

FLOOD RISK ASSESSMENT AND DRAINAGE STRATEGY

Little Orchard, Lower Kingsdown Road, Kingsdown,
Corsham, SN13 8BD on Behalf of Mr. Pim De Witte.

Date: December 2025
Issue No. 1



DOCUMENT ISSUE RECORD

Client : Mr. Pim De Witte

Project: Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham, SN13 8BD

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1.0 INTRODUCTION

- 1.1 This *Flood Risk Assessment and Drainage Strategy (FRA & DS)* has been prepared by Cole Easdon Consultants (CE) on behalf of Mr. Pim De Witte in relation to a planning application for a single dwelling at Little Orchard, Kingsdown, SN13 8BD.

The Development

- 1.2 The development comprises a single new build dwelling in place of an existing dwelling with associated landscaping and parking.

Need for Study

- 1.3 The purpose of this assessment is to demonstrate that the development can be satisfactorily accommodated. The study has been undertaken as per guidance provided within national guidance documents, namely *National Planning Policy Framework (NPPF)* and its associated *Planning Practice Guidance (PPG)* and the requirements of the Environment Agency (EA).

Scope of Study

- 1.4 In Section 2.0, we describe the characteristics of the development site and surrounding area. In Section 3.0, we discuss potential sources of flood risk and any required mitigation measures. In Section 4.0, we discuss the surface water drainage proposals for the site, conclusions are presented in Section 5.0.
- 1.5 The following publicly available documents have also been reviewed as part of this assessment:
- *National Planning Policy Framework (July 2021)*;
 - *Planning Practice Guidance (August 2021)*;
 - *CIRIA C753 The SuDS Manual (2015)*; and
 - *DEFRA National Standards for SuDS (2025)*
- 1.6 The following abbreviations have been used in this Report:
- AOD Above Ordnance Datum;
 - BGS British Geological Survey;
 - EA Environment Agency;
 - LPA Local Planning Authority;
 - NPPF National Planning Policy Framework;
 - PPG Planning Practice Guidance; and
 - SuDS Sustainable Drainage Systems.

2.0 THE APPLICATION SITE

Site Location and Topography

- 2.1 The application site is located north of Lower Kingsdown Road in Kingsdown near Corsham, Wiltshire.
- 2.2 The site falls steeply from south to north. The dwelling is located in the south of the site adjacent to the road, the levels fall away from the dwelling towards the fields to the north.

Nearby Watercourses

- 2.3 There are no existing watercourses within the vicinity of the site.

Existing Drainage

- 2.4 Wessex Water asset records indicate the presence of a 150mm foul water sewer that crosses through the site from east to west. It is located approximately 12 metres off the northern face of the dwelling.

Existing Ground Conditions

- 2.5 British Geological Survey (BGS) mapping indicates the site is underlain by Fuller's Earth Formation with no superficial deposits. Refer to BGS map in Figure 2.1 below



Figure 2.1: BGS Map

-
- 2.6 The underlying bedrock geology is classified as an 'Principal' aquifer. The southern part of the site (approximately half of the site area) lies within a Zone 2 source protection zone, the northern part of the site does not lie within any source protection zone.

3.0 FLOOD RISK ASSESSMENT

- 3.1 This Section of the study reviews historical flooding events within the local catchment area and presents an assessment of flood risk to the proposed development from various external sources. Recommended flood risk mitigation measures appropriate to the level of perceived risk are included within this assessment. Flood risk posed by additional surface water runoff generated by the new development and appropriate mitigation measures are addressed within Section 4.0.

Flooding from Fluvial/Tidal Sources

- 3.2 The Flood Map for Planning (FMP) for the locality as produced by the EA is shown in Figure 3.1 below. According to the FMP, it can be seen that the entire development site lies within Flood Zone 1 (Low Risk).

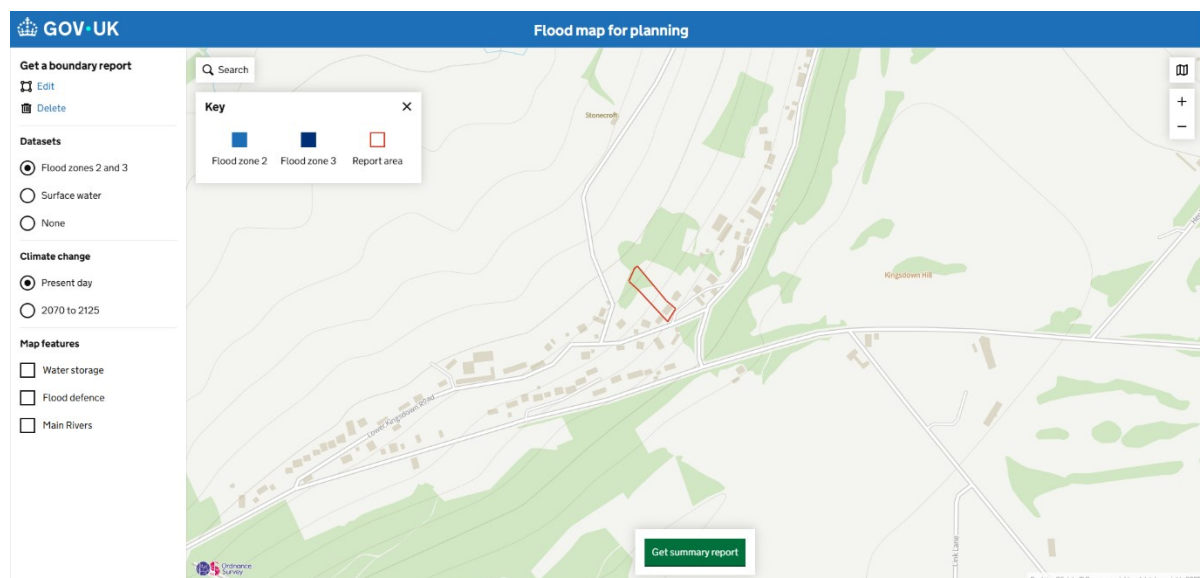


Figure 3.1: Extract from Central Government's 'Flood Map for Planning' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

- 3.3 The proposed development will be located solely within Flood Zone 1. NPPF PPG Flood Risk and Coastal Change (Table 2: Flood Risk Vulnerability and Flood Zone Incompatibility) confirms that all types of development are permitted within Flood Zone 1.

Flooding from Existing Sewers/Drains

- 3.4 The existing drainage within the site is located downslope of the dwelling, if flooding were to occur then flows would follow the existing topography away from the dwelling.

Sewer Flood Risk Mitigation Measures

- 3.5 Appropriate maintenance of the proposed onsite drainage system will aid in reducing any potential risk. No additional mitigation is required.

Flooding from Overland Flow (Surface Water)

- 3.6 The Surface Water Flood Risk Map for the locality as produced by the EA indicates that the site is a low risk of surface water flooding.

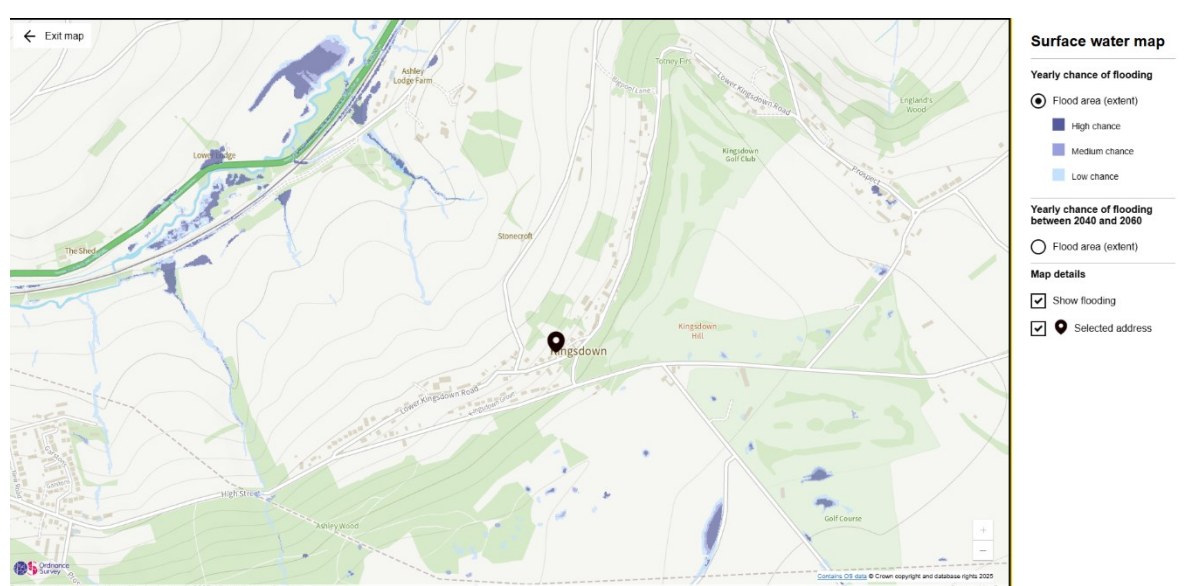


Figure 3.2 Extract from Central Government's 'Surface Water Flood Risk' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

Overland Flow Flood Risk Mitigation Measures

- 3.7 Appropriate maintenance of the proposed onsite drainage system will aid in reducing any potential risk. No additional mitigation is required.
- 3.8 An appropriately designed surface water drainage system and SuDS features will be incorporated within the development to prevent surface water runoff generated within the new development from causing flooding at the site or increasing flood risk elsewhere. Further details are included in Section 4.0.

Flooding from Groundwater

- 3.9 Intrusive site investigation did not encounter groundwater within 2.0m of the surface, it is therefore considered that flood risk from groundwater sources is low. The site is not located within any groundwater flood alert area.

Groundwater Flood Risk Mitigation Measures

- 3.10 No mitigation measures are considered necessary.

Assessment of Flood Risk from Artificial Sources

- 3.11 The flood map for planning indicates that flooding from reservoirs is unlikely in this area.

Artificial Sources Flood Risk Mitigation Measures

- 3.12 No mitigation is required
- 3.13 Table 3.1 provides a summary of the identified flood risk sources for this development. It can be considered that the overall flood risk for this site is low, therefore the sequential test is passed and the exception test is not required.

Table 3.1 Summary of Flood Risk and Mitigation Measures

Source of Potential Flooding to the Development Site	Flood Risk	Mitigation/Comments
Fluvial	Low	The site is located within Flood Zone 1 (Low Risk)
Public Sewers / Drains	Low	Appropriate maintenance of the proposed onsite drainage system will aid in reducing any potential risk. Should flooding occur flows would follow the site topography away from the dwelling.
Overland Flow	Low	Site topography will divert any flows away from the dwelling
Groundwater	Low	No mitigation required
Artificial Sources	Low	No mitigation required

4.0 DRAINAGE PROPOSALS

- 4.1 This Section details how surface water flows arising from the development site will be managed in line with related national and local guidance.

Surface Water Drainage Proposal

- 4.2 The proposed development will contain 0.012ha (120m²) of impermeable area. Surface water runoff generated from the site will be managed on site utilising sustainable drainage measures.
- 4.3 Drainage proposals for the site have been developed in line with the national and local guidance, SuDS principles and Building Regulations guidelines.

Drainage Hierarchy

- 4.4 The drainage strategy for the site has been prepared according to the hierarchy set out in Standard 1 of the National Standard for SuDS, as follows:
- Priority 1: Collected for non-potable use
- Priority 2: Infiltrated to ground
- Priority 3: Discharged to an above ground surface water body
- Priority 4: Discharged to a surface water sewer, or another piped surface water drainage system
- Priority 5: Discharged to a combined sewer

Rainwater Harvesting

- 4.5 For a single dwelling, not-potable water demand is considered low and therefore rainwater harvesting is not considered appropriate for this site, however water butts will be used for landscape irrigation purposes.

Infiltration Feasibility

- 4.6 Infiltration testing to BRE365 methodology was completed by Paddock Geo-Engineering in November 2025. Three test cycles were completed in two trial pits to the north of the dwelling, both pits produced reasonable results and it is therefore considered that infiltration is a suitable method of surface water disposal. Please refer to site investigation report in Appendix 3.

Proposed SuDS

- 4.7 It is proposed that surface water shall be discharged to ground via cellular soakaway. The soakaway will be constructed at a shallow depth therefore a design rate of 2.98×10^{-5} m/s is considered appropriate as per the results yielded from trial pit 2.

- 4.8 The soakaway is designed to accommodate a 1 in 100 year storm event plus a 45% allowance for climate change. Required dimensions of the soakaway are 4.0 x 4.0 x 0.4m, please refer to drawing 10668 - 501 [*Surface Water Drainage Layout*] in Appendix 1 and design calculations in Appendix 2.

Interception SuDS

- 4.9 In accordance with Standard 2 of the National Standards for SuDS, systems that discharge all runoff to ground with no surface water discharged off site are assumed to provide sufficient interception.

Residual Flood Risk

- 4.10 Should the drainage system block/fail or under extreme events of flooding exceeding the design standard, floodwater would be contained within the highway and follow the natural topography away from the dwelling. Please refer to drawing 10668 - 501 [*Surface Water Drainage Layout*] in Appendix 1.
- 4.11 It is noted that the LLFA have raised at concern at pre-application stage regarding the arisings produced by the basement excavation and their method of disposal. It is confirmed that all arisings were removed off site and therefore have not affected the existing topography of the site and subsequently there is no increase to local flood risk due to the excavation of the basement section of the dwelling.

Water Quality

- 4.12 Runoff from the dwelling is limited to roof areas only and therefore the risk of contaminants entering the surface water drainage system is considered low. The soakaway will be located at shallow depth to maximise the travel distance to the groundwater table and will be wrapped in a geotextile to trap any silt or contaminants that may enter the drainage system.

Foul Water Drainage

- 4.13 Foul water drainage from the site will drain to the existing public foul sewer to the north. The dwelling is located within a groundwater source protection zone where discharge of foul water to a public sewer is acceptable.

Adoption and Maintenance

- 4.14 All surface water drainage systems will remain private and will be maintained by the owner of the site.

- 4.15 Regular inspection and maintenance is important for the effective operation of SuDS systems as designed. The regular maintenance of drainage / SuDS will be carried out in line with the C753 The SUDS Manual (CIRIA, November 2015) or as per manufacturer's specification, and is outlined in the tables below.

Table 4.1: Maintenance Schedule for Cellular Soakaway

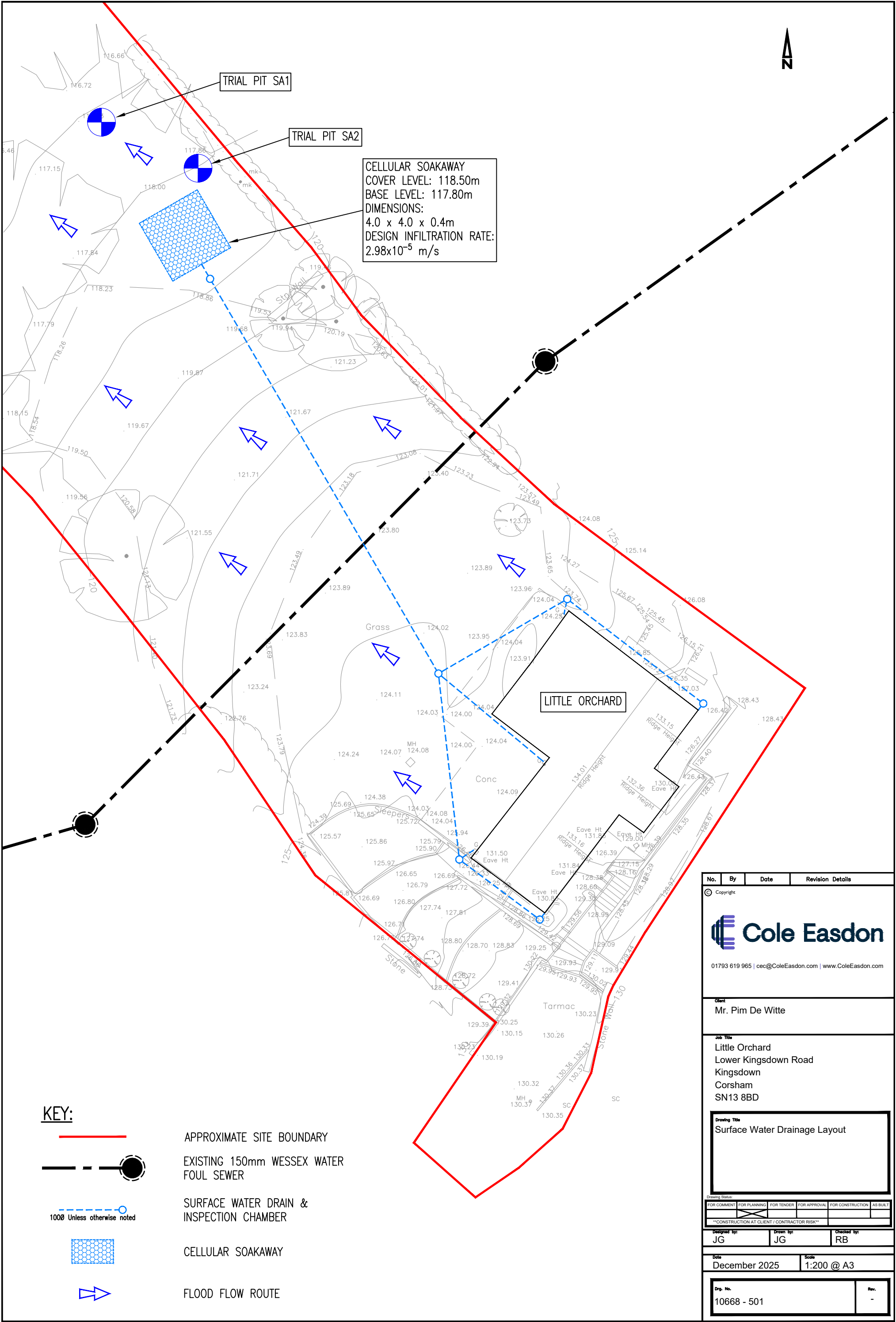
Drainage Element	Schedule	Maintenance Requirement	Frequency
Cellular Soakaway	Regular	- Inspect for sediment and debris in pre-treatment devices and floor of inspection tube or chamber - Cleaning of gutters and any filters and downpipes - Trimming any roots that may be causing blockages	Annually, or as required based on inspection
	Occasional	Remove sediment and debris from pre-treatment components and floor of inspection tube or chamber	As required
	Remedial	- Reconstruct soakaways and/or replace or clean fill, if performance deteriorates or failure occurs - Replacement of clogged geotextile	As required
	Monitoring	- Inspect silt traps and note sediment accumulation rate - Check soakaways to ensure emptying is occurring	- Monthly in the first year and then annually - Annually

5.0 DISCUSSIONS AND CONCLUSIONS

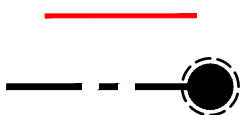
- 5.1 This *Flood Risk Assessment and Drainage Strategy* has been prepared by CE on behalf of Mr. Pim De Witte, in relation to a planning application for a single dwelling at Little Orchard, Kingsdown, Corsham.
- 5.2 Flood risk to the proposed development from various sources, including rivers, sewers, groundwater, ditches and overland flow has been considered in this study. Flood risk from all sources is considered low and therefore no mitigation measures are proposed.
- 5.3 Surface water runoff from the site will be discharged to ground via cellular soakaway. Ensuring no discharge of surface water off site.
- 5.4 Residual flood risk in case of design exceedance or blockages will be managed by diverting flood flows away from the dwelling
- 5.5 The drainage proposals are subject to discussions with the LLFA.
- 5.6 This study has been undertaken in accordance with the principles of the *NPPF* document. We conclude that providing the development adheres to the conditions advised within this Report, the proposals can be accommodated without increasing flood risk within the locality in accordance with objectives set by Central Government and the LPA/LLFA.

Cole Easdon Consultants Limited
December 2025

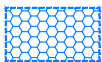
Appendix 1



KEY:



1000 Unless otherwise noted



- APPROXIMATE SITE BOUNDARY
- EXISTING 150mm WESSEX WATER FOUL SEWER
- SURFACE WATER DRAIN & INSPECTION CHAMBER
- CELLULAR SOAKAWAY
- FLOOD FLOW ROUTE

No.	By	Date	Revision Details
Copyright			
01793 619 965 cec@ColeEasdon.com www.ColeEasdon.com			
Client			
Mr. Pim De Witte			
Job Title			
Little Orchard Lower Kingsdown Road Kingsdown Corsham SN13 8BD			
Drawing Title			
Surface Water Drainage Layout			
Drawing Status			
FOR COMMENT	FOR PLANNING	FOR TENDER	FOR APPROVAL
FOR CONSTRUCTION	AS BUILT		
CONSTRUCTION AT CLIENT / CONTRACTOR RISK			
Designed by:	Drawn by:	Checked by:	
JG	JG	RB	
Date		Scale	
December 2025		1:200 @ A3	
Dwg. No.		Rev.	
10668 - 501		-	

Appendix 2

Project: Little Orchard Kingsdown Corsham	Date: 02/12/2025			
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Details: Type: Inflows Storm Phase: Phase	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			



Catchment Area

Type : Catchment Area

Area (ha)

0.005

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric	0.750
Winter Volumetric Runoff	0.840
Time of Concentration	5
Percentage Impervious	100



Catchment Area (1)

Type : Catchment Area

Area (ha)

0.007

Dynamic Sizing	
Runoff Method	Time of Concentration
Summer Volumetric	0.750
Winter Volumetric Runoff	0.840
Time of Concentration	5
Percentage Impervious	100

Project: Little Orchard Kingsdown Corsham	Date: 02/12/2025			 Cole Easdon
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			



Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	118.500
Depth (m)	0.400
Base Level (m)	117.800
Number of Crates Long	4
Number of Crates Wide	4
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	1
Crate Height (m)	0.4
Total Volume (m³)	6.380

Advanced

Base Infiltration Rate (m/hr)	0.1073
Side Infiltration Rate (m/hr)	0.1073
Safety Factor	2.0

Project: Little Orchard Kingsdown Corsham	Date: 02/12/2025			 Cole Easdon
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Details: Type: Network Design Criteria Storm Phase: Phase	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			

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: Little Orchard Kingsdown Corsham	Date: 02/12/2025			 Cole Easdon
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Title: Rainfall Analysis Criteria	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			

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)	300
Perform No Discharge Analysis	☐

Rainfall	
FEH	Type: FEH
Site Location	GB 380600 167650 ST 80600 67650
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Project: Little Orchard Kingsdown Corsham	Date: 02/12/2025			 Cole Easdon
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			



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. Resid ent 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 (%)
Cellular Storage	FEH: 100 years: +45 %: 120 mins: Winter	118.137	118.137	0.337	0.337	2.4	5.128	0.000	4.119	0.0	0.000	158	19.624

Project: Little Orchard Kingsdown Corsham	Date: 02/12/2025			 Cole Easdon
	Designed by: JG	Checked by: RB	Approved By: RB	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company Address: Cole Easdon Consultants Unit 2, York House, Edison Park Dorcan Way, Swindon, SN3 3RB			

Status
OK

Appendix 3

Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD

BRE365 INFILTRATION TESTING



Mr. Pim de Witte

November 2025

P25-339inf

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2.3	Groundwater Details	3
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ISSUE	DATE	Written by:	Comment
1	20/11/2025	Edoardo Angelone MSc FGS	-
		Reviewed and approved by	
		Matt Paddock MSc FGS	
For and on behalf of Paddock Geo Engineering Limited			

APPENDICES

A	Exploration Point Location Plan
B	Trial Pit and Borehole Logs
C	Laboratory Analysis Results – Not used
D	Infiltration Testing Results
E	Site Photographs

1.0 INTRODUCTION

Further to instructions received from Mr. Pim de Witte; the Client, infiltration testing has been carried out to the BRE365 methodology in relation to assessing the infiltration properties of the underlying ground on the subject site referred as Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD.

1.1 Objectives

This assessment has been carried out to a scope of works as detailed by the Client prior to commencement. The assessment has been designed to assess the infiltration properties of the near surface strata and determine feasibility of soakaways design if applicable.

1.2 Scope of Works

The works comprised the forming of 2no. machine excavated trial pit, with infiltration testing carried out in accordance with the BRE365 methodology.

1.3 Terms of Reference

The assessment has been carried out generally in accordance with the following guidance.

- BRE Digest 365 – Soakaway Design 2016
- BS5930: 2015 - Code of Practice for Site Investigations, British Standards Institution

2.0 SITE DESCRIPTION

The site is situated within Kingsdown village, approximately 3km east of Batheaston town centre and around 6.9km southwest of Corsham town centre. It comprises an irregularly shaped plot that moderately slopes northwest, consistent with the surrounding topography. The southern portion of the site is occupied by a residential dwelling, with the rear garden extending northwards.

The area investigated is located within the northern section of the rear garden and was accessed via Wormcliff Lane, through a neighbouring private property.

2.1 Sitework

The sitework was carried out on 5th November 2025 and involved the forming of 2no. machine excavated trial pits (SA01 to SA02) to depth between 0.90m and 2.00m below ground level (bgl) with infiltration testing conducted in accordance with the BRE365 methodology.

The trial pits were formed in locations indicated by the Client's Engineer and in areas clear of obstruction and any buried services following a Cable Avoidance Tool (CAT) and Signal Generator survey. The testing locations are indicated on the enclosed Exploratory Location Plan presented in Appendix A.

The trial pits arisings were logged by a Geotechnical Engineer generally in accordance with BS5930:2015. No samples were recovered from the exploratory points.

The trial pits were reinstated upon completion of testing with compacted arisings.

Report on behalf of Mr. Pim de Witte

P25-339inf - Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD

2.2 Encountered Strata

A log of the trial pits, and an exploratory Location Plan showing the positions investigated are presented in Appendix B and A respectively.

The strata encountered within the Trial Pits is summarised in the table below. These details are also included on the Trial Pit and Borehole Logs presented in Appendix B.

Table 1: Encountered Strata

Encountered Strata – Trial Pit Strata	Exploratory Hole and Basal Depth (m bgl)	
	SA1	SA2
TOPSOIL Vegetation onto dark grey brown slightly sandy organic CLAY with frequent rootlets and roots up to 40mm diameter.	0.35	0.30
LANDSLIP DEPOSIT Brown slightly sandy silty CLAY with occasional limestone up to medium gravel size.	1.70	0.60
LANDSLIP DEPOSIT Brown slightly sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded limestone.	2.00	0.90
Total Depth (m bgl)	2.00	0.90

2.3 Groundwater Details

Groundwater was not encountered within any exploration points to the maximum depth investigated of 2.00m bgl.

It should be noted that groundwater levels may vary seasonally and with other factors. The reviewer should satisfy themselves with the groundwater levels at the time of any construction works.

3.0 LABORATORY ANALYSIS

Samples were not recovered from the arisings and laboratory analysis was not carried out.

4.0 INFILTRATION TESTING

4.1 Surface Water Soakaways

Infiltration testing was carried out within the trial pits (SA1 and SA2) to the BRE365 methodology to provide an estimate infiltration factor for the subject site. The trial pits were formed at depths between 0.90m and 2.00m bgl and filled between 0.40m and 0.50m of water at its base to limit the amount water used and reduce the likelihood of trial pit instabilities.

Three successfully cycles were carried out within both trial pits, and the test results are summarised in the table 2 and within Appendix D.

Table 2: Infiltration Factors

Trial Pit	Soil Tested	Tested Depth (m bgl)	Infiltration Factor (ms^{-1})		
			Cycle 1	Cycle 2	Cycle 3
SA01	Landslip Deposit	c.1.50 – 2.00	1.68×10^{-5}	1.25×10^{-5}	1.17×10^{-5}
SA02		0.60 – 1.05	4.80×10^{-5}	3.58×10^{-5}	2.98×10^{-5}

Given the result of the infiltration tests, it is considered that conventional soakaways may be effective within the shallow Landslip Deposit soils underlying the northern portion of the site.

General Notes

This report is produced for the sole use of the Client, and no responsibility of any kind, whether for negligence or otherwise, can be accepted for any Third Party who may rely upon it.

The conclusions and recommendations given in this report are based on our understanding of the future plans for the site and based on a scope of works agreed by the Client and afforded by the agreed budget. No responsibility is accepted for conditions not encountered, which are between exploratory points or outside of the agreed scope of work or if construction is commenced before regulatory approval of designs.

The report has been prepared following the guidelines and principles established in the British Standards, BS 5930, CIRIA Guidance and NHBC Standards. It necessarily relies on the co-operation of other organisations and the free availability of information and total access. No responsibility can, therefore, be accepted for conditions arising from information that was inaccurate or not available to the investigating team as a result of information being withheld or access being denied.

This report may suggest an opinion on a suspected configuration of strata or conditions between exploratory points and below the maximum depth of investigation. However, this is for guidance only and no liability can be accepted for its accuracy. Comments on the groundwater conditions are based on observations made at the time of the investigation unless otherwise stated. It should be noted, however, that groundwater levels might vary due to seasonal or other effects.

APPENDIX A

Exploration Points Location Plan

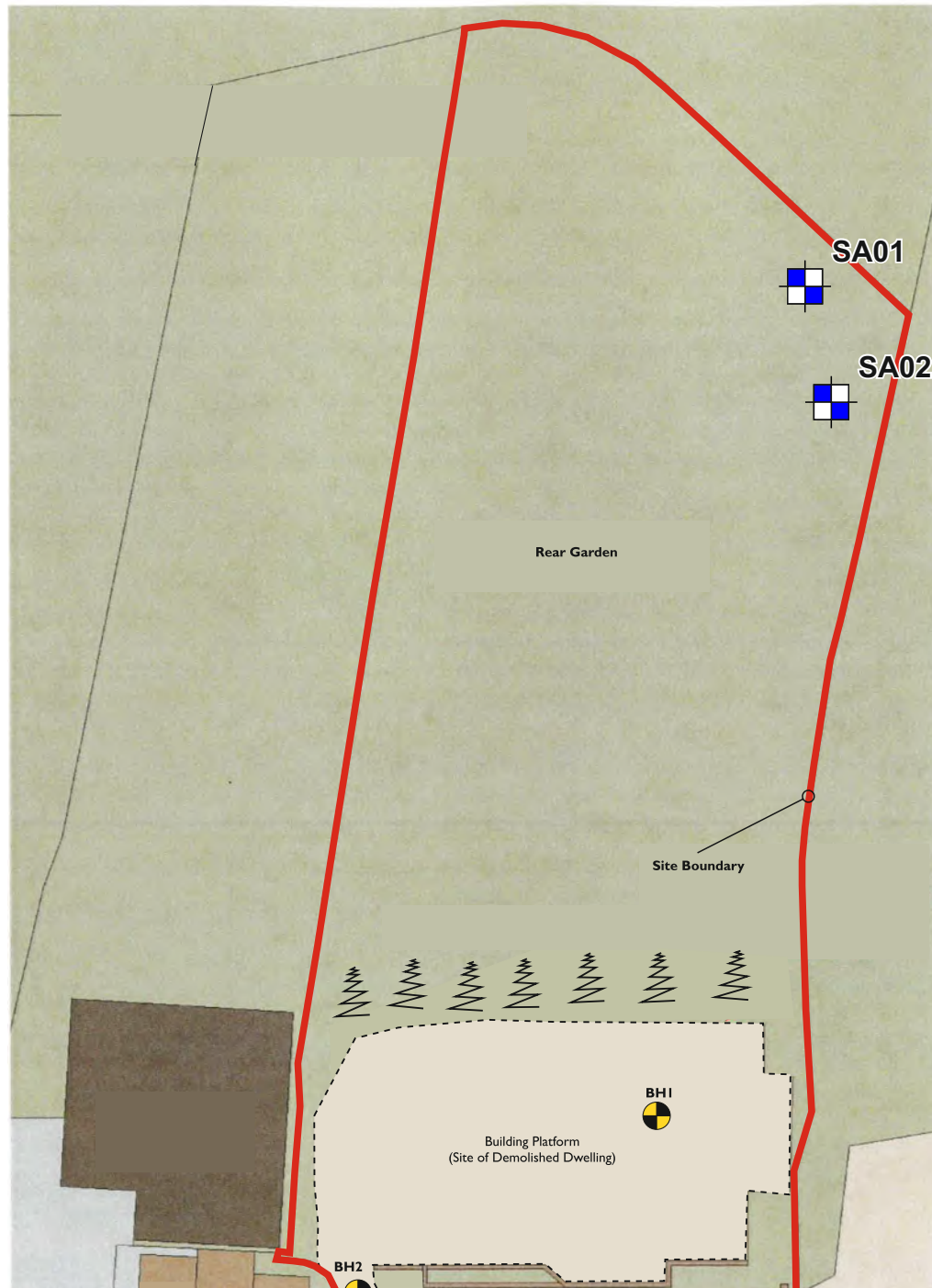
Exploratory Point Location Plan

P25-339

**Little Orchard,
Lower Kingsdown Road,
Kingsdown, Corsham
SN13 8BD**

Mr. Pim de Witte

November 2025



Legend:

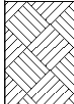


Notes:

- 1) Not to scale
- 2) Dimensions as shown
- 3) All positions are approximate
- 4) Drawing to be viewed in colour
- 5) Drawing to be viewed digitally
- 6) Not for construction detail
- 7) Based on plans provided the Client

APPENDIX B

Trial Pit Logs

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.35)	Vegetation onto dark grey brown slightly sandy organic CLAY with frequent rootlets and roots up to 40mm diameter. (TOPSOIL)		
					0.35	Brown mottled white slightly sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded limestone. (LANDSLIP)		
					(1.35)	...frequent rootlets and roots up to 3mm encountered up to 1.00m depth		
					1.70	Light brown slightly sandy gravelly silty CLAY with low cobble content. Gravel is fine to coarse angular to subangular limestone. (LANDSLIP)		
					(0.30)			
					2.00	Complete at 2.00m		



Infiltration test carried out to the BRE365 methodology
Trial pit terminated at 2.00m depth
Trial pit backfilled with arising
No groundwater encountered
Trial pit stable upon completion

Logged in accordance BS5930:2015

Figure No.

P25-339.SA01

PADDOCK GEO ENGINEERING						Site Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD		Trial Pit Number SA02	
Excavation Method 2.5 Tonne Excavator		Dimensions 0.30 x 2.00		Ground Level (mOD)		Client Mr. Pim de Witte		Job Number P25-339	
		Location				Dates 05/11/2025		Engineer	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
					0.30	Vegetation onto dark grey brown slightly sandy organic CLAY with frequent rootlets and roots up to 40mm diameter. (TOPSOIL)			
					0.30	Brown slightly sandy silty CLAY with occasional limestone up to medium gravel size. (LANDSLIP)			
					0.60	Brown slightly sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded limestone. (LANDSLIP)			
					0.90	Complete at 0.90m			



Remarks Infiltration test carried out to the BRE365 methodology Trial pit terminated at 0.90m depth Trial pit backfilled with arising No groundwater encountered Trial pit stable upon completion		
Logged in accordance BS5930:2015		
Scale (approx) 1:25	Logged By	Figure No. P25-339.SA02

APPENDIX C

Laboratory Analysis Results – Not Used

APPENDIX D

Infiltration Testing Results

Infiltration Test to BRE365 - SA01 - TEST 1

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.47
	2.50	150.00	1.51
	6.30	378.00	1.55
	18.40	1104.00	1.65
	23.20	1392.00	1.67
	32.40	1944.00	1.71
	43.80	2628.00	1.74
	60.20	3612.00	1.78
	120.00	7200.00	1.87

Location: SA01

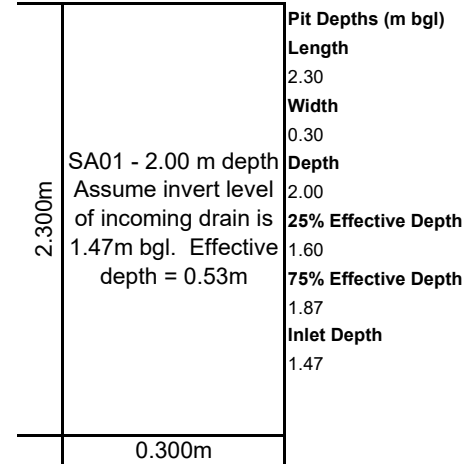
TEST 1

Weather: Cloudly

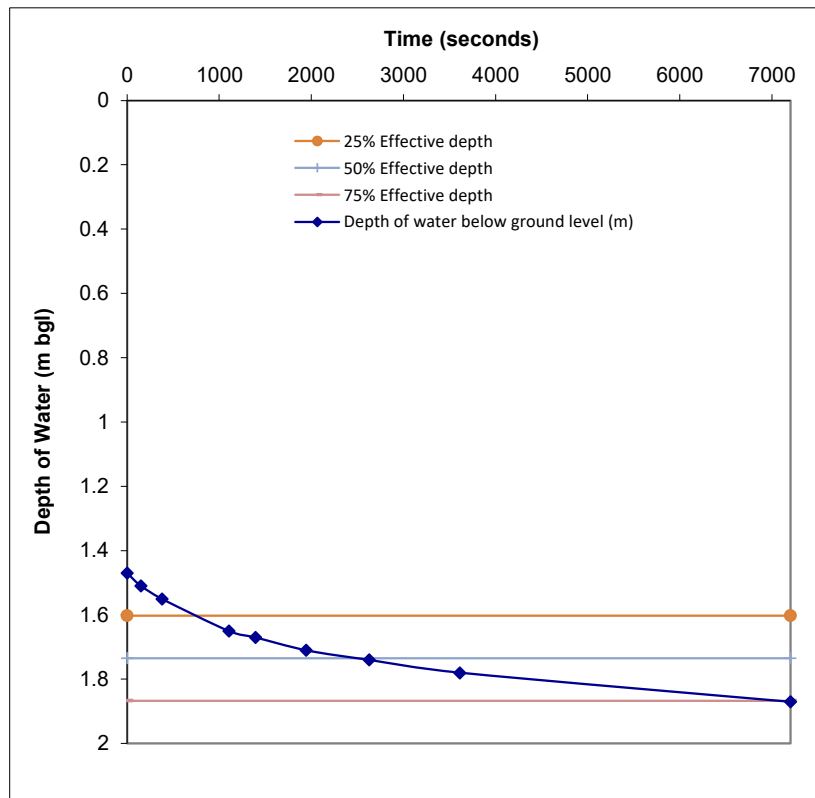
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.47



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth

$$2.30 \times 0.30 \times (1.8675 - 1.6025) = 0.18285$$

$$ap_{50} = \text{internal area of TP upto 50\% effective depth + base of TP}$$

$$2(2.30 \times) + 2(0.30 \times) + (2.30 \times 0.30) = 2.068$$

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

$$= 5256 \text{ secs}$$

$$f = 1.68E-05 \text{ m/s}$$

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA01 - TEST 2

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.50
	1.00	60.00	1.50
	16.30	978.00	1.56
	28.60	1716.00	1.60
	34.50	2070.00	1.61
	41.45	2487.00	1.63
	48.40	2904.00	1.64
	157.28	9437.01	1.88

Location: SA01

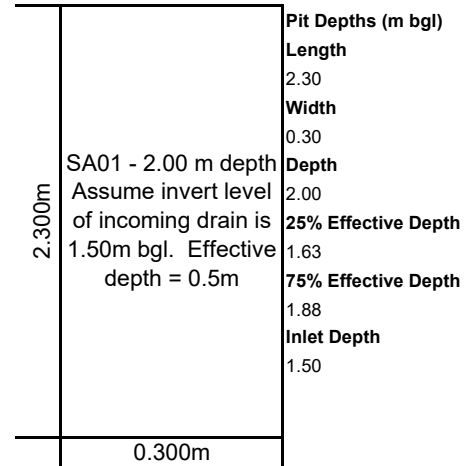
TEST 2

Weather: Cloudly

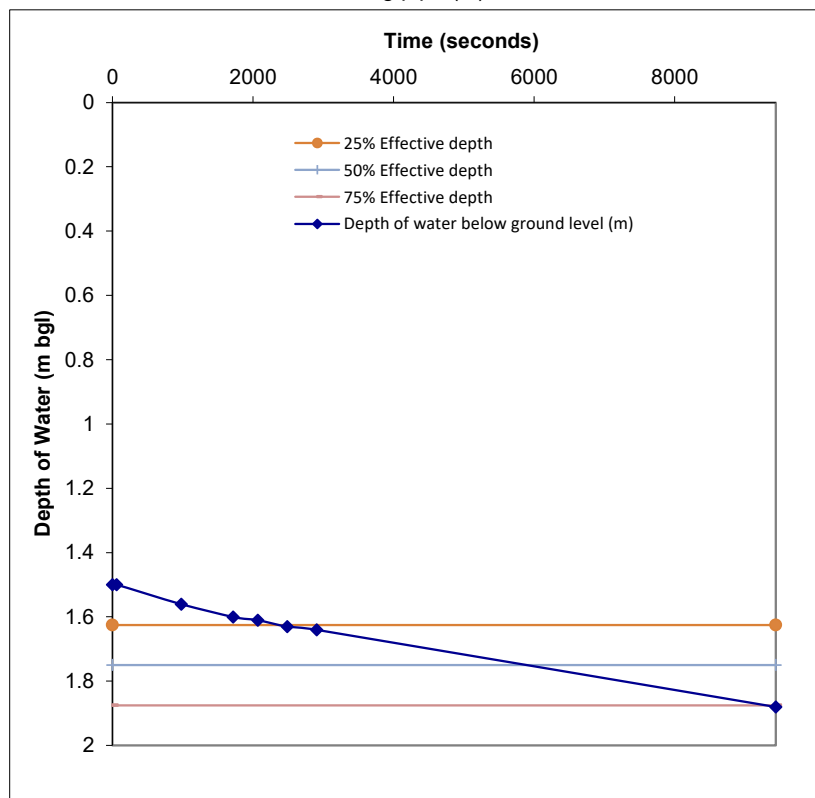
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth

$$2.30 \times 0.30 \times (1.875 - 1.625) = 0.1725$$

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.30 \times 0.30) + 2(0.30 \times 0.30) + (2.30 \times 0.30) = 1.99$

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

$$= 6950 \text{ secs}$$

$$f = 1.25E-05 \text{ m/s}$$

Comment



Client: Mr. Pim de Witte
Project No: P25-339
Project: Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA01 - TEST 3

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.46
	3.90	234.00	1.46
	17.10	1026.00	1.50
	45.30	2718.00	1.56
	61.75	3705.00	1.60
	188.65	11319.01	1.87

Location: SA01

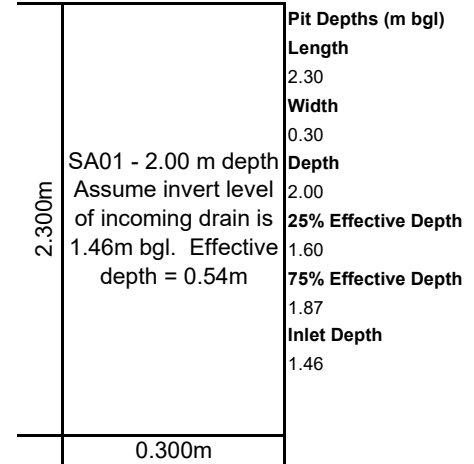
TEST 3

Weather: Cloudly

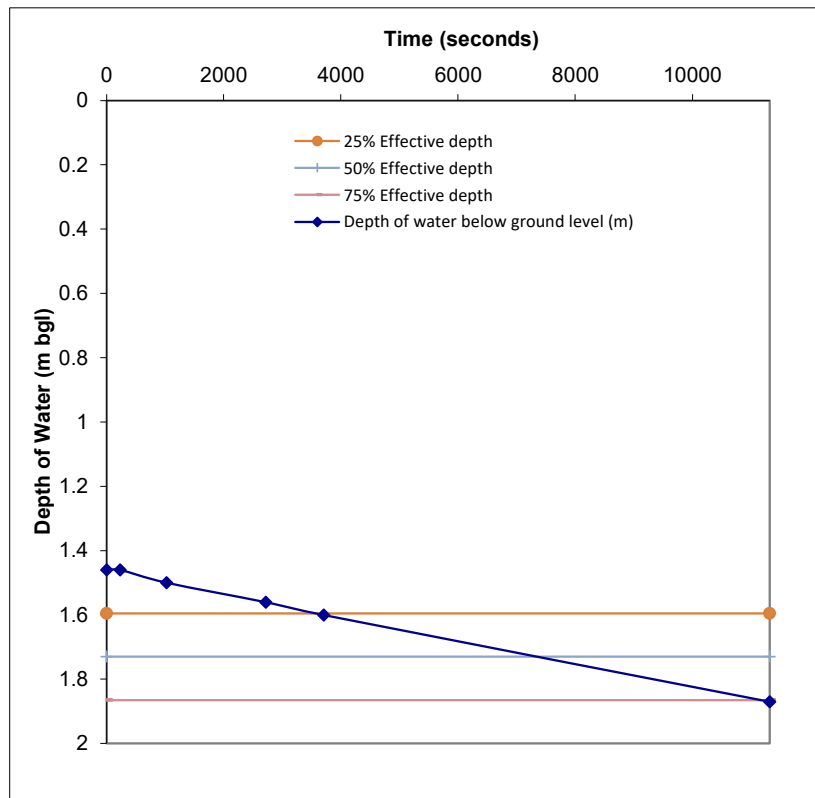
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.46



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (a_{p50} \times t_{p75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth

$$2.30 \times 0.30 \times (1.865 - 1.595) = 0.1863$$

$$a_{p50} = \text{internal area of TP upto 50\% effective depth + base of TP} \\ 2(2.30 \times 0.30) + 2(0.30 \times 0.30) + (2.30 \times 0.30) = 2.094$$

t_{p75-25} = the time for water level to fall from 75% - 25% effective depth

$$= 7614 \text{ secs}$$

$$f = 1.17E-05 \text{ m/s}$$

Comment



Client: Mr. Pim de Witte
Project No: P25-339
Project: Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 1

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.40	84.00	0.57
	3.50	210.00	0.60
	5.50	330.00	0.63
	9.10	546.00	0.67
	11.90	714.00	0.70
	13.80	828.00	0.71
	30.90	1854.00	0.80

Location: SA02

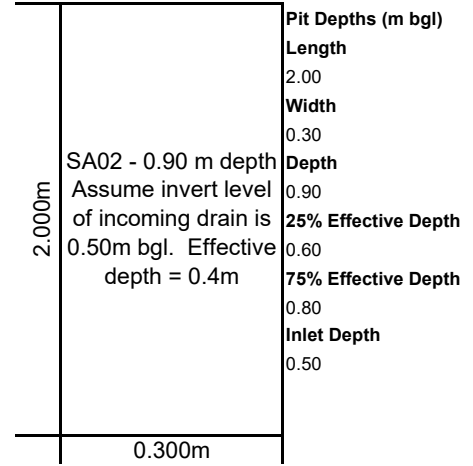
TEST 1

Weather: Cloudly

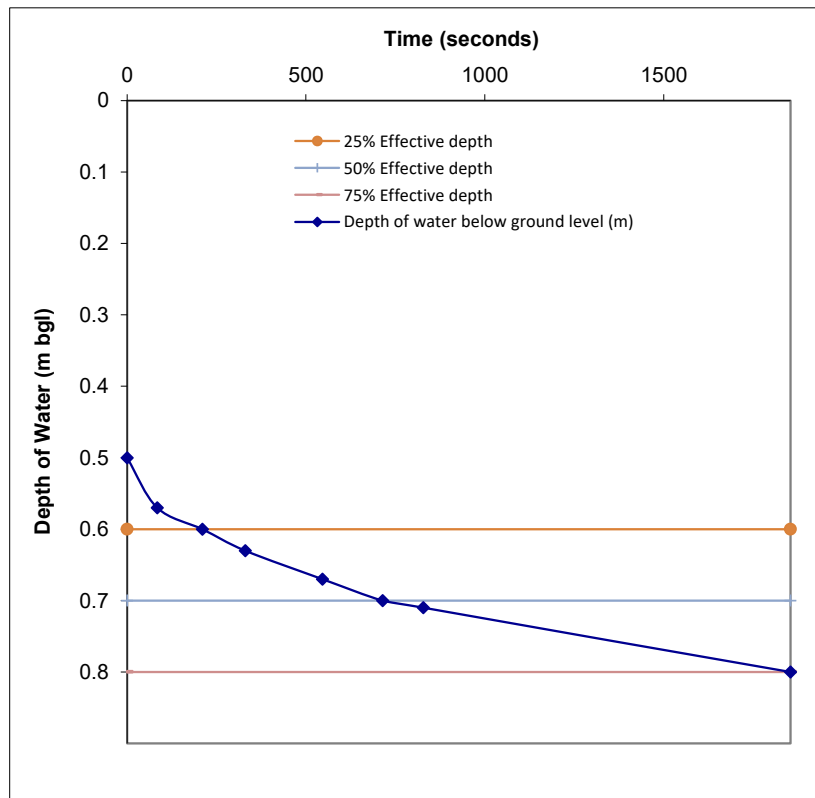
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= 0.12

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= 1.52

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= 1644 secs

f= 4.80E-05 m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 2

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.40	84.00	0.53
	6.20	372.00	0.57
	10.10	606.00	0.60
	14.40	864.00	0.63
	20.30	1218.00	0.67
	25.20	1512.00	0.69
	31.10	1866.00	0.72
	46.83	2810.00	0.80

Location: SA02

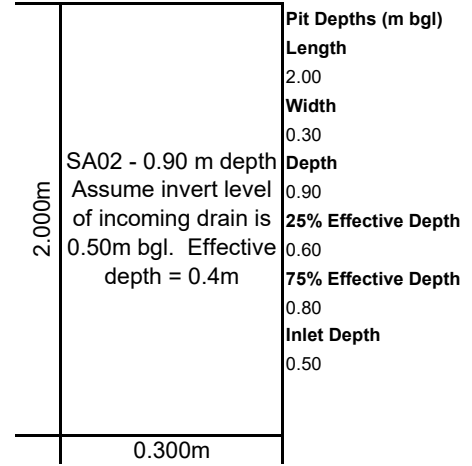
TEST 2

Weather: Cloudly

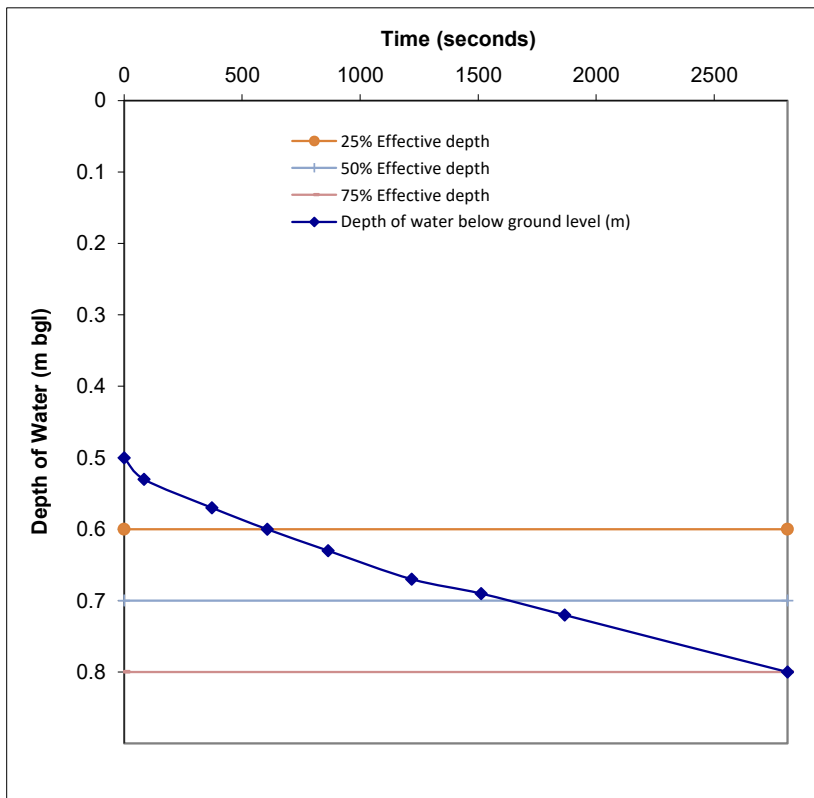
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= **0.12**

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= **1.52**

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= **2204** secs

f= **3.58E-05** m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 3

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.80	108.00	0.53
	3.70	222.00	0.54
	16.70	1002.00	0.60
	29.70	1782.00	0.66
	54.60	3276.00	0.77
	60.80	3648.00	0.79
	66.80	4008.00	0.81

Location: SA02

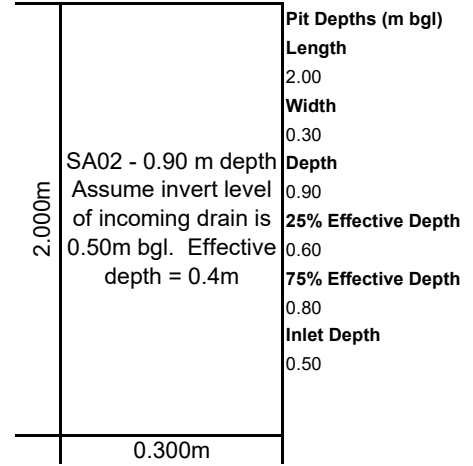
TEST 3

Weather: Cloudly

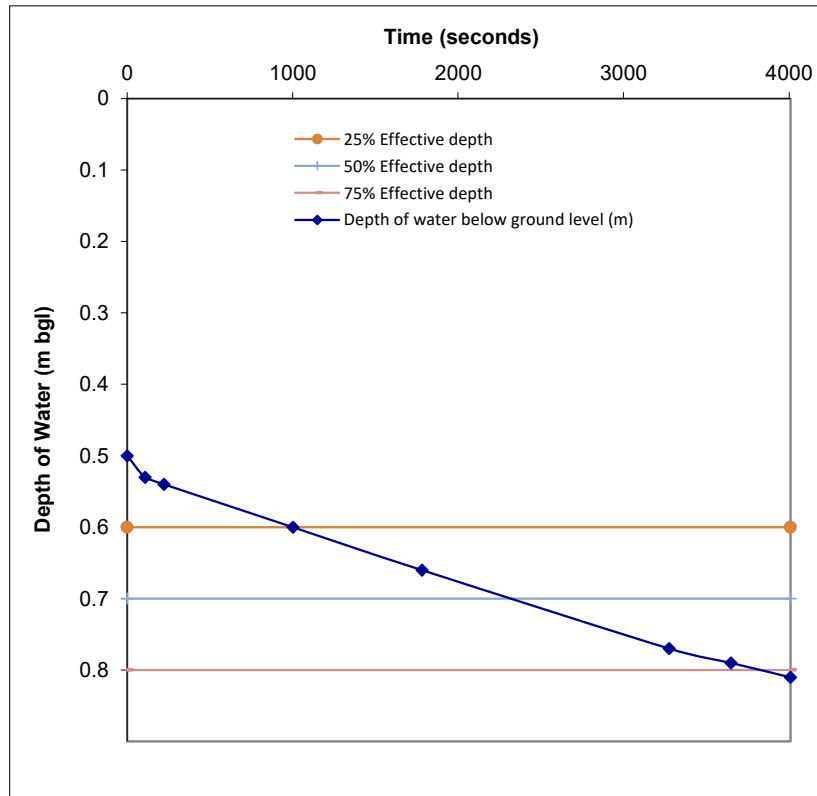
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= 0.12

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= 1.52

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= 2646 secs

f= 2.98E-05 m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

APPENDIX E

Site Photographs

Infiltration Test to BRE365 - SA01 - TEST 1

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.47
	2.50	150.00	1.51
	6.30	378.00	1.55
	18.40	1104.00	1.65
	23.20	1392.00	1.67
	32.40	1944.00	1.71
	43.80	2628.00	1.74
	60.20	3612.00	1.78
	120.00	7200.00	1.87

Location: SA01

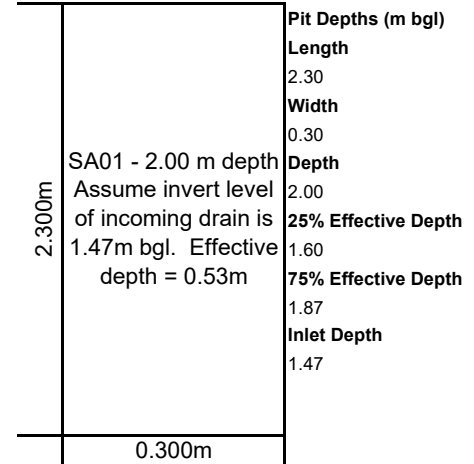
TEST 1

Weather: Cloudly

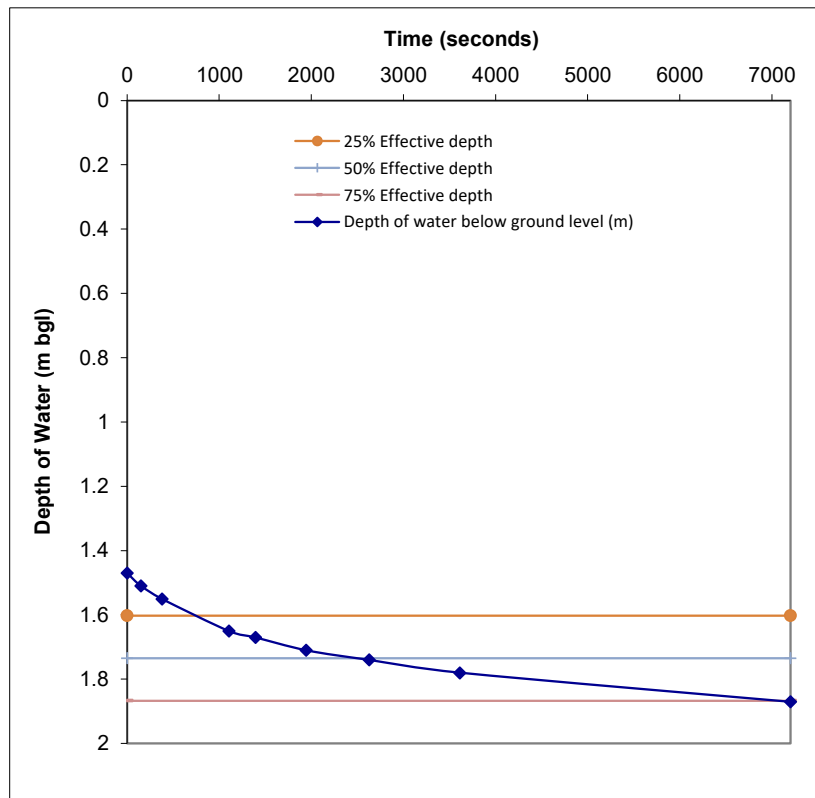
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.47



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth

$$2.30 \times 0.30 \times (1.8675 - 1.6025) = 0.18285$$

$$ap_{50} = \text{internal area of TP upto 50\% effective depth + base of TP}$$

$$2(2.30 \times) + 2(0.30 \times) + (2.30 \times 0.30) = 2.068$$

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

$$= 5256 \text{ secs}$$

$$f = 1.68E-05 \text{ m/s}$$

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA01 - TEST 2

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.50
	1.00	60.00	1.50
	16.30	978.00	1.56
	28.60	1716.00	1.60
	34.50	2070.00	1.61
	41.45	2487.00	1.63
	48.40	2904.00	1.64
	157.28	9437.01	1.88

Location: SA01

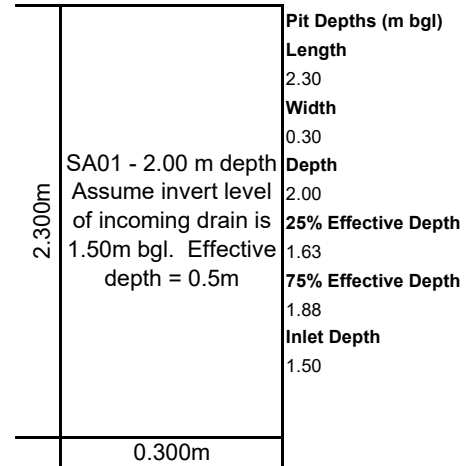
TEST 2

Weather: Cloudly

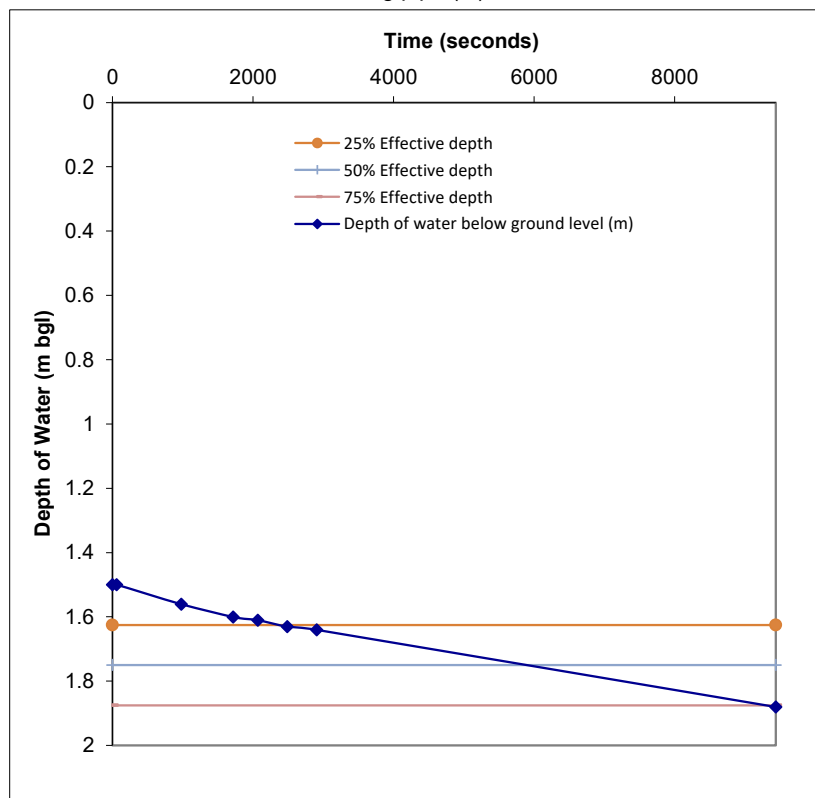
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth

$$2.30 \times 0.30 \times (1.875 - 1.625) = 0.1725$$

$$ap_{50} = \text{internal area of TP upto 50\% effective depth + base of TP} \\ 2(2.30 \times 0.30) + 2(0.30 \times 0.30) + (2.30 \times 0.30) = 1.99$$

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

$$= 6950 \text{ secs}$$

$$f = 1.25E-05 \text{ m/s}$$

Comment



Client: Mr. Pim de Witte
Project No: P25-339
Project: Little Orchard, Lower Kingsdown Road, Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA01 - TEST 3

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	1.46
	3.90	234.00	1.46
	17.10	1026.00	1.50
	45.30	2718.00	1.56
	61.75	3705.00	1.60
	188.65	11319.01	1.87

Location: SA01

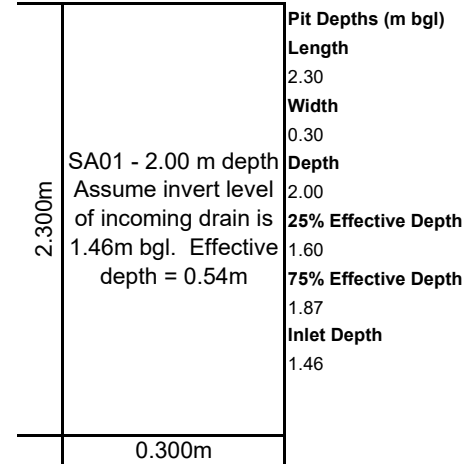
TEST 3

Weather: Cloudly

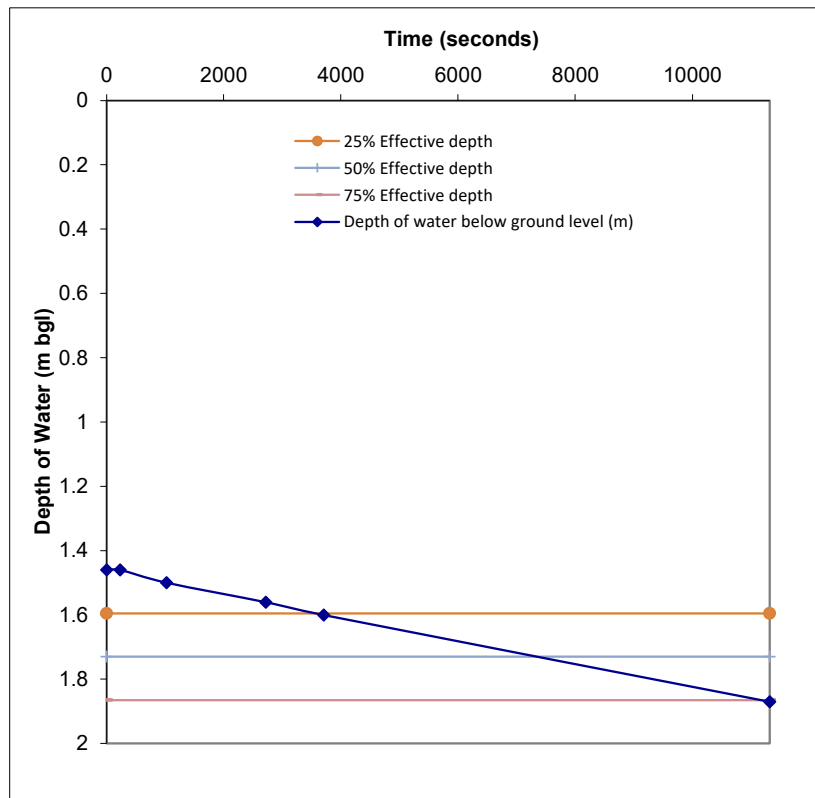
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 1.46



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (a_{p50} \times t_{p75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.30 \times 0.30 \times (1.865 - 1.595)$
 = **0.1863**

a_{p50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.30 \times) + 2(0.30 \times) + (2.30 \times 0.30)$
 = **2.094**

t_{p75-25} = the time for water level to fall from 75% - 25% effective depth
 = **7614** secs

f= **1.17E-05** m/s

Comment



Client: Mr. Pim de Witte
Project No: P25-339
Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 1

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.40	84.00	0.57
	3.50	210.00	0.60
	5.50	330.00	0.63
	9.10	546.00	0.67
	11.90	714.00	0.70
	13.80	828.00	0.71
	30.90	1854.00	0.80

Location: SA02

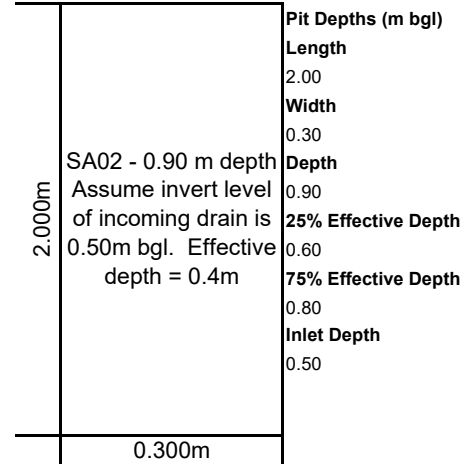
TEST 1

Weather: Cloudly

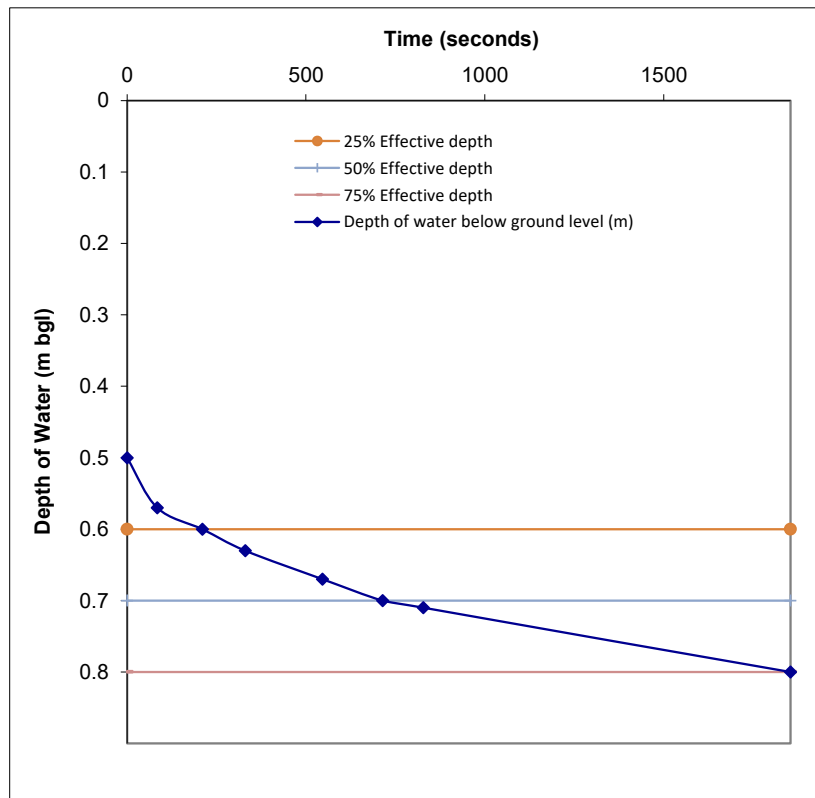
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= 0.12

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= 1.52

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= 1644 secs

f= 4.80E-05 m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 2

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.40	84.00	0.53
	6.20	372.00	0.57
	10.10	606.00	0.60
	14.40	864.00	0.63
	20.30	1218.00	0.67
	25.20	1512.00	0.69
	31.10	1866.00	0.72
	46.83	2810.00	0.80

Location: SA02

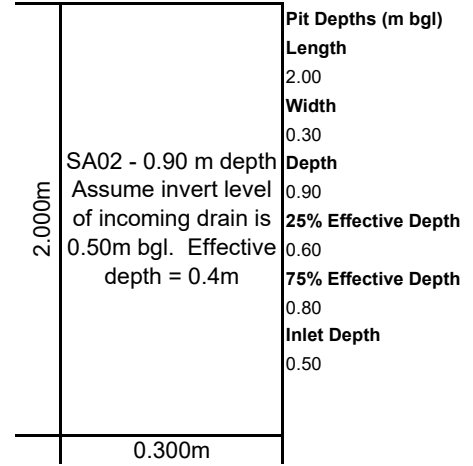
TEST 2

Weather: Cloudly

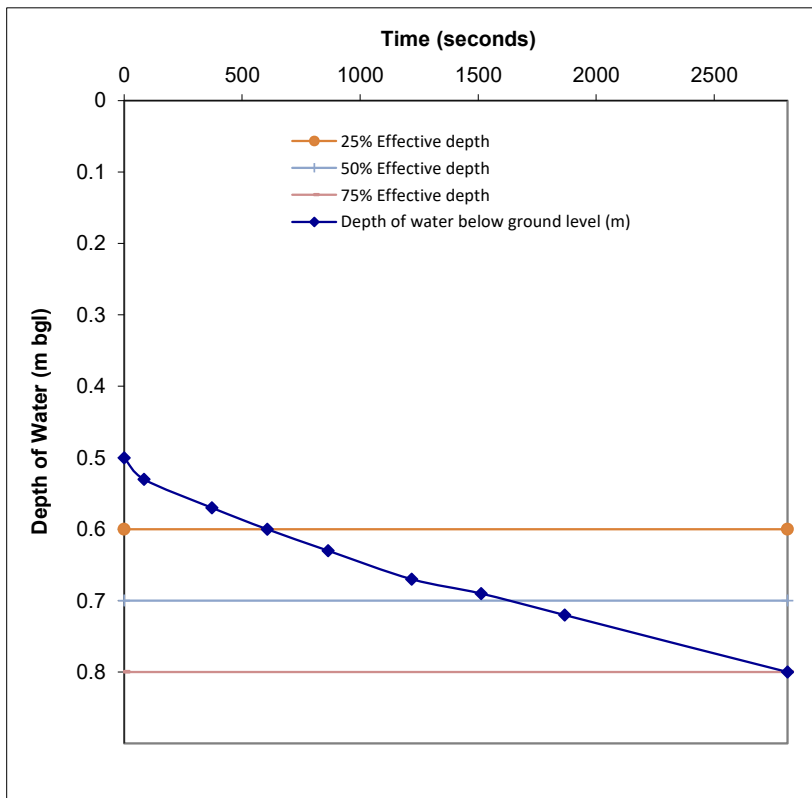
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= **0.12**

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= **1.52**

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= **2204** secs

f= **3.58E-05** m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD

Infiltration Test to BRE365 - SA02 - TEST 3

Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.00	0.00	0.50
	1.80	108.00	0.53
	3.70	222.00	0.54
	16.70	1002.00	0.60
	29.70	1782.00	0.66
	54.60	3276.00	0.77
	60.80	3648.00	0.79
	66.80	4008.00	0.81

Location: SA02

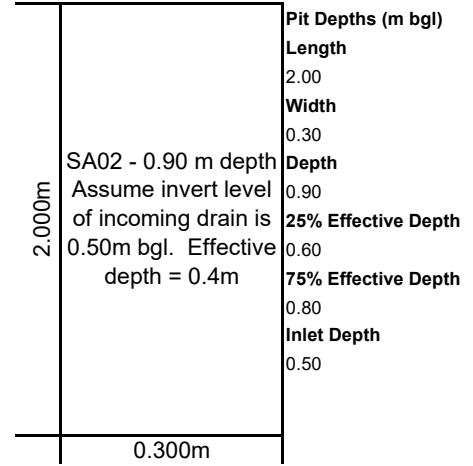
TEST 3

Weather: Cloudly

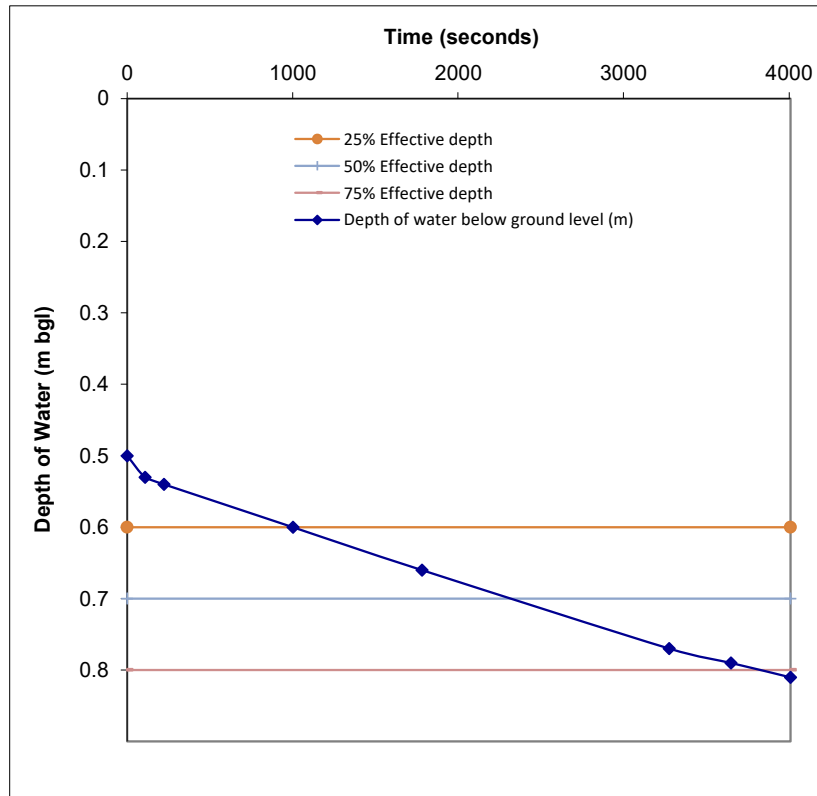
Engineer:

Date: 05/11/2025

Strata Tested LANDSLIP DEPOSIT



Invert Level of incoming pipe (m): 0.50



CALCULATION:

Soil Infiltration Rate(f) =
 $V_{p75-25} / (ap_{50} \times tp_{75-25})$

Where:

V_{p75-25} = effective storage volume between 75% and 25% effective depth
 $2.00 \times 0.30 \times (0.8 - 0.6)$

= 0.12

ap_{50} = internal area of TP upto 50% effective depth + base of TP
 $2(2.00 \times) + 2(0.30 \times) + (2.00 \times 0.30)$

= 1.52

tp_{75-25} = the time for water level to fall from 75% - 25% effective depth

= 2646 secs

f= 2.98E-05 m/s

Comment



Client: Mr. Pim de Witte
 Project No: P25-339
 Project: Little Orchard, Lower Kingsdown Road,
 Kingsdown, Corsham SN13 8BD