

Glanville Consultants Response to LLFA Comments

Cedar Cottage, Sandygate Lane, Lower Beeding, RH13 6LR

1.0 Introduction

- 1.1 This document has been prepared by Glanville Consultants on behalf of BlackOnyx for the purpose of addressing and responding to the comments received from West Sussex County Council, acting in its capacity as the Lead Local Flood Authority (LLFA), during the planning process for the proposed development at Cedar Cottage, Sandygate Lane, Lower Beeding. The comments provided by the LLFA relate primarily to the proposed surface water drainage strategy, flood risk considerations, and the wider sustainable drainage approach associated with the development proposals. This document has therefore been prepared to provide clarification where required, set out the design rationale adopted to date, and demonstrate how the proposals seek to address the matters raised during the consultation.
- 1.2 The full set of comments issued by the LLFA on 03.06.2026 is included within Appendix A of this document. This response document should be read in conjunction with the Flood Risk Assessment '013_8240636_SLS_Flood_Risk_Assessment_(Issue_4)', which outlines the overarching drainage strategy and supporting technical assessments prepared for the site. Together, these documents provide the basis for understanding the proposed approach to surface water management, flood mitigation, and compliance with relevant national and local planning policy requirements.
- 1.3 For ease of reference and to facilitate review, the individual comments raised by the LLFA have been reproduced within this document in the same order as originally presented in the consultation response. Corresponding responses prepared by Glanville are provided directly beneath each comment and are identified in bold text.

2.0 LLFA Comments

2.1 Required information: A Detailed Management Plan

LLFA Commentary: *'A detailed management plan for pump failure, including how emergency storage capacity (up to 24hrs) is managed within the system. This is particularly critical given the proximity of the storage / pump to the southerly redline boundary, ground conditions and the proximity (or lack of) a waterbody downstream of the development, should a failure occur.'*

Glanville Response: Please see the foul and drainage strategy in appendix B for details of exceedance flow and emergency storage. Please see offsite flow plan in Appendix C for the flow path between the site and the downstream watercourse. Emergency storage for the surface water system is calculated using 125 m³ per hectare of impermeable area onsite in line with The Design and Construction Guidance (Water UK, 2021). The emergency storage requirement for the site is 60.3 m³. The available storage within the tanks above the critical 100-year + 45% to accommodate the emergency storage is 78.5 m³. The emergency storage for the foul system will be 13,650 l/day or 13.65 m³.

Manufacturers will issue pump management plans before construction and installation to provide a safe and effective response to pump failures, minimise downtime, protect personnel, prevent environmental pollution, and restore normal operation as quickly as possible. The information will detail operation of, and response to, pump failure alarms and actions that must be taken during faults or failures. The additional storage provided within the separate foul and surface water systems will exceed the 24-hour emergency storage requirements to minimize the risk of sewer flooding offsite.

Table 1: Surface Water Attenuation Tank Volumes

	Total volume of tank (m ³)	Effective volume of tank (95% void space) (m ³)	% Available during critical 100 year +45% storm	Free volume for emergency storage (m ³)
Tank 1	294.0	279.3	10	27.9
Tank 2	168.0	159.6	18	28.7
Tank 3	127.5	121.1	18	21.8
Total		560	46	78.5

2.2 Required information: Drainage Hierarchy

LLFA Comment: 'Pumping of surface water should only be used where there is no practicable alternative (see 1.24 of Standard 1 of the National Standards for SuDS) we require further evidence that connections to either the watercourse to the South or the Southern Water network at a more southerly location (where a full or partial gravity fed connection could be feasible) have been adequately explored and discounted in accordance with 1.3 of the above Standard.'

Glanville Response: Please see appendix D for the land registry plan which shows all land ownership boundaries for the immediate area. The plan shows the requirement for permission from three third party landowners to lay a sewer between the site and the downstream watercourse and waterbody of Leech Pond. Routes to connect to the Southern Water network at a more southerly location were also explored. As shown on the map in appendix D, there is a road that extends west from the B2110 towards the south of the site. However, this is evidently a gated private driveway, and this route would require circa 200m of sewer to be laid through three separate third party landownerships. Therefore, the surface water drainage strategy that utilises a pump station to facilitate a connection to the Southern Water network within Trinity Fields is the only practicable solution.

2.3 Required information: Greenfield Runoff Rate

LLFA Comment: 'The proposed pump supplier has recommended a discharge rate of 4.0l/s, however, to comply with national policy the discharge rate leaving the development must instead be limited to greenfield Qbar. Please provide updated calculations and amended plans where necessary.'

Glanville Response: The greenfield runoff rate for the site is 2.7 l/s. Reducing the current design pump rate of 4.0 l/s to greenfield results in a reduction of 1.3 l/s. This would increase the attenuation requirement onsite, however, since the updated layout decreases impermeable areas, the current combined tank sizes are still adequate to provide storage for the 1 in 100 year +45% plus the requirement for emergency storage during pump failure. Emergency storage is calculated using 125m³ per hectare of impermeable area onsite in line with The Design and Construction Guidance (Water UK, 2021). Please see updated surface water calculations in appendix E of this document which show the storage requirements are satisfied within the combined tank volumes onsite.

2.4 Required information: A Detailed Management Plan

LLFA Commentary: 'Whilst we appreciate there is some topographic fall to the site, the applicant should review the CIRIA SuDS manual, particularly section 8.4 and maximise the inclusion of additional SuDS and/or source control features (such as rain gardens / permeable paving (with suitable stop dams)).

Glanville Response: The drainage strategy already fully utilises permeable paving on all driveways and shared parking areas. This is the optimum location for this SuDS type as this is where most spills and leaks happen and where vehicles spend most of their time onsite. Permeable paving is unsuitable for the development spine road as the site has a gradient of circa 1:35 which would mean frequent baffling along its length to provide usable storage. Rain gardens have now been added to the strategy where practicable to provide additional treatment for runoff. Both the extensive use of source control permeable paving and rain gardens, along with a proprietary device such as a Downstream Defender, will provide the necessary pollution mitigation for the development.



Appendix A

West Sussex County Council LLFA Comments 03/06/2026

Ground Floor
Northleigh
County Hall
Chichester
West Sussex
PO19 1RH



Lead Local Flood Authority

Alice Johnson
Development Control
Horsham District Council
Albery House
Springfield Road
Horsham
RH12 2GB

Date 03/06/2026

Dear Alice,

RE: DC/26/0640 Cedar Cottage Sandygate Lane Lower Beeding RH13 6LR

Thank you for your consultation on the above site, received on 13th May 2026. We have reviewed the application as submitted and wish to make the following comments.

This is a full application for the demolition of existing dwelling and erection of 24no. dwellings including the creation of a new access from Sandygate Lane with associated works.

We object and require additional information:

1. A detailed management plan for pump failure, including how emergency storage capacity (up to 24hrs) is managed within the system. This is particularly critical given the proximity of the storage / pump to the southerly redline boundary, ground conditions and the proximity (or lack of) a waterbody downstream of the development, should a failure occur.
2. Pumping of surface water should only be used where there is no practicable alternative (see 1.24 of Standard 1 of the National Standards for SuDS) we require further evidence that connections to either the watercourse to the South or the Southern Water network at a more southerly location (where a full or partial gravity fed connection could be feasible) have been adequately explored and discounted in accordance with 1.3 of the above Standard.
3. The proposed pump supplier has recommended a discharge rate of 4.0l/s, however, to comply with national policy the discharge rate leaving the development must instead be limited to greenfield Qbar. Please provide updated calculations and amended plans where necessary.
4. Whilst we appreciate there is some topographic fall to the site, the applicant should review the CIRIA SuDS manual, particularly section 8.4 and maximise the inclusion of additional SuDS and/or source control features (such as rain gardens / permeable paving (with suitable stop dams).

Upon receipt of the above we will consider the proposal further and provide updated comments or remove our objection as appropriate.

Yours sincerely,

Natalie Biddulph

Flood Risk Management Team

FRM@westsussex.gov.uk

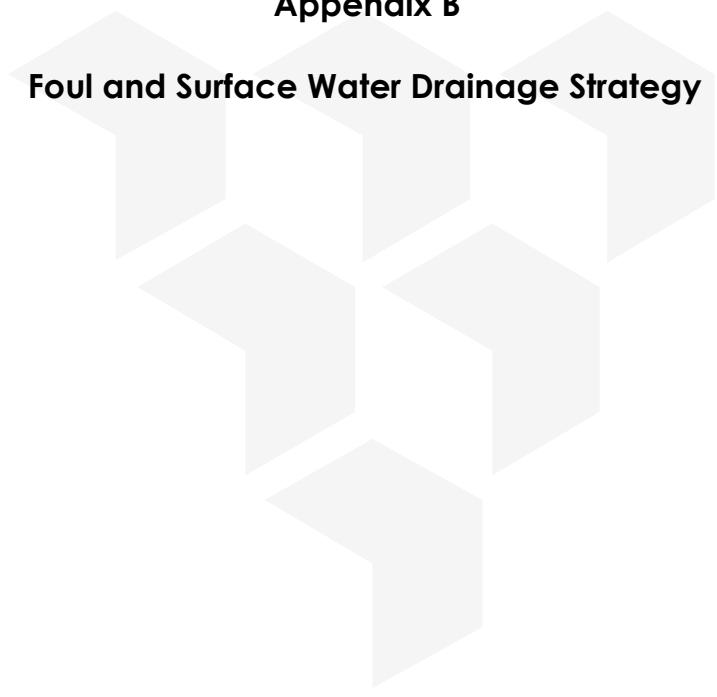
Annex

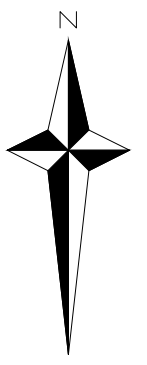
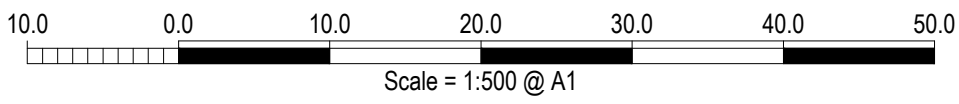
The following documents have been reviewed, which have been submitted to support the application;

- SURFACE WATER DRAINAGE PROFORMA 16/04/2026
- SURFACE WATER DRAINAGE STATEMENT 16/04/2026
- FLOOD RISK ASSESSMENT: 011_8240636 ISSUE 3 16/04/2026

Appendix B

Foul and Surface Water Drainage Strategy



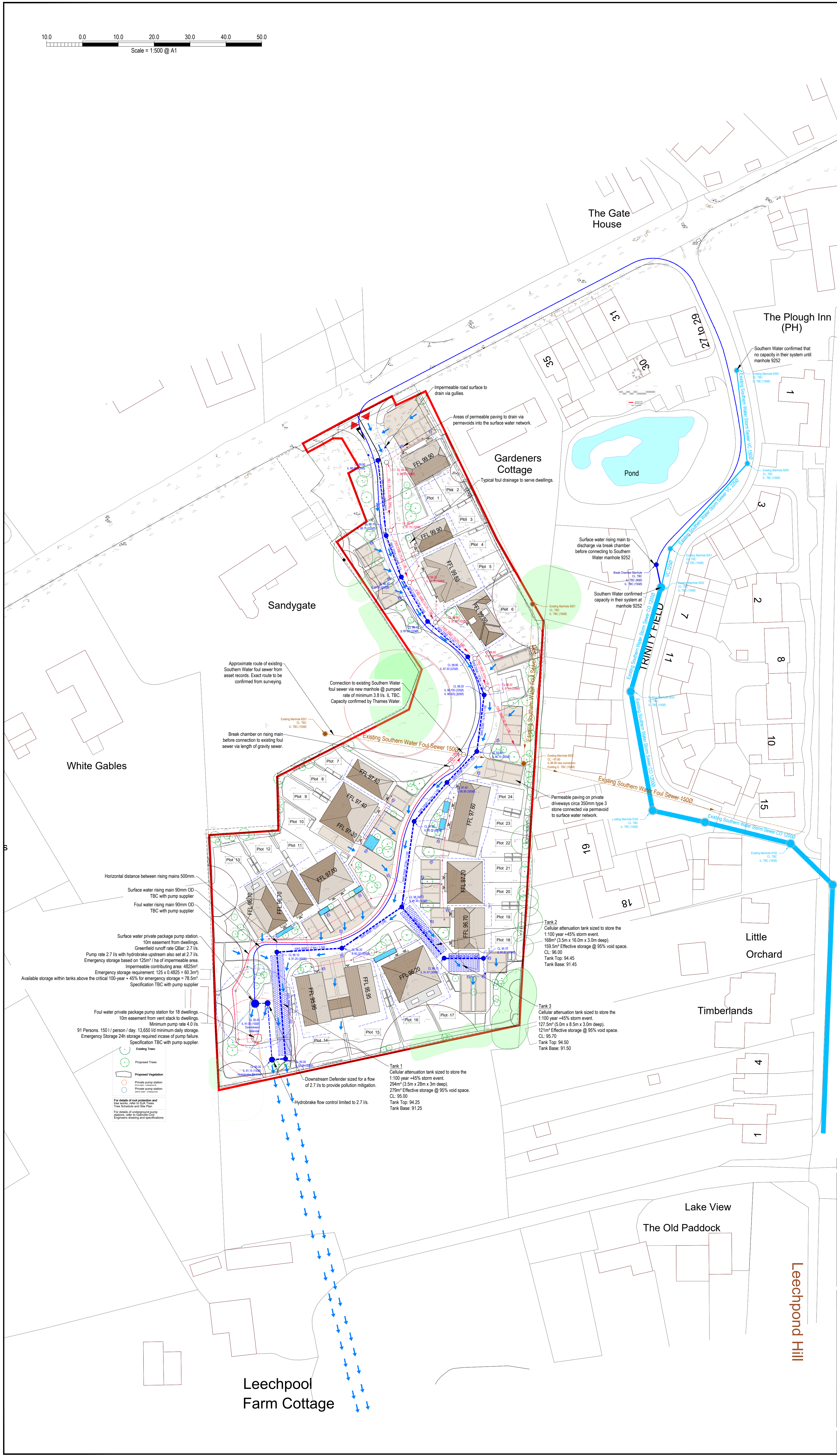


NOTES

- This drawing is to be read in conjunction with all relevant documents and specifications.
- Scaleable for planning purposes only.
- This drawing has been prepared for information purposes only and must not be used for tender of construction purposes.
- Number of road gullies to be confirmed following detailed design.
- Finished floor levels, cover levels and invert levels are indicative and subject to detail design.

KEY

- Application boundary.
- Proposed surface water sewer (Gravity).
- Proposed foul water sewer (Gravity).
- Proposed surface water rising main.
- Proposed foul water rising main.
- Existing foul water sewer (Southern Water).
- Existing surface water sewer (Southern Water).
- Proposed surface / foul water manhole.
- Proposed road gully.
- Proposed cellular attenuation tank.
- Proposed permeable paving.
- Indicative finished floor level.
- Exceedance flow arrow.
- Rain Garden.



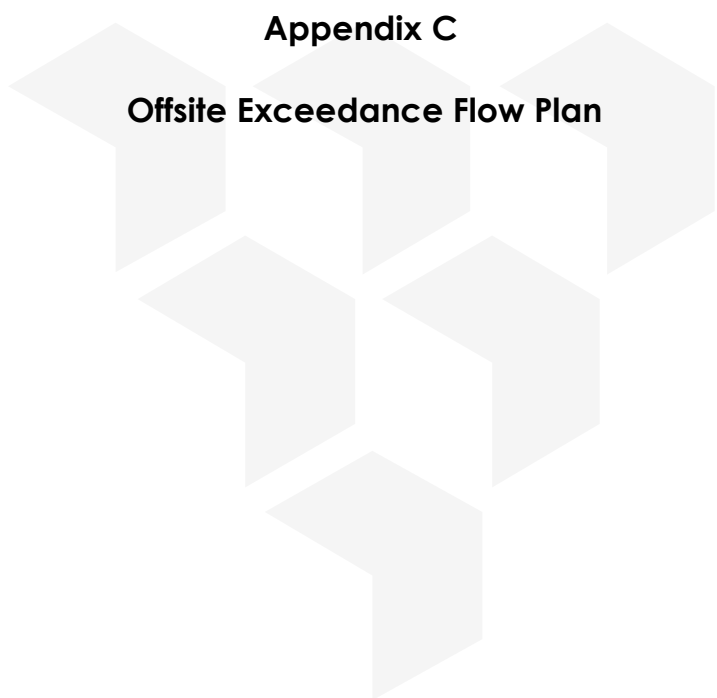
Rev.	Description	Date	By	Chkd
P4	Updated to new layout.	03.07.2026	SLS	JB
P3	Updated to new layout.	15.04.2026	SLS	JB
P2	Added rising main to key. Added FFLs	13.03.2026	SLS	JB
P1	First Issue	06.03.2026	SLS	JB



- Civil Engineering
- Structural Engineering
- Transport Planning
- Highways Engineering
- Building Surveying
- Geomatics

Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

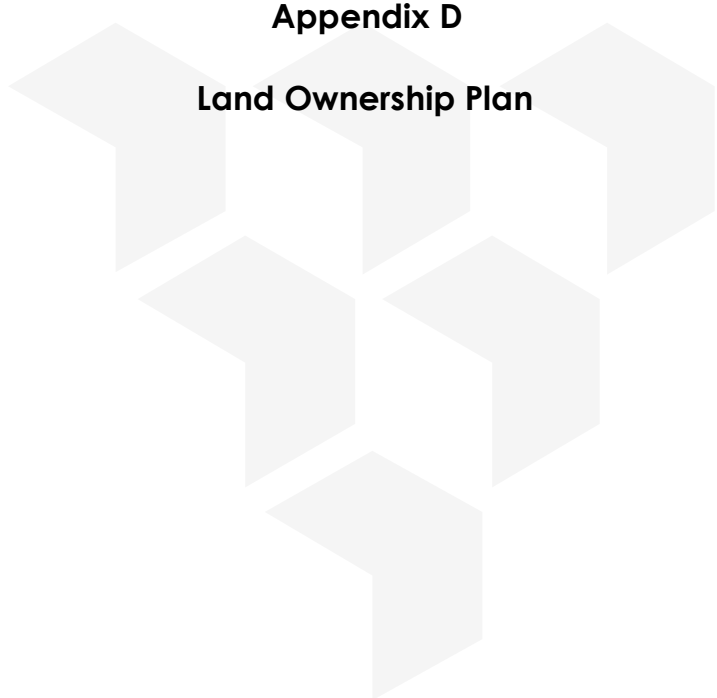
Client :	BlackOnyx Group		
Project :	Ceder Cottage Lower Beeding		
Title :	Drainage Strategy		
Engineer : SLS	Date :	02.07.2026	
Director : JB	Scale :	1:500 @A1	
Status :	PRELIMINARY		
Drawing No.	8240636-1201	Rev	P4



Appendix C

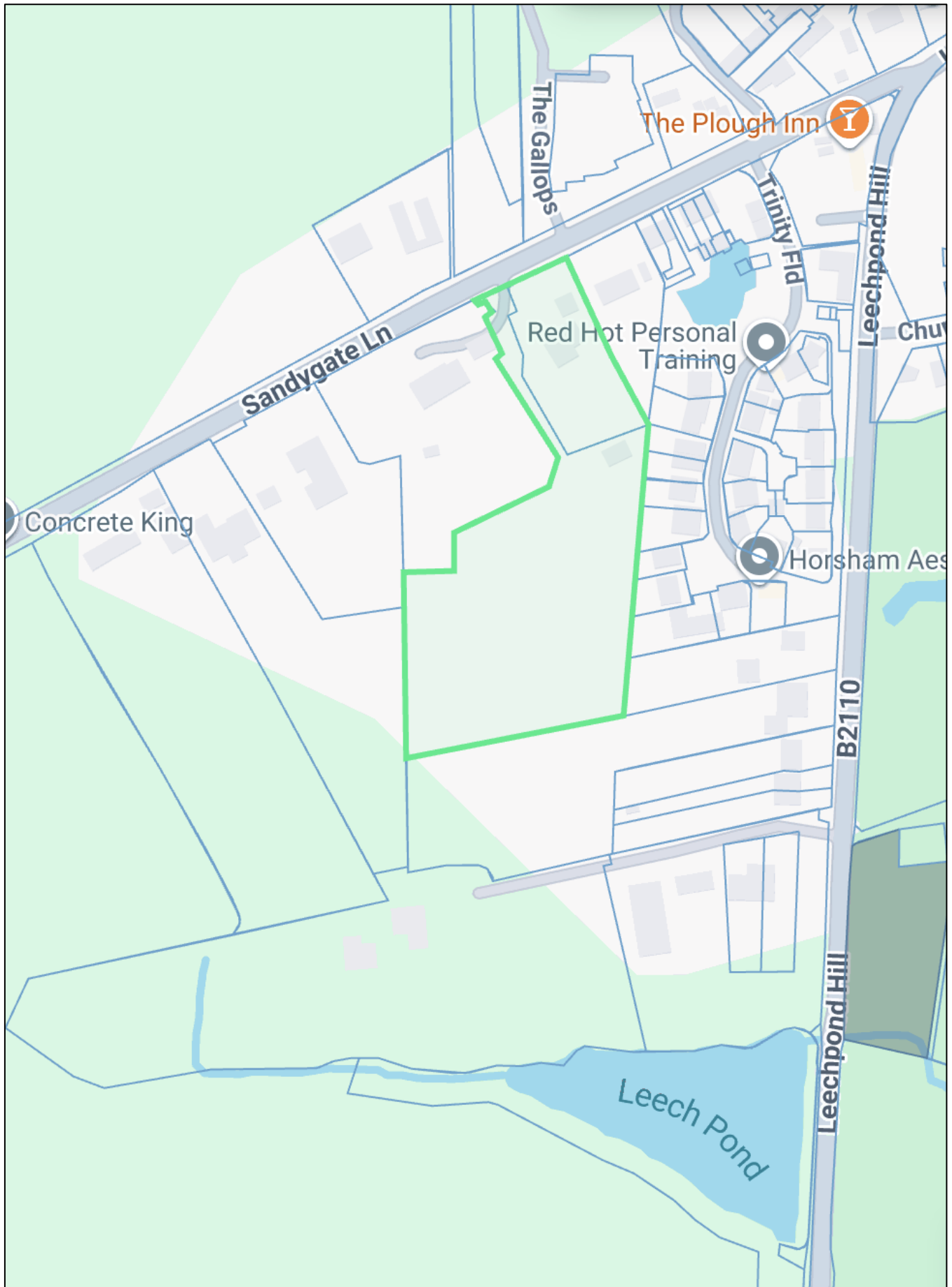
Offsite Exceedance Flow Plan

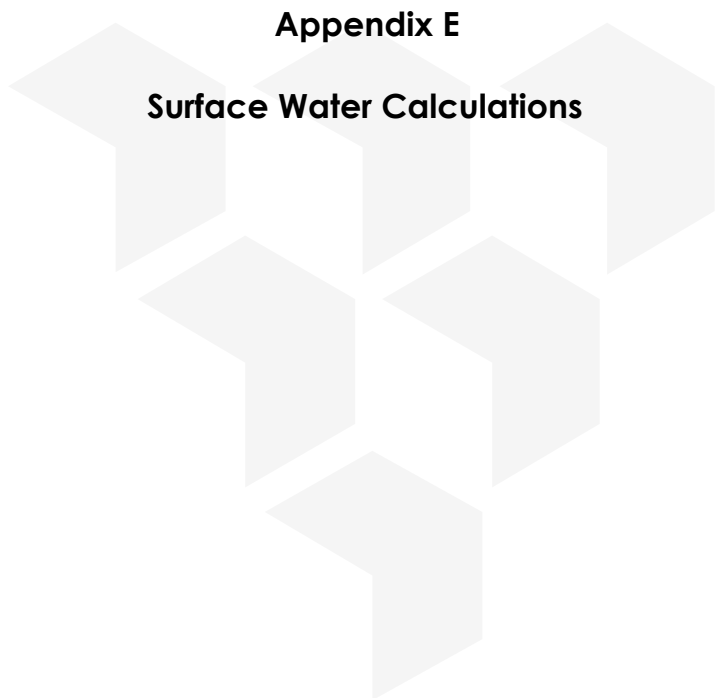




Appendix D

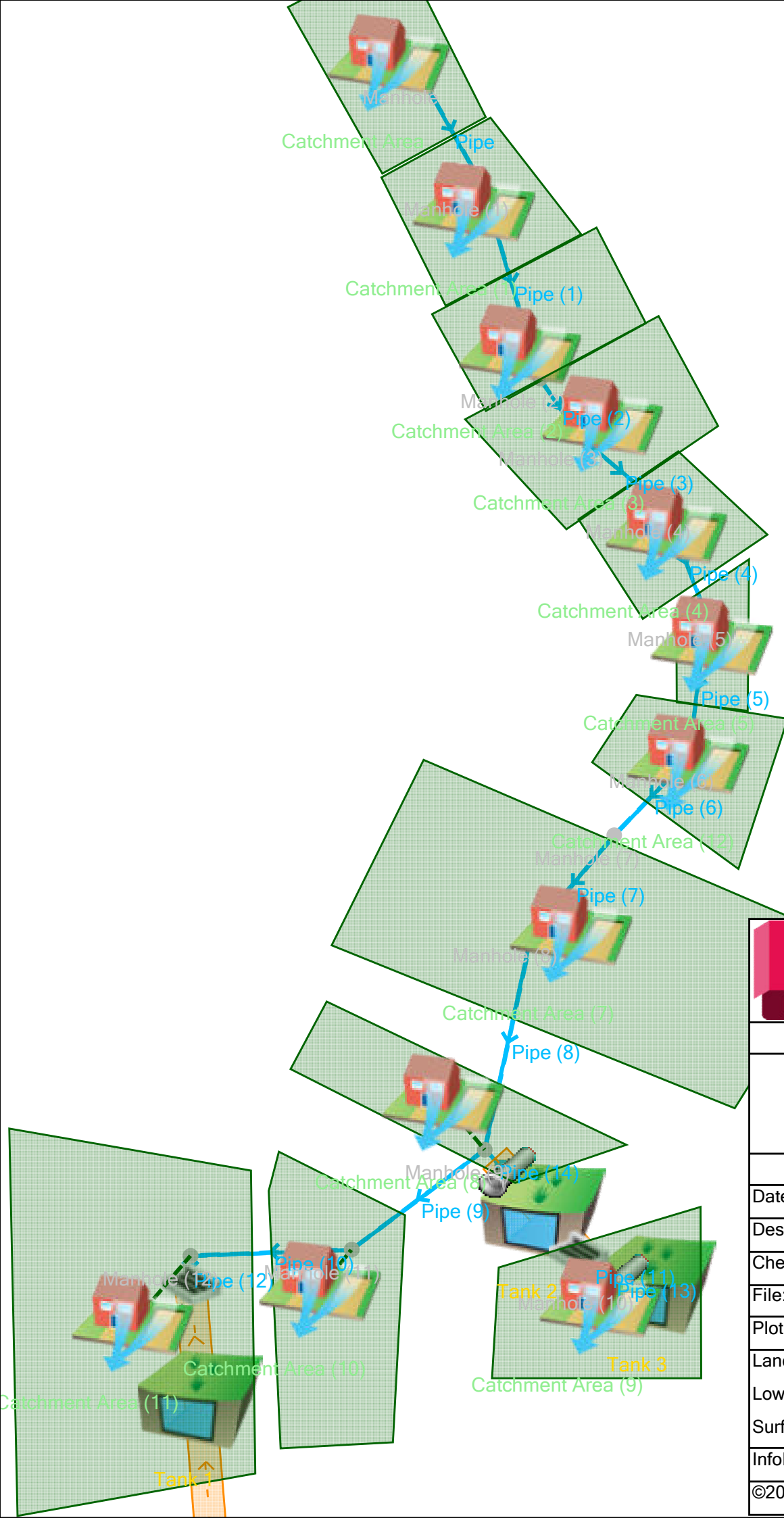
Land Ownership Plan





Appendix E

Surface Water Calculations



I DRN	
Date: 07/07/2026 00:00:00	
Designed by: SLS	
Checked by:	
File: Lower Beeding - SWS Network to C	
Plot Scale: 1:570	
Land at Cedar Cottage	
Lower Beeding	
Surface Water Network	
InfoDrainage 2026.4	
©2025 Autodesk, Inc. All rights reserved	

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Catchment Area

Type : Catchment Area

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

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



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.025
-----------	-------

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



Catchment Area (2)

Type : Catchment Area

Area (ha)	0.025
-----------	-------

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



Catchment Area (3)

Type : Catchment Area

Area (ha)	0.034
-----------	-------

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

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Catchment Area (4)

Type : Catchment Area

Area (ha)	0.02
-----------	------

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



Catchment Area (5)

Type : Catchment Area

Area (ha)	0.011
-----------	-------

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



Catchment Area (7)

Type : Catchment Area

Area (ha)	0.106
-----------	-------

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



Catchment Area (8)

Type : Catchment Area

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

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

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Inflows Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Catchment Area (9)

Type : Catchment Area

Area (ha)	0.036
-----------	-------

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



Catchment Area (10)

Type : Catchment Area

Area (ha)	0.041
-----------	-------

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



Catchment Area (11)

Type : Catchment Area

Area (ha)	0.103
-----------	-------

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



Catchment Area (12)

Type : Catchment Area

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

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

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Tank 1

Type : Tank

Dimensions

Exceedance Level (m)	95.000
Depth (m)	3.750
Base Level (m)	91.250
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	95
Average Slope (1:X)	0.00
Total Volume (m³)	280.050

Depth (m)	Area (m²)	Volume (m³)
0.000	98.00	0.000
3.000	98.00	279.300

Inlets

Inlet

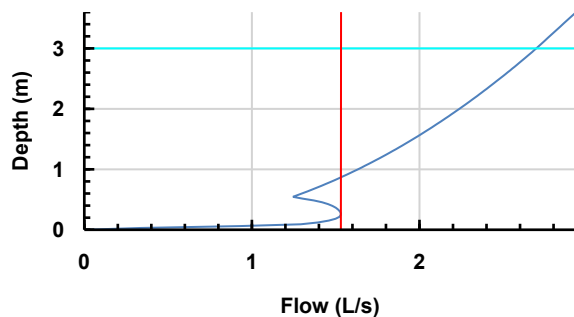
Inlet Type	Point Inflow
Incoming Item(s)	Pipe (12)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	91.250
Design Depth (m)	3.000
Design Flow (L/s)	2.7
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☒

Unit Reference	SHE-0060-2700-3000-2700
----------------	-------------------------



Advanced

Perimeter	Circular
Length (m)	28.000

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Tank 3

Type : Tank

Dimensions

Exceedance Level (m)	96.000
Depth (m)	4.530
Base Level (m)	91.470
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	95
Average Slope (1:X)	0.00
Total Volume (m³)	122.655

Depth (m)	Area (m²)	Volume (m³)
0.000	42.50	0.000
3.000	42.50	121.125

Inlets

Outlets

Outlet

Outgoing Connection	Pipe (13)
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	8.500

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
Company: Glanville Consultants				



Tank 2

Type : Tank

Dimensions

Exceedance Level (m)	96.100
Depth (m)	4.650
Base Level (m)	91.450
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	95
Average Slope (1:X)	0.00
Total Volume (m³)	161.250

Depth (m)	Area (m²)	Volume (m³)
0.000	56.00	0.000
3.000	56.00	159.600

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pipe (11)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe (14)
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	16.000

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Manhole		Time of Concentration	0.029	100	0	100	0.029
Catchment Area (1)	Manhole (1)		Time of Concentration	0.025	100	0	100	0.025
Catchment Area (2)	Manhole (2)		Time of Concentration	0.025	100	0	100	0.025
Catchment Area (3)	Manhole (3)		Time of Concentration	0.034	100	0	100	0.034
Catchment Area (4)	Manhole (4)		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (5)	Manhole (5)		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (7)	Manhole (8)		Time of Concentration	0.106	100	0	100	0.106
Catchment Area (8)	Manhole (9)		Time of Concentration	0.029	100	0	100	0.029
Catchment Area (9)	Manhole (10)		Time of Concentration	0.036	100	0	100	0.036
Catchment Area (10)	Manhole (11)		Time of Concentration	0.041	100	0	100	0.041
Catchment Area (11)	Manhole (12)		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (12)	Manhole (6)		Time of Concentration	0.024	100	0	100	0.024
TOTAL		0.0		0.483				0.483

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Network Design Criteria Storm Phase: Phase	Designed by: SLS		Checked by:	Approved By:
Company: Glanville Consultants				

Flow Options

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

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 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

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
		Designed by: SLS	Checked by:		Approved By:
Report Details: Type: Outfall Details Storm Phase: Phase		Company: Glanville Consultants			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
Tank 1	Free Discharge			

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Title: Rainfall Analysis Criteria	Designed by: SLS		Checked by:	Approved By:
Company: Glanville Consultants				

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

Rainfall		
FEH		Type: FEH
Site Location	GB 522400 126900 TQ 22400 26900	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

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

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Title: UK and Ireland Rural Runoff Calculator	Designed by: SLS		Checked by:	Approved By:
	Company: Glanville Consultants			

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.48
SAAR (mm)	800.0
Soil	0.47
Region	Region 7
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 7	2.7	2.7	2.3	6.1	8.6

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



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

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Catchment Area	FEH: 2 years: +0 %: 15 mins: Summer	0.03	6.0	2.616
Catchment Area (1)	FEH: 2 years: +0 %: 15 mins: Summer	0.03	5.2	2.250
Catchment Area (2)	FEH: 2 years: +0 %: 15 mins: Summer	0.03	5.2	2.250
Catchment Area (3)	FEH: 2 years: +0 %: 15 mins: Summer	0.03	7.1	3.066
Catchment Area (4)	FEH: 2 years: +0 %: 15 mins: Summer	0.02	4.1	1.800
Catchment Area (5)	FEH: 2 years: +0 %: 15 mins: Summer	0.01	2.3	0.993
Catchment Area (7)	FEH: 2 years: +0 %: 15 mins: Summer	0.11	22.0	9.561
Catchment Area (8)	FEH: 2 years: +0 %: 15 mins: Summer	0.03	6.0	2.616
Catchment Area (9)	FEH: 2 years: +0 %: 15 mins: Summer	0.04	7.5	3.243
Catchment Area (10)	FEH: 2 years: +0 %: 15 mins: Summer	0.04	8.5	3.693
Catchment Area (11)	FEH: 2 years: +0 %: 15 mins: Summer	0.10	21.4	9.288
Catchment Area (12)	FEH: 2 years: +0 %: 15 mins: Summer	0.02	5.0	2.166

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 30 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Catchment Area	FEH: 30 years: +45 %: 15 mins: Summer	0.03	19.3	8.352
Catchment Area (1)	FEH: 30 years: +45 %: 15 mins: Summer	0.03	16.6	7.200
Catchment Area (2)	FEH: 30 years: +45 %: 15 mins: Summer	0.03	16.6	7.200
Catchment Area (3)	FEH: 30 years: +45 %: 15 mins: Summer	0.03	22.6	9.792
Catchment Area (4)	FEH: 30 years: +45 %: 15 mins: Summer	0.02	13.3	5.757
Catchment Area (5)	FEH: 30 years: +45 %: 15 mins: Summer	0.01	7.3	3.165
Catchment Area (7)	FEH: 30 years: +45 %: 15 mins: Summer	0.11	70.4	30.522
Catchment Area (8)	FEH: 30 years: +45 %: 15 mins: Summer	0.03	19.3	8.352
Catchment Area (9)	FEH: 30 years: +45 %: 15 mins: Summer	0.04	23.9	10.365
Catchment Area (10)	FEH: 30 years: +45 %: 15 mins: Summer	0.04	27.2	11.805
Catchment Area (11)	FEH: 30 years: +45 %: 15 mins: Summer	0.10	68.4	29.652
Catchment Area (12)	FEH: 30 years: +45 %: 15 mins: Summer	0.02	15.9	6.909

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Inflows Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Catchment Area	FEH: 100 years: +45 %: 15 mins: Summer	0.03	24.2	10.517
Catchment Area (1)	FEH: 100 years: +45 %: 15 mins: Summer	0.03	20.9	9.062
Catchment Area (2)	FEH: 100 years: +45 %: 15 mins: Summer	0.03	20.9	9.062
Catchment Area (3)	FEH: 100 years: +45 %: 15 mins: Summer	0.03	28.4	12.323
Catchment Area (4)	FEH: 100 years: +45 %: 15 mins: Summer	0.02	16.7	7.249
Catchment Area (5)	FEH: 100 years: +45 %: 15 mins: Summer	0.01	9.2	3.988
Catchment Area (7)	FEH: 100 years: +45 %: 15 mins: Summer	0.11	88.6	38.434
Catchment Area (8)	FEH: 100 years: +45 %: 15 mins: Summer	0.03	24.2	10.517
Catchment Area (9)	FEH: 100 years: +45 %: 15 mins: Summer	0.04	30.1	13.055
Catchment Area (10)	FEH: 100 years: +45 %: 15 mins: Summer	0.04	34.3	14.862
Catchment Area (11)	FEH: 100 years: +45 %: 15 mins: Summer	0.10	86.1	37.345
Catchment Area (12)	FEH: 100 years: +45 %: 15 mins: Summer	0.02	20.1	8.705

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



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

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FEH: 2 years: +0 %: 15 mins: Summer	99.75 0	98.25 0	98.310	0.060	6.0	0.068	0.000	5.8	2.615	OK
Manhole (1)	FEH: 2 years: +0 %: 15 mins: Summer	99.70 0	98.16 0	98.222	0.062	11.0	0.070	0.000	10.6	4.861	OK
Manhole (2)	FEH: 2 years: +0 %: 15 mins: Summer	99.30 0	97.80 0	97.870	0.070	15.7	0.079	0.000	15.2	7.109	OK
Manhole (3)	FEH: 2 years: +0 %: 15 mins: Summer	99.10 0	97.60 0	97.687	0.087	22.3	0.098	0.000	21.8	10.172	OK
Manhole (4)	FEH: 2 years: +0 %: 15 mins: Summer	98.80 0	97.30 0	97.377	0.077	26.0	0.087	0.000	25.5	11.967	OK
Manhole (5)	FEH: 2 years: +0 %: 15 mins: Summer	98.20 0	96.70 0	96.782	0.082	27.8	0.092	0.000	27.2	12.952	OK
Manhole (6)	FEH: 2 years: +0 %: 15 mins: Summer	97.60 0	96.10 0	96.204	0.104	32.2	0.118	0.000	31.4	15.113	OK
Manhole (7)	FEH: 2 years: +0 %: 15 mins: Summer	97.40 0	95.90 0	96.007	0.107	31.4	0.121	0.000	30.5	15.094	OK
Manhole (8)	FEH: 2 years: +0 %: 15 mins: Summer	97.20 0	95.70 0	95.767	0.067	52.6	0.076	0.000	51.9	24.678	OK
Manhole (9)	FEH: 2 years: +0 %: 600 mins: Winter	96.70 0	91.40 0	91.981	0.581	7.4	0.657	0.000	4.1	128.045	Surcharged
Manhole (10)	FEH: 2 years: +0 %: 600 mins: Winter	96.10 0	91.47 0	91.981	0.511	2.4	0.578	0.000	0.5	33.551	Surcharged
Manhole (11)	FEH: 2 years: +0 %: 600 mins: Winter	96.20 0	91.32 0	91.981	0.661	4.6	0.747	0.000	4.4	102.114	Surcharged
Manhole (12)	FEH: 2 years: +0 %: 600 mins: Winter	96.10 0	90.25 0	91.981	1.731	6.4	1.958	0.000	6.3	134.933	Surcharged

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 30 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FEH: 30 years: +45 %: 15 mins: Summer	99.75 0	98.25 0	98.367	0.117	19.3	0.133	0.000	18.7	8.351	OK
Manhole (1)	FEH: 30 years: +45 %: 15 mins: Summer	99.70 0	98.16 0	98.282	0.122	35.3	0.138	0.000	34.2	15.546	OK
Manhole (2)	FEH: 30 years: +45 %: 15 mins: Summer	99.30 0	97.80 0	97.957	0.157	50.8	0.177	0.000	49.0	22.741	OK
Manhole (3)	FEH: 30 years: +45 %: 15 mins: Summer	99.10 0	97.60 0	97.794	0.194	71.6	0.219	0.000	69.9	32.529	OK
Manhole (4)	FEH: 30 years: +45 %: 15 mins: Summer	98.80 0	97.30 0	97.464	0.164	83.2	0.185	0.000	81.9	38.280	OK
Manhole (5)	FEH: 30 years: +45 %: 15 mins: Summer	98.20 0	96.70 0	96.889	0.189	89.2	0.214	0.000	87.0	41.434	OK
Manhole (6)	FEH: 30 years: +45 %: 15 mins: Summer	97.60 0	96.10 0	96.326	0.226	102.9	0.255	0.000	101.3	48.339	OK
Manhole (7)	FEH: 30 years: +45 %: 15 mins: Summer	97.40 0	95.90 0	96.116	0.216	101.3	0.244	0.000	99.3	48.315	OK
Manhole (8)	FEH: 30 years: +45 %: 15 mins: Summer	97.20 0	95.70 0	95.823	0.123	169.7	0.139	0.000	168.6	78.693	OK
Manhole (9)	FEH: 30 years: +45 %: 960 mins: Winter	96.70 0	91.40 0	93.302	1.902	13.1	2.151	0.000	5.0	355.913	Surcharged
Manhole (10)	FEH: 30 years: +45 %: 960 mins: Winter	96.10 0	91.47 0	93.302	1.832	4.2	2.072	0.000	0.5	103.218	Surcharged
Manhole (11)	FEH: 30 years: +45 %: 960 mins: Winter	96.20 0	91.32 0	93.302	1.982	6.8	2.241	0.000	6.7	252.317	Surcharged
Manhole (12)	FEH: 30 years: +45 %: 960 mins: Winter	96.10 0	90.25 0	93.302	3.052	11.1	3.451	0.000	11.0	349.513	Surcharged

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Manhole	FEH: 100 years: +45 %: 15 mins: Summer	99.750	98.250	98.387	0.137	24.2	0.155	0.000	23.6	10.516	OK
Manhole (1)	FEH: 100 years: +45 %: 15 mins: Winter	99.700	98.160	98.298	0.138	41.8	0.156	0.000	40.3	19.564	OK
Manhole (2)	FEH: 100 years: +45 %: 15 mins: Summer	99.300	97.800	98.091	0.291	66.0	0.329	0.000	57.3	28.631	Surcharged
Manhole (3)	FEH: 100 years: +45 %: 15 mins: Summer	99.100	97.600	97.944	0.344	85.7	0.389	0.000	81.2	40.953	Surcharged
Manhole (4)	FEH: 100 years: +45 %: 15 mins: Summer	98.800	97.300	97.488	0.188	97.9	0.213	0.000	89.6	48.191	OK
Manhole (5)	FEH: 100 years: +45 %: 15 mins: Summer	98.200	96.700	97.051	0.351	98.8	0.397	0.000	99.0	52.191	Surcharged
Manhole (6)	FEH: 100 years: +45 %: 15 mins: Summer	97.600	96.100	96.361	0.261	119.1	0.295	0.000	118.7	60.890	OK
Manhole (7)	FEH: 100 years: +45 %: 15 mins: Summer	97.400	95.900	96.146	0.246	118.7	0.278	0.000	118.1	60.867	OK
Manhole (8)	FEH: 100 years: +45 %: 15 mins: Summer	97.200	95.700	95.839	0.139	206.8	0.157	0.000	205.8	99.130	OK
Manhole (9)	FEH: 100 years: +45 %: 1440 mins: Winter	96.700	91.400	93.950	2.550	12.1	2.884	0.000	4.9	513.558	Surcharged
Manhole (10)	FEH: 100 years: +45 %: 1440 mins: Winter	96.100	91.470	93.950	2.480	3.8	2.805	0.000	0.6	148.342	Surcharged
Manhole (11)	FEH: 100 years: +45 %: 1440 mins: Winter	96.200	91.320	93.950	2.630	6.5	2.974	0.000	6.4	377.563	Surcharged
Manhole (12)	FEH: 100 years: +45 %: 1440 mins: Winter	96.100	90.250	93.950	3.700	10.5	4.185	0.000	10.4	514.355	Surcharged

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Tank 1	FEH: 2 years: +0 %: 600 mins: Winter	91.981	91.981	0.731	0.731	6.3	68.044	0.000	0.000	1.5	90.073		75.703
Tank 3	FEH: 2 years: +0 %: 600 mins: Winter	91.981	91.981	0.511	0.511	2.3	20.629	0.000	0.000	0.3	10.056		83.181
Tank 2	FEH: 2 years: +0 %: 600 mins: Winter	91.981	91.981	0.531	0.531	4.1	28.246	0.000	0.000	0.7	36.550		82.483

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
	Company: Glanville Consultants			

Status
OK
OK
OK

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 30 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Tank 1	FEH: 30 years: +45 %: 960 mins: Winter	93.302	93.302	2.052	2.052	11.0	191.008	0.000	0.000	2.3	217.723	840	31.795
Tank 3	FEH: 30 years: +45 %: 960 mins: Winter	93.302	93.302	1.832	1.832	4.0	73.960	0.000	0.000	0.5	25.686	475	39.701
Tank 2	FEH: 30 years: +45 %: 960 mins: Winter	93.302	93.302	1.852	1.852	7.9	98.517	0.000	0.000	1.1	105.764	510	38.904

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
	Company: Glanville Consultants			

Status
OK
OK
OK

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By:
Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Tank 1	FEH: 100 years: +45 %: 1440 mins: Winter	93.950	93.950	2.700	2.700	10.4	251.351	0.000	0.000	2.6	361.726		10.248
Tank 3	FEH: 100 years: +45 %: 1440 mins: Winter	93.950	93.950	2.480	2.480	3.7	100.130	0.000	0.000	0.5	42.828	1350	18.364
Tank 2	FEH: 100 years: +45 %: 1440 mins: Winter	93.950	93.950	2.500	2.500	7.2	133.000	0.000	0.000	1.3	160.798	1385	17.519

Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Designed by: SLS	Checked by:	Approved By:	
	Company: Glanville Consultants			

Status
OK
OK
OK

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



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

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole	Manhole (1)	99.750	98.310	0.061	2.615	0.7	0.14	5.8	OK
Pipe (1)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (1)	Manhole (2)	99.700	98.222	0.066	4.861	1.1	0.16	10.6	OK
Pipe (2)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (2)	Manhole (3)	99.300	97.870	0.078	7.109	1.2	0.18	15.2	OK
Pipe (3)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (3)	Manhole (4)	99.100	97.687	0.082	10.172	1.7	0.27	21.8	OK
Pipe (4)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (4)	Manhole (5)	98.800	97.377	0.079	11.967	2.0	0.23	25.5	OK
Pipe (5)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (5)	Manhole (6)	98.200	96.782	0.093	12.952	1.8	0.27	27.2	OK
Pipe (6)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (6)	Manhole (7)	97.600	96.204	0.106	15.113	1.4	0.22	31.4	OK
Pipe (7)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (7)	Manhole (8)	97.400	96.007	0.087	15.094	1.8	0.23	30.5	OK
Pipe (8)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (8)	Manhole (9)	97.200	95.767	0.120	24.678	2.0	0.11	51.9	OK
Pipe (9)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (9)	Manhole (11)	96.700	91.572	0.195	20.738	1.0	0.55	39.8	OK
Pipe (10)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (11)	Manhole (12)	96.200	91.555	0.300	23.314	0.6	0.16	43.6	OK
Pipe (11)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (10)	Tank 2	96.100	91.552	0.093	1.333	0.9	0.08	5.9	OK
Pipe (12)	FEH: 2 years: +0 %: 15 mins: Summer	Pipe	Manhole (12)	Tank 1	96.100	91.556	0.300	0.000	0.9	1.21	64.0	Surcharged
Pipe (13)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Tank 3	Manhole (10)	96.000	91.553	0.083	0.000	0.1	0.02	0.9	OK
Pipe (14)	FEH: 2 years: +0 %: 15 mins: Winter	Pipe	Tank 2	Manhole (9)	96.100	91.556	0.130	0.000	0.1	0.02	2.0	OK

Project: Land at Cedar Cottage Lower Beeding Surface Water Network		Date: 07/07/2026			
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: SLS	Checked by:		Approved By:
		Company: Glanville Consultants			



FEH: 30 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole	Manhole (1)	99.750	98.367	0.120	8.351	0.9	0.46	18.7	OK
Pipe (1)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (1)	Manhole (2)	99.700	98.282	0.139	15.546	1.3	0.52	34.2	OK
Pipe (2)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (2)	Manhole (3)	99.300	97.957	0.175	22.741	1.5	0.58	49.0	OK
Pipe (3)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (3)	Manhole (4)	99.100	97.794	0.179	32.529	2.1	0.87	69.9	OK
Pipe (4)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (4)	Manhole (5)	98.800	97.464	0.176	38.280	2.4	0.73	81.9	OK
Pipe (5)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (5)	Manhole (6)	98.200	96.889	0.207	41.434	2.3	0.86	87.0	OK
Pipe (6)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (6)	Manhole (7)	97.600	96.326	0.221	48.339	1.8	0.7	101.3	OK
Pipe (7)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (7)	Manhole (8)	97.400	96.116	0.170	48.315	2.4	0.75	99.3	OK
Pipe (8)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (8)	Manhole (9)	97.200	95.823	0.300	78.693	2.4	0.36	168.6	OK
Pipe (9)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (9)	Manhole (11)	96.700	92.043	0.300	39.277	1.4	0.75	54.2	Surcharged
Pipe (10)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (11)	Manhole (12)	96.200	92.042	0.300	49.118	1.1	0.29	78.8	Surcharged
Pipe (11)	FEH: 30 years: +45 %: 15 mins: Winter	Pipe	Manhole (10)	Tank 2	96.100	92.043	0.300	0.743	1.0	0.07	5.3	Surcharged
Pipe (12)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Manhole (12)	Tank 1	96.100	92.043	0.300	0.000	2.0	2.73	144.8	Surcharged
Pipe (13)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Tank 3	Manhole (10)	96.000	92.043	0.300	0.000	0.0	0.03	1.8	Surcharged

Project: Land at Cedar Cottage Lower Beeding Surface Water Network				Date: 07/07/2026									
Report Details: Type: Connections Summary Storm Phase: Phase				Designed by: SLS		Checked by:						Approved By:	
				Company: Glanville Consultants									
Pipe (14)	FEH: 30 years: +45 %: 15 mins: Summer	Pipe	Tank 2	Manhole (9)	96.100	92.043	0.300	0.000	0.1	0.03	3.6	Surcharged	

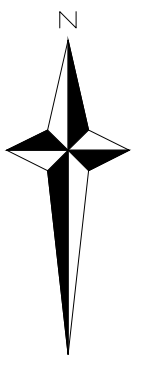
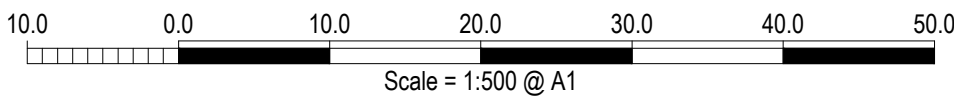
Project: Land at Cedar Cottage Lower Beeding Surface Water Network	Date: 07/07/2026			
	Designed by:	Checked by:	Approved By:	
	SLS			
Report Details: Type: Connections Summary Storm Phase: Phase	Company: Glanville Consultants			



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole	Manhole (1)	99.750	98.387	0.137	10.516	0.9	0.57	23.6	OK
Pipe (1)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (1)	Manhole (2)	99.700	98.297	0.214	19.547	1.2	0.68	45.1	OK
Pipe (2)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (2)	Manhole (3)	99.300	98.091	0.225	28.631	1.4	0.68	57.3	Surcharged
Pipe (3)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (3)	Manhole (4)	99.100	97.944	0.225	40.953	2.0	1.01	81.2	Surcharged
Pipe (4)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Manhole (4)	Manhole (5)	98.800	97.460	0.225	48.201	2.3	0.82	92.3	OK
Pipe (5)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (5)	Manhole (6)	98.200	97.051	0.225	52.191	2.5	0.98	99.0	Surcharged
Pipe (6)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (6)	Manhole (7)	97.600	96.361	0.253	60.890	1.9	0.83	118.7	OK
Pipe (7)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (7)	Manhole (8)	97.400	96.146	0.192	60.867	2.5	0.89	118.1	OK
Pipe (8)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (8)	Manhole (9)	97.200	95.839	0.300	99.130	2.9	0.44	205.8	OK
Pipe (9)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (9)	Manhole (11)	96.700	92.231	0.300	46.565	1.3	0.8	58.3	Surcharged
Pipe (10)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (11)	Manhole (12)	96.200	92.229	0.300	59.239	1.3	0.33	89.0	Surcharged
Pipe (11)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Manhole (10)	Tank 2	96.100	92.232	0.300	0.948	0.9	0.09	6.6	Surcharged
Pipe (12)	FEH: 100 years: +45 %: 15 mins: Summer	Pipe	Manhole (12)	Tank 1	96.100	92.228	0.300	0.000	2.4	3.25	172.1	Surcharged
Pipe (13)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Tank 3	Manhole (10)	96.000	92.232	0.300	0.000	0.1	0.07	3.6	Surcharged

Project: Land at Cedar Cottage Lower Beeding Surface Water Network				Date: 07/07/2026									
Report Details: Type: Connections Summary Storm Phase: Phase				Designed by: SLS		Checked by:						Approved By:	
				Company: Glanville Consultants									
Pipe (14)	FEH: 100 years: +45 %: 15 mins: Winter	Pipe	Tank 2	Manhole (9)	96.100	92.232	0.300	0.000	0.1	0.07	8.6	Surcharged	



NOTES

1. This drawing is to be read in conjunction with all relevant documents and specifications.
2. Scaleable for planning purposes only.
3. This drawing has been prepared for information purposes only and must not be used for tender of construction purposes.
4. Number of road gullies to be confirmed following detailed design.
5. Finished floor levels, cover levels and invert levels are indicative and subject to detail design.

KEY

- Application boundary.
- Proposed surface water sewer (Gravity).
- Proposed foul water sewer (Gravity).
- Proposed surface water rising main.
- Proposed foul water rising main.
- Existing foul water sewer (Southern Water).
- Existing surface water sewer (Southern Water).
- Proposed surface / foul water manhole.
- Proposed road gully.
- Proposed cellular attenuation tank.
- Proposed permeable paving.
- Indicative finished floor level.
- Exceedance flow arrow.
- Rain Garden.

- Landscaping / External features:
- Grass area
 - Cycle store - 2 cycles
 - Existing Trees
 - Proposed Trees
 - Proposed Vegetation
 - Private pump station
 - Private pump station
 - Private pump station
- For details of roof protection and tree works, refer to SJA Trees Tree Schedule and Site Plan
- For details of underground pump stations, refer to Glanville Civil Engineers drawing and specifications

Total Site Area (Redline Boundary) = 10680m²

Total Proposed Impermeable Area = 4750m²

Greenfield Runoff Calculated on 4750m².
Qbar = 2.7 l/s

Total Proposed Impermeable Area +10% on
Roof Areas for Urban Creep = 4825m²

P3	Updated to new layout.	03.07.2026	SLS	JB
P2	Updated to new layout.	15.04.2026	SLS	JB
P1	First Issue	06.03.2026	SLS	JB
Rev	Description	Date	By	Chkd



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

Client :	BlackOnyx Group		
Project :	Ceder Cottage Lower Beeding		
Title :	Impermeable Area Plan		
Engineer : SLS	Date : 15.04.2026		
Director : JB	Scale : 1:500 @A1		
Status :	PRELIMINARY		
Drawing No.	8240636-1202	Rev	P3