SMH08-SMH07	Pipe	24.496	Diam/Width:225	Not Applicable
SMH10	25.932 25.212	Diameter / Length: 1.200	{1} SIC02-SMH10	Pipe	25.212	Diam/Width:150	Manhole
E:110.872 N:55.838	0.720		{a} SMH10-SMH09	Pipe	25.212	Diam/Width:150	Not Applicable
SMH11	25.235 24.500	Diameter / Length: 1.200					Manhole
E:36.853 N:105.735	0.735		{a} SMH11-SMH05	Pipe	24.500	Diam/Width:225	Not Applicable

Hedge End Carehome:	Date: 13/06/2025		
	Designed by: JF	Checked by: GB	Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase	AFA Consulting Engineers:		



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SIC01		Time of Concentration	0.021	100	0	100	0.021
Catchment Area (1)	SIC02		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (2)	SIC03		Time of Concentration	0.029	100	0	100	0.029
Catchment Area (3)	SMH10		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (4)	SMH01		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (5)	SMH02		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (6)	SMH04		Time of Concentration	0.039	100	0	100	0.039
Catchment Area (7)	SMH09		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (8)	SMH09		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (9)	SMH11		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (10)	SMH07		Time of Concentration	0.042	100	0	100	0.042
Catchment Area (11)	SIC04		Time of Concentration	0.018	100	0	100	0.018
TOTAL		0.0		0.349				0.349

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Details:	AFA Consulting Engineers:			
Type: Network Design Criteria Storm Phase: Phase				

Flow Options

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

Pipe Options

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

Pipe Size Library

Default

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

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

Hedge End Carehome:	Date: 13/06/2025		
	Designed by: JF	Checked by: GB	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Phase	AFA Consulting Engineers:		



Manhole Options

Apply Offset ☐

Manhole Size Library

Default

Diameter / Width

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

Additional Sizing

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

Depth

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

Access

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

Benching Requirements

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

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
	Report Details: Type: Outfall Details Storm Phase: Phase			
		AFA Consulting Engineers:		

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
SMH07	Free Discharge			

Hedge End Carehome:	Date: 13/06/2025			
	Designed by: JF	Checked by: GB	Approved By:	
Report Title: Rainfall Analysis Criteria	AFA Consulting Engineers:			

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

Rainfall	
FSR	Type: FSR
Region	England And Wales
M5-60 (mm)	19.7
Ratio R	0.350
Summer	☒
Winter	☒

Return Period	
Return Period (years)	Increase Rainfall (%)
100.0	40.000
30.0	40.000
1.0	0.000

Storm Durations	
Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

APPENDIX D

Surface Water Maintenance Management Plan

SuDS MAINTENANCE MANAGEMENT PLAN

This document sets out the principles for the long-term management and maintenance of the proposed surface water Sustainable Drainage Systems (SuDS) installed at the Care Home at Hedge End, Boorley Green, Botley.

The purpose of this document is to ensure that the adopting operator of the building is entrusted with a robust inspection and maintenance programme, ensuring the optimum operation of the surface water drainage network is continually maintained for the lifetime of the development and to prevent the increased risk of flooding both on and off site.

As a managed care home all SuDS systems will be the responsibility of the company operating/running the care home to maintain.

SuDS are engineered solutions that aim to mimic natural drainage processes. They help to reduce pollution of watercourses and localised flooding, as well as providing amenity benefit and biodiversity.

Key Factors to be considered during maintenance

- Undesirable plants – all efforts should be made to prevent drains becoming blocked and the growth of unintentional vegetation which could be detrimental to the intentional plant regime, biodiversity aims and the building fabric.
- Regular site attendance for litter collection, grass cutting and checking of inlets, outlets and control structures.
- Occasional visits to brush clean inlet gullies and drainage channels, remove silt from source control features.
- Drain heads and outlets – all drainage points must be checked every year and cleared out if necessary to ensure optimum performance.

The maintenance of all drainage features serving the development will be maintained by the building owner/operator. Ongoing maintenance activities for this infrastructure are detailed below.

All those responsible for the maintenance operations should adhere to the relevant health and safety legislation for the activities listed within this report (including lone working, if relevant). Method statements and risk assessments should always be completed prior to the undertaking of any works.

Catch Pit / Silt interceptor

The ongoing maintenance activities for the petrol and silt interceptor should be in line with manufacturer recommendations. A summary of the typical expected requirements is detailed below.

Catch Pit / Silt interceptor	
<i>Regular Maintenance</i>	<i>Frequency</i>
Inspection - Record and empty/clean as required	Monthly
Litter and debris removal	Monthly
Testing alarm system	Annually
<i>Occasional Tasks</i>	<i>Frequency</i>

SuDS MAINTENANCE MANAGEMENT PLAN

Service – in line with manufacturers recommendations	As required in line with manufacturers recommendations
Remedial Work	Frequency
Jet clean as required. In line with manufacturers recommendations	As required in line with manufacturers recommendations

Conventional Surface Water Drainage Features

The maintenance of all drainage features serving the development will be maintained by the building owner/operator. Ongoing maintenance activities for this infrastructure are detailed below.

Maintenance Activity	Action	Frequency
Check gully pots, linear drainage channels and catchpits	Check, clean and empty gully pots and catchpits as required to remove debris and sediment	Regular - Monthly
Check manholes and inspection chambers	Inspect manholes and inspection chambers for any signs of blockages. Clean, jet and empty as required	Regular - Annually
CCTV survey and jetting of drains	Check the integrity of drains, jet and clean as required. Remove collected debris as required	As necessary Every 5 years
Hydrobrake chambers / Vortex Flow Control – visual inspection	Check and remove any silt build up or blockages in accordance with the Manufacturers recommendations	Typically annually or as required

Records

A service log will be maintained which will include details of all scheduled maintenance required. Logs will be incorporated that record when checks were carried out and whether any actions are deemed necessary. If actions are required, a breakdown of the maintenance measures undertaken or in progress will be logged along with the date when the action was or is to be scheduled.

Records will be maintained by the management company for a minimum period of 5 years.

APPENDIX E
Proposed Drainage Layout



Key

FMH00

FIC00

SMH00

SIC00

Road Gully

Retaining Wall Refer to Drawing SL(9)900

Foul water pipe showing flow direction

Foul water manhole & number

Foul water inspection chamber & number

Surface water pipe showing flow direction

Surface water manhole & number

Surface water inspection chamber & number

- Notes
- Contractor to undertake CCTV of existing foul sewer prior to commencing works on site and invert level TBC.
 - Surface water discharge to be agreed with local authority prior to connection.
 - Catch pits to be installed to all chambers/manholes prior to discharge to attenuation chamber.
 - Any drainage run through RPA to be agreed with tree officer prior to commencing installation.
 - Manhole and interception cover level to be confirmed.
 - For Aco drain to entrance/door threshold use Aco RainDrain Brickslot B 125 or similar approved with heel protector.
 - For the gully to bin store use 150x150 square gully with metal cover.
 - Infiltration testing to BRE365 to be undertaken at each soakaway location to verify discharge rates and design updated accordingly.

DO NOT SCALE FROM THIS DRAWING

GENERAL

1. These notes are intended to augment drawings and specifications. Where conflict of requirements exists the order of precedence shall be as shown in the specifications. Otherwise the strictest provision shall govern.

2. This drawing is to be read in conjunction with all other relevant Engineers and Architects drawings

3. Drawings not to be scaled. All dimensions to be checked on site by the Contractor prior to the commencement of any work or shop drawing. Any discrepancies to be notified to the Architect & Engineer and further instructions obtained before work is commenced.

DRAINAGE NOTES

1. Invert of foul and surface water inspection chambers to be min 600mm below FFL

2. Covers HD in road, MD in paths and landscaped areas.

3. All branches from stacks 100mm Ø.

4. All inspection chambers 450mm Ø with 450mm covers.

5. Manholes generally to be 1200x750 or 1050 Ø with 600x600 or 600 Ø covers except manholes between 1.5 & 2.7m deep which are to be minimum 1200mm Ø.

6. Ground floor ensuite shower and bath connections made below floor into nearest run min. 2000mm downstream using 135 branch pipe. Trap to be demountable for rodding.

7. RWP to discharge into roddable access gullies compatible

8. Gullies in hardstanding to be Hepworth semi-universal-square top (200m² capacity).

9. Ensure trap is fitted on laundry installation (separate connection).

10. Drain runs in the car park area to be surrounded in minimum 150mm pea gravel giving class s bedding factor 2.5.

11. All soil stacks to be vented - those marked SVP are taken through the roof and vented to air, all other to be fitted with Agreement Certified Air Admittance Valves.

12. Invert levels, pipe diameters, gradients, and connection points associated with petrol interceptors, storage and infiltration areas to be specified by Subcontractor.

13. Rocker pipes are to be fitted at each side of any pipes penetrating walls or relieving intels are to be provided.

14. See project specification for further information.

15. 1500 drains assume 1:150 unless stated

16. 1000 drains assume 1:80 unless stated

17. Kitchen wastes connected to above floor grease trap and then into soil stack.

18. Where manhole/inspection chamber covers are located in paved or block paved areas, then covers need to be recessed to accept paving type.

DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
A	Updated to suit new architectural model	28-07-2025	JF	GB
B	Updated to suit new architectural layout	12-02-2026	SS	GB
C	Updated to suit new architectural layout	13-08-2026	SS	GB

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CLIENT

Halbourne Group

PROJECT

Care Home Development, Boorley Gardens,
Botley, Hedge End,

DRAWING TITLE

Drainage Layout

DRAWING STATUS

CONSTRUCTION ISSUE

SCALE

1:200 @ A1

DATE

May 2025

DRAWN BY

JF

CHECKED BY

GB

JOB NO.

0044

DWG NO.

SL(5)500

REV

C