



Report prepared at

Ashcroft House
100 Kingston Lane
Shoreham-by-Sea
BN43 6YU

On behalf of

Bugler Developments Limited

Report reference

25-127.03

Report date

November 2025

Prepared by

Aviron Associates Limited

Report Quality Management			
Project Name	Ashcroft House, 100 Kingston Lane, Shoreham-by-Sea, BN43 6YU		
Project Title	Soil Infiltration Testing		
Client	Bugler Developments Limited		
Project Number	25-127.03		
Version	1		Date
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1.0 PROJECT AND SITE INFORMATION

1.1 APPOINTMENT

Aviron Associates Limited (Aviron) was retained by Bugler Developments Limited (St Peters) (the “Client”) to undertake Soil Infiltration and Percolation Testing at the following premises:

Ashcroft House, 100 Kingston Lane, Shoreham-by-Sea, BN43 6YU (hereafter referred to as the “site”).

The purpose of this assessment is to report on a ground investigation to enable surface water drainage design.

1.2 THE SITE

Table 1.2 provides a summary of site details and surrounding area.

Table 1.2: Site Details	
Site Location	The site is located at 100 Kingston Lane, on the eastern outskirts of Shoreham-by-Sea, approximately 1850 metres (m) to the east of Shoreham railway station.
National Grid Ref.	Centred at approximately 523690, 105440.
Recent Land Use	The site comprises the partly cleared sheltered accommodation of Ashcroft House. The site includes eight vacant single-storey residential terraced premises in the south-west. Figure 1 is presented as the Pre-Clearance Site Layout Plan.
Surrounding Land Use	The site is located within a residential urban area and is surrounded by residential premises in all directions. Kingston Lane forms the eastern boundary of the site.
Proposed Land Use	The proposed development comprises the demolition of the remaining residential premises and the construction of a two to three storey apartment building, as well as a new access road, parking and amenity space. Figure 2 is presented as the Proposed Development Plan.

1.3 PREVIOUS REPORTS

Aviron have prepared a Preliminary Risk Assessment and Site Investigation report, dated May 2025, version 1 and referenced 25-127.01 provided the following:

-  Completion of two cable and percussion boreholes (BH1 and BH2) to enable evaluation of ground conditions to depth of up to 30.5m below ground level (bgl)
-  Completion of nine window sample boreholes (WS1 to WS9) to enable evaluation of ground conditions to depth of up to 5m bgl.

- Completion of five machine excavated trial pits (TP1 and TP2 and SP1 to SP3) to enable evaluation of ground conditions and for the purpose of soil infiltration testing (SP1 to SP3)

Ground conditions encountered during the investigation of 24, 28 and 29 April 2025 are summarised in table 1.3.1.

Table 1.3.1: April 2025 Summary of Ground Conditions			
Unit	Description	From (m bgl)	To (m bgl)
Reworked Topsoil	Reworked Topsoil locally to depths of between 0.5m and 0.9m bgl.	GL	0.5 – 0.9
Made Ground	MADE GROUND typically comprising silty sandy gravelly CLAY. Gravel inclusions of flint, brick and concrete fragments and timber.	GL	0.3 – 1.1
River Terrace Deposits	Soft and firm, locally stiff and very stiff silty sandy gravelly, locally very gravelly CLAY/clayey SILT, with horizons of SAND and GRAVEL.	0.3 – 1.1	5.0+
	Loose to medium dense, medium dense and dense becoming very dense clayey silty locally gravelly SAND, and sandy GRAVEL.	3.1 – 4.6	5.6 – 5.9
Tarrant Chalk Member	Structureless CHALK of weathering Grade Dm/Dc	5.9	12.2
	Structureless CHALK of weathering Grade Dc	5.6	8.7
	CHALK of weathering Grade C	8.7 – 12.2	10.0 – 16.5
	CHALK of weathering Grade B	10.0 – 16.5	15.0 – 20.0
	CHALK of weathering Grade A	15.0 – 20.0	30.5+

Monitoring wells were installed into window sample boreholes WS1, WS5 and WS9. During return groundwater monitoring 8 and 22 May 2025 groundwater was not encountered to 2.95m bgl within WS1, nor to 4.99m bgl in WS5, nor to 5.06m bgl in WS9.

Enclosed as **Figures 3** and **4** are the April 2025 Exploratory Hole Plans, relative to the pre-clearance site layout and the proposed development.

Pertinent to this assessment, soil infiltration tests were completed in April 2025 in general accordance with BRE D365, and the infiltration rates determined are presented within table 1.3.2.

Table 1.3.2: April 2025 Soil Infiltration Rates

Location (Test no.)	Testing depths (bgl)	Strata Tested	Infiltration Rate (m/s)	Comments
SP1 (T1)	0.83m – 2.0m	CLAY/SILT	8.47×10^{-6}	25% fill levels not reached after 140-240 minutes. Extrapolated rate determined. Tests not fully compliant.
SP1 (T2)	0.79m – 2.0m	CLAY/SILT	8.23×10^{-6}	
SP1 (T3)	0.8m – 2.0m	CLAY/SILT	5.84×10^{-6}	
SP2 (T1)	0.81m – 2.0m	CLAY/SILT	1.72×10^{-5}	75% and 25% fill levels reached after 130 minutes. Moderate to poor infiltration rate determined. Test partially compliant.
SP2 (T2)	1.26m – 2.0m	CLAY/SILT	1.26×10^{-5}	25% fill levels not reached after 180 minutes. Extrapolated rates determined. Tests not fully compliant.
SP2 (T3)	1.07m – 2.0m	CLAY/SILT	1.35×10^{-5}	
SP3 (T1)	0.8m – 2.5m	CLAY/SILT	2.36×10^{-4}	75% and 25% fill levels reached after 20-40 minutes. Moderate to good infiltration rates determined. Tests fully compliant.
SP3 (T2)	0.8m – 2.5m	CLAY/SILT	1.04×10^{-4}	
SP3 (T3)	0.84m – 2.5m	CLAY/SILT	1.17×10^{-4}	

Recommendations made in May 2025 re as follows:

-  The Chalk beneath the site is of low density, however, soakaway drainage is unlikely to discharge directly into Chalk. It is recommended that the Local Authority, build warranty providers and additional stake holders are consulted to determine if their preference is to follow the advice of CIRIA C574 (Engineering in Chalk, 2002) or not. C574 advised that where the chalk is of low density, or its density is not known, soakaways should be sited at least 10m away from any foundations, provided areas of dissolution can be avoided.
-  Shallow soakage drainage in the soils overlying the site may be suitable for the new development subject to design requirements, the proposed locations of soakaways, and the requirements of the Local Authority, build warranty providers and, if necessary, CIRIA C574.

Full detail of the April 2025 testing can be reviewed within the aforementioned May 2025 report.

2.0 INVESTIGATION WORK

2.1 METHOD STATEMENT AND GROUND INVESTIGATION APPROACH

A method statement detailing how the ground investigation was to be conducted was produced in accordance with current statutory guidance, best practices and the Client's instructions.

A health and safety plan was completed before site work commenced. Ground investigation staff were briefed on the potential contaminants likely to be encountered, and the appropriate personal protective equipment (PPE) to be adopted for this type of investigation.

The site investigation was conducted in accordance with British Standards; BS5930:2015+A1 'Code of Practice for Ground Investigation', and BS1377-1:2016 'Methods of test for soils for Civil Engineering Purposes'.

The objectives of the investigation were to:

1. Complete **Soil Infiltration Testing** in positions of proposed surface water soakaways in accordance with Building Research Establishment (BRE) **Digest DG 365**, February 2016, Soakaway Design.

2.2 GROUND INVESTIGATION METHODS

Machine excavated trial pits were undertaken in order to enable the completed of the proposed tests.

Table 2.2 presents what it considered to be a suitable method and rationale of investigation which was completed on 13 and 14 November 2025.

Figure 5 is enclosed as the November 2025 Infiltration Test Location Plan, determined by the Client's design team.

Table 2.2: Rationale of Site Investigation Positions	
Location	Rationale
SP11	Posited in the location of a soakaway in the south-west. The test was completed as close to the position of the proposed soakaway given the presence of existing buildings in the south-west of the site.
SP12	Posited in the location of central soakaway.
SP13	Positioned in an area of permeable paving in the north.
SP14	Positioned in an area of permeable paving in the south.

All intrusive locations were pre-cleared prior to the ground investigation works using a cable avoidance tool (CAT) and tracing of manhole covers, which was completed to endeavour service avoidance during this exercise.

2.2.1 Soil Infiltration Test Trial Pits

Four machine trial pits (SP11-SP14) were excavated using a 2.5 tonne 360-degree excavator to depths of:

 SP11 - 2.1m bgl

 SP12 - 2.2m bgl

 SP13 - 0.6m bgl

 SP13 - 0.6m bgl

Consultation with the design team was made to excavate the pits to the necessary depth below existing ground level to tie in with the depths of the proposed soakaways to enable the stratum tested to match the stratum to which soakaways would discharge surface water to.

2.3 GROUND CONDITIONS

Exploratory hole logs and photographs are enclosed as **Appendix I**.

2.3.1 Strata Encountered

Detailed strata descriptions are shown on the aforementioned exploratory hole logs though in general ground conditions were encountered as described in table 2.3.1.

Table 2.3.1: November 2025 Summary of Ground Conditions			
Unit	Description	From (m bgl)	To (m bgl)
Reworked Topsoil	Reworked Topsoil in positions SP11, SP13 and SP14	GL	0.1 - 0.6+
Made Ground	MADE GROUND in position SP12 typically comprising silty sandy gravelly CLAY. Gravel inclusions of flint, brick and concrete fragments and timber.	GL	0.35
River Terrace Deposits	Variable light brown, very sandy, silty, gravelly CLAY becoming light brown, very clayey sandy, slightly gravelly chalky SILT	0.1 - 0.35	2.2

2.3.2 Field Observations

No unusual stains or odours were noted within the encountered horizons during the ground investigation works.

No groundwater was encountered during the investigative works to the maximum excavated depth of 2.7m bgl.

3.0 INFILTRATION TEST RESULTS

The following sections provide the results of the Soil Infiltration and Percolation Testing.

3.1 SOAKAWAY DRAINAGE – SOIL INFILTRATION TESTING

Soil infiltration tests were completed in trial pits SP11, SP12, SP13 and SP14 in accordance with Building Research Establishment (BRE) Digest DG 365, February 2016, Soakaway Design. The trial pits were located in areas of proposed soakaway and permeable paving construction as detailed in table 2.2.

Excavation of the trial pits was completed at a steady rate and the trial pits were rapidly filled with a tankered water supply.

The subsequent fall in water level was observed over the time period specified within the table of results. In order to enable infiltration testing to be completed evening shifts were arranged.

Three water fills were completed within the trial pits in accordance with the progress of infiltration during the time permitted, which is indicated within table 3.1 along with the infiltration rates and comments.

Table 3.1: 2025 Soil Infiltration Rates				
Location (Test no.)	Testing depths (bgl)	Strata Tested	Infiltration Rate (m/s)	Comments
SP11 (T1)	1.2m – 2.1m	Silty sandy gravelly CLAY/SILT	2.2×10^{-5}	25% and 75% fill levels reached. Moderate to poor infiltration rates recorded. Tests fully compliant.
SP11 (T2)	1.22m – 2.1m	Silty sandy gravelly CLAY/SILT	1.37×10^{-5}	
SP11 (T3)	1.27m – 2.1m	Silty sandy gravelly CLAY/SILT	8.8×10^{-6}	
SP12 (T1)	1.2m – 2.2m	Silty sandy gravelly CLAY/SILT	2.2×10^{-5}	25% and 75% fill levels reached. Moderate to poor infiltration rates recorded. Tests fully compliant.
SP12 (T2)	1.31m – 2.2m	Silty sandy gravelly CLAY/SILT	1.77×10^{-5}	
SP13 (T3)	1.27m – 2.2m	Silty sandy gravelly CLAY/SILT	9.51×10^{-6}	
SP13 (T1)	0.20m – 0.6m	Made Ground of Silty sandy gravelly CLAY	2.16×10^{-5}	25% and 75% fill levels reached. Moderate infiltration rates recorded. Tests fully compliant.
SP13 (T2)	0.17m – 0.6m	Made Ground of Silty sandy gravelly CLAY	2.16×10^{-5}	
SP13 (T3)	0.19m – 0.6m	Made Ground of Silty sandy gravelly CLAY	1.13×10^{-5}	

Table 3.1: 2025 Soil Infiltration Rates

Location (Test no.)	Testing depths (bgl)	Strata Tested	Infiltration Rate (m/s)	Comments
SP14 (T1)	0.15m – 0.6m	Silty sandy gravelly CLAY	3.69×10^{-5}	25% and 75% fill levels reached. Moderate infiltration rates recorded. Tests fully compliant.
SP14 (T2)	0.17m – 0.6m	Silty sandy gravelly CLAY	1.27×10^{-5}	
SP14 (T3)	0.19m – 0.6m	Silty sandy gravelly CLAY	1.10×10^{-5}	

Shallow soakaway drainage may be effective for the new development subject to seasonal groundwater monitoring and design requirements.

Soil infiltration test results are included within **Appendix II**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This Ground Investigation has provided an assessment of the site's suitability for the proposed soakaways and permeable paving.

Table 4.1 summarises the geotechnical assessment and pertinent risks.

Table 4.1: Investigation Summary	
Element	Comments
Soakaway Drainage (surface)	Soil infiltration rates determined of between: 3.69×10^{-5} m/s and 8.8×10^{-6} m/s.

This report and the Clients preferred drainage solution should be presented to the Local Authority or appropriate build warranty provider for approval prior to construction.

5.0 PROJECT INSTRUCTION AND LIMITATIONS

5.1 SCOPE OF WORKS

The following scope of work was undertaken to an agreed brief set out in Aviron's proposal and involves the following:

-  Four trial pits to enable soil infiltration testing.
-  Prepare an interpretative report to interpret ground conditions to provide recommendations for drainage design.

Aviron has relied upon information received from the Client and their agents as accurate, unless contradicted by written documentation or site observations.

5.2 LIMITATIONS

Aviron's scope of work has been designed to meet the timeframe and budgets. As such it may follow that further work would be prudent upon evaluation of the ground conditions. The scope of work provided shall provide a view of site conditions and understanding of potential geo-environmental risks and possible mitigation procedures.

The information used in this report has been derived from the ground investigation, which in turn were based on known current and historical land uses identified at the site and surrounding area, available to Aviron at the time of the investigation.

Intrusive points chosen relate to the data collected and the risk assessment will rely on these points only. It therefore follows that some areas of the site will not be examined. It is always possible that some areas not investigated may contain conditions which would be impossible to determine due to lack of evidence or time and budget restrictions.

Should changes in legislation, statutory requirements or industry practices occurred following issue of this report, this report should be viewed in light of these changes.

Should a notable time period elapse between the date issue of this report and the date of application of this report changes to site dynamics may occur and in particular the site inspection notes may no longer be applicable should any change of use occur to the site in the interim.

This report comprises a Ground Investigation Report in accordance with BS EN 1997-2, unless otherwise stated. This report does not constitute a Geotechnical Design Report (BS EN 1997-2) and geotechnical recommendations in this report are for guidance only.

Unless otherwise stated, a preliminary or detailed risk assessment of unexploded ordnance (UXO) is outside the scope of this report.

Also, unless otherwise stated, an assessment of invasive species such as Japanese Knotweed and Himalayan Balsam is outside the scope of this report.

6.0 REFERENCES AND OTHER SOURCES OF INFORMATION

BRE DG 365 Soakaway Design. 2016

British Geological Survey Website. www.bgs.ac.uk

BS1377-1:2016. Methods of test for soils for Civil Engineering Purposes

BS5930:2015+A1:2020. British Standards Institute. Code of Practice for Ground Investigations

BS EN ISO 14688-1:2002 Geotechnical investigation and testing – Identification and Classification of Soil – Identification and Description

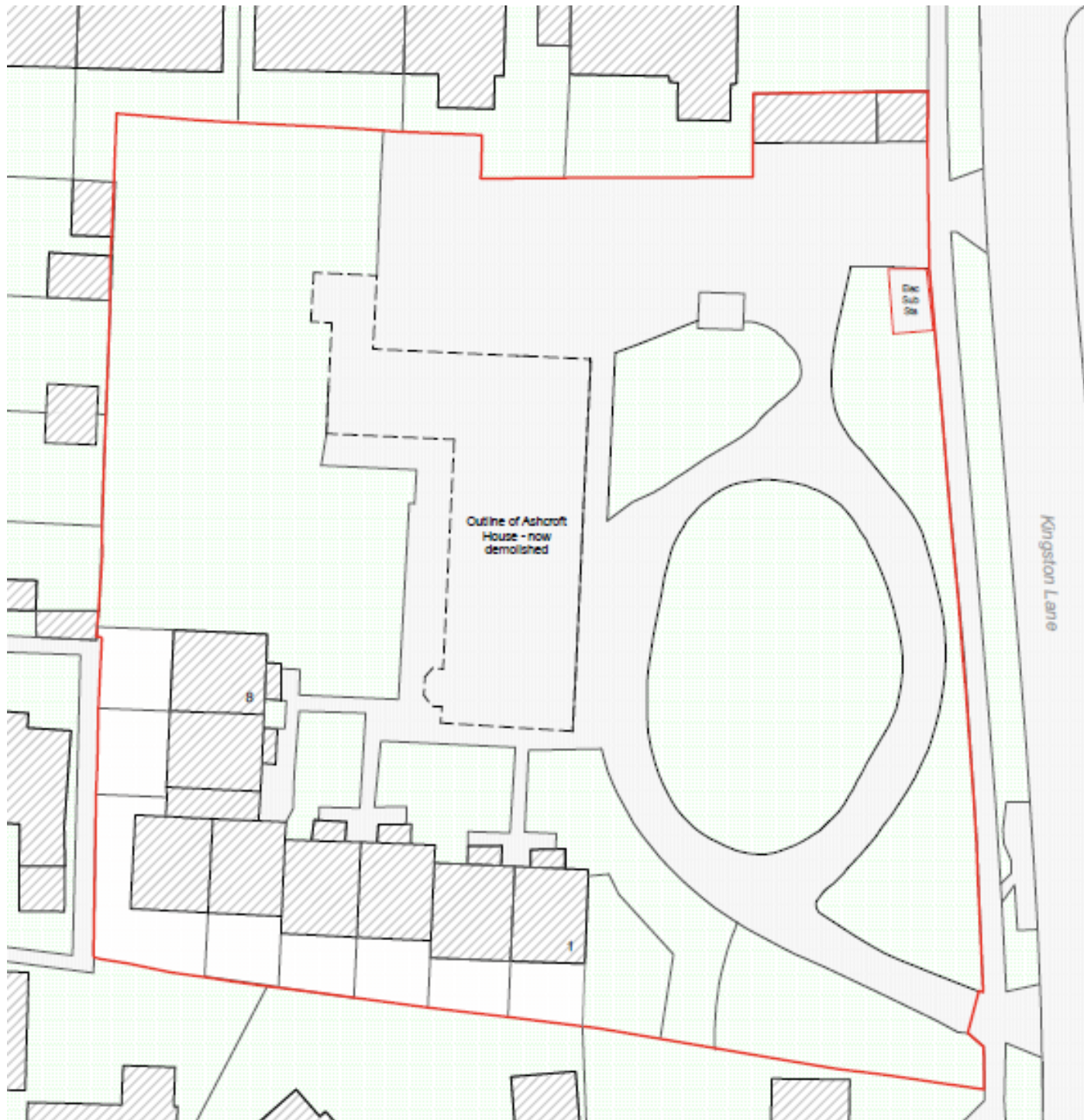
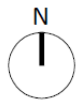
BS EN ISO 14688-2:2004 Geotechnical investigation and testing – Identification and Classification of Soil – Principles for a Classification

BS EN 1997-1:2004+A1:2013 Eurocode 7 Geotechnical Design Part 1 General Rules

BS EN 1997-2:2007 Eurocode 7 Geotechnical Design Part 2 Ground Investigation and Testing

Figures

- 1 Pre-Clearance Site Layout Plan
- 2 Proposed Development Plan
- 3 April 2025 Exploratory Hole Location Plan – Pre-Clearance Layout
- 4 April 2025 Exploratory Hole Location Plan – Proposed Development
- 5 November 2025 Test Location Plan – Proposed Development



Legend

— Approx. Site Boundary

Notes

Figure 1

Drawing Title

Pre-Clearance Site Layout Plan

Project Number 25-127.03

Project Title

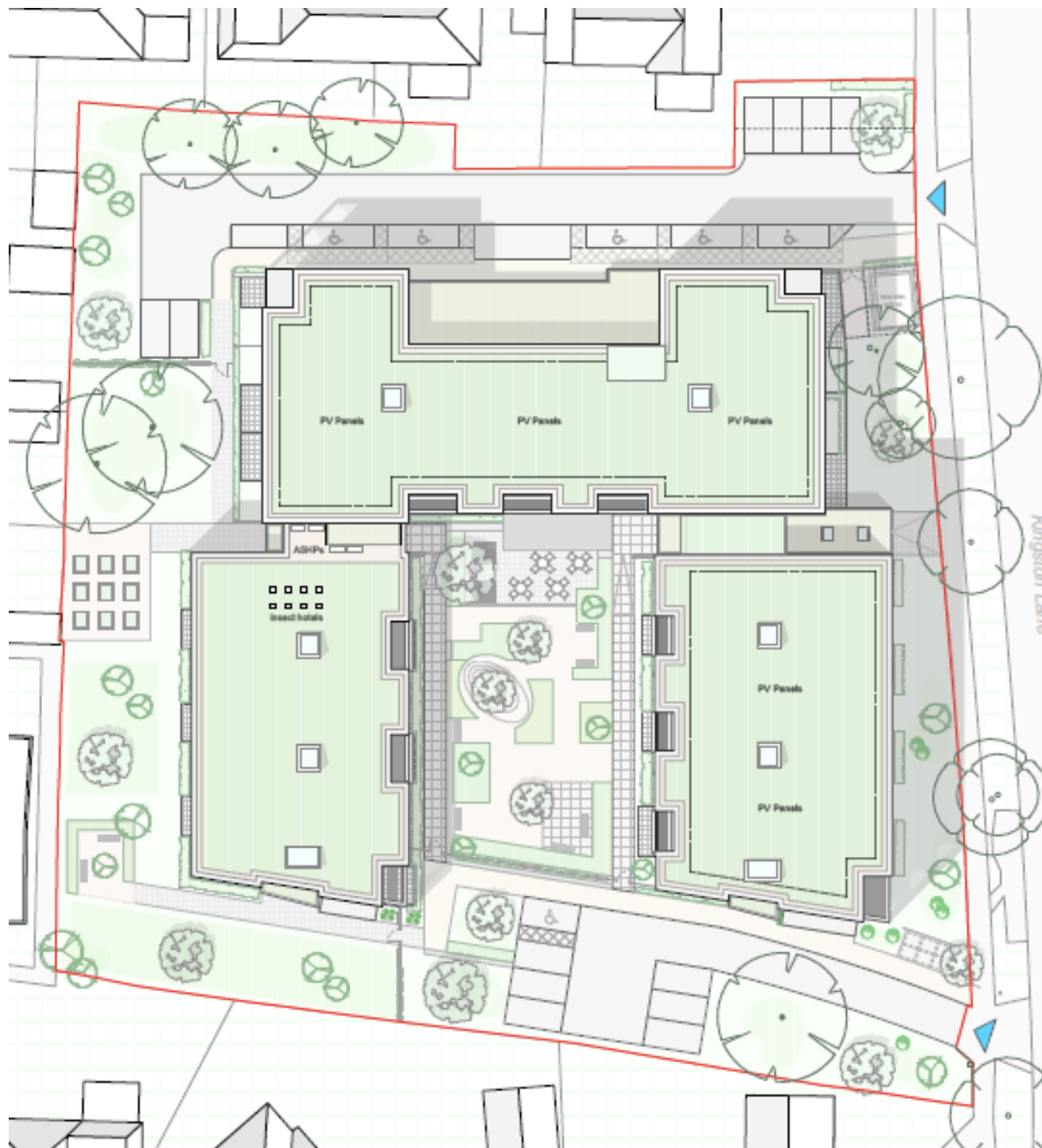
Ashcroft House, 100 Kingston Lane,
Shoreham, BN43 6YU

Drawn by DN

Checked by JB

Scale NTS





Legend

— Site Boundary

Notes

Figure 3

Drawing Title

Proposed Development Plan

Project Number 25-127.03

Project Title

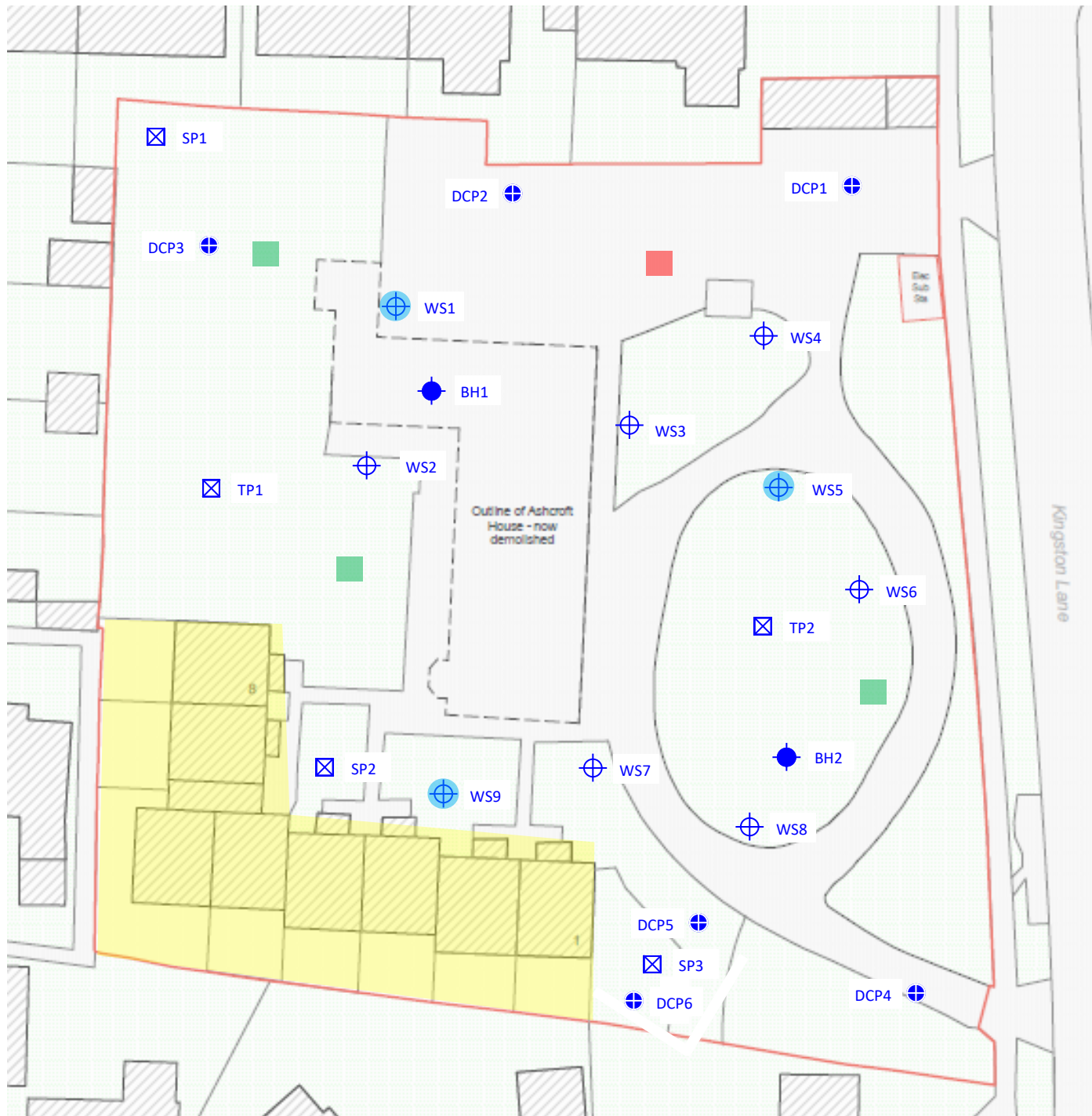
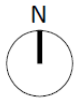
Ashcroft House, 100 Kingston Lane,
Shoreham, BN43 6YU

Drawn by DN

Checked by JB

Scale NTS





Legend

-  Cable Percussion Borehole
-  Window Sample Location
-  Monitoring Well
-  Mechanical Trial Pit
-  CBR by DCP
-  No access,

Notes

Figure 3

Drawing Title

April 2025 Exploratory Hole Location Plan
Pre-Clearance Layout

Project Number 25-127.03

Project Title

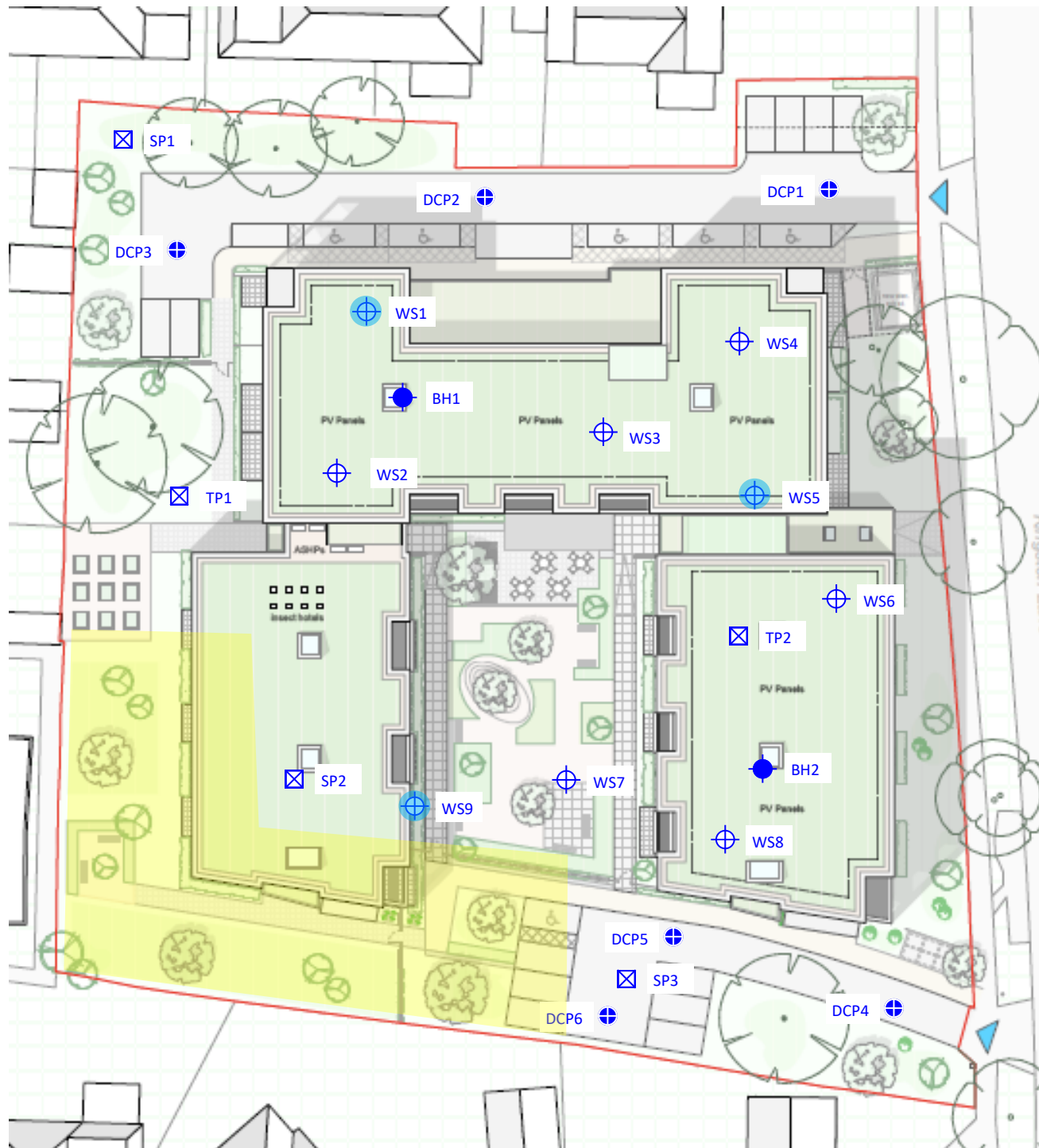
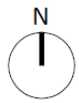
Ashcroft House, 100 Kingston Lane,
Shoreham, BN43 6YU

Drawn by DN

Checked by JB

Scale NTS





Legend

-  Cable Percussion Borehole
-  Window Sample Location
-  Monitoring Well
-  Mechanical Trial Pit
-  CBR by DCP
-  No access

Notes

Figure 4

Drawing Title

April 2025 Exploratory Hole Location Plan
Proposed Development

Project Number 25-127.03

Project Title

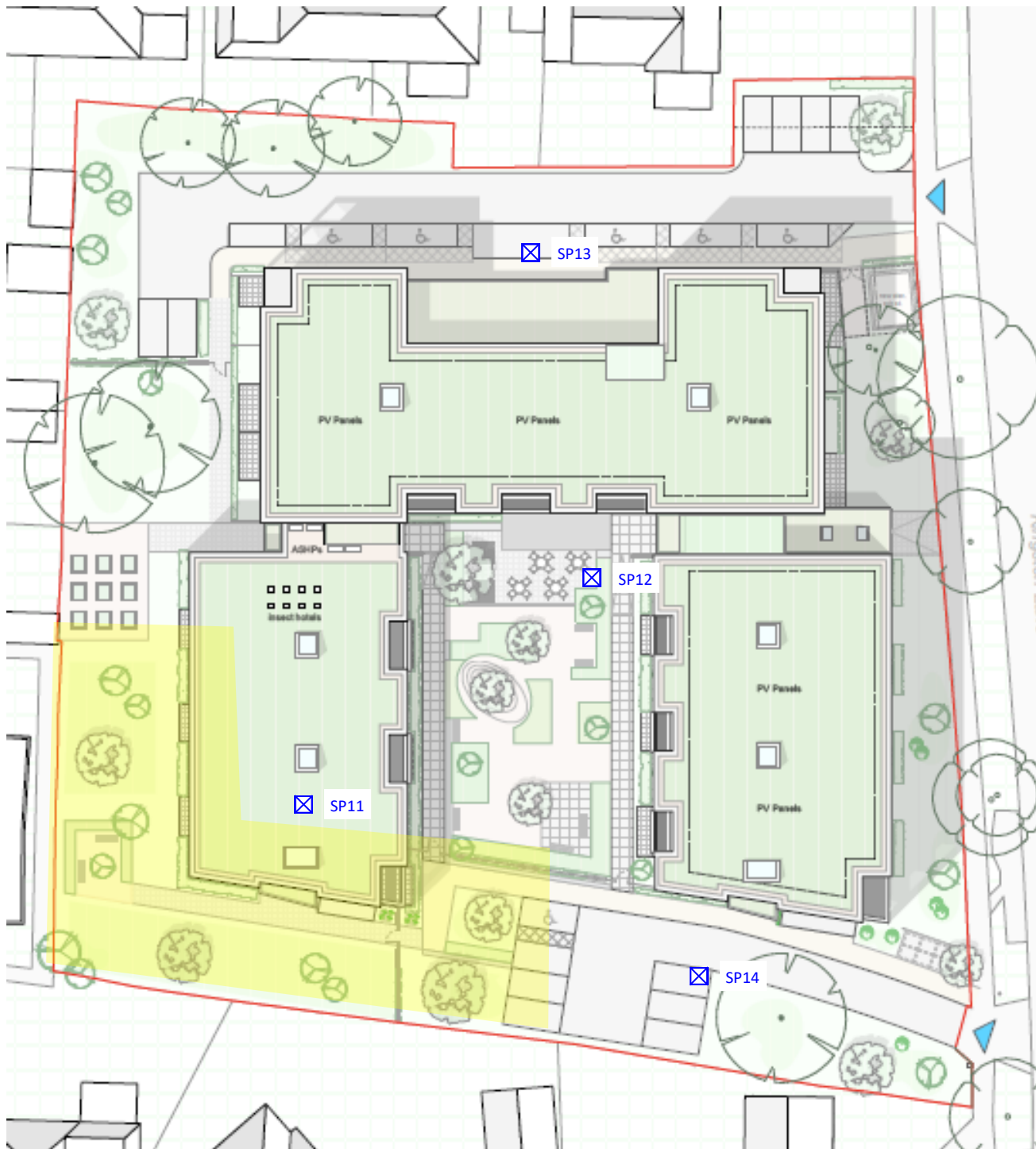
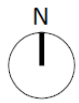
Ashcroft House, 100 Kingston Lane,
Shoreham, BN43 6YU

Drawn by DN

Checked by JB

Scale NTS





Legend

-  Site Boundary
-  Mechanical Trial Pit
-  No access

Notes

Figure 5

Drawing Title

November 2025 Infiltration Test Location Plan

Project Number 25-127.03

Project Title

Ashcroft House, 100 Kingston Lane,
Shoreham, BN43 6YU

Drawn by DN

Checked by JB

Scale NTS



Appendices

- I Exploratory Hole Logs and Photographs
- II Soil Infiltration Results

Appendix

I Exploratory Hole Logs and Photographs



Project:			Project No.		Trial Pit:	
Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU			25-127.03		SP11	
Client:			Start:		End:	
Bugler Developments Limited			13/11/2025		14/11/2025	
Method/Plant Used:			Co-ordinates:		Ground Level:	
2.5T Bobcat			NT		NT	

[illegible]

Dimensions (m)			Water level observations (depths in metres below gl)					
Length	Width	Depth	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
1.30	0.60	2.065	13/11/2025	Dry	-	-	-	

Remarks		By	
Roots to 0.3m. No groundwater encountered. Trial pit backfilled with arisings. Soil infiltration test carried out	Logged	JC	
	Checked	DN	Scale 01:25



TRIAL PIT LOG

Project: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU				Project No. 25-127.03		Trial Pit: SP12									
Client: Bugler Developments Limited				Start: 13/11/2025		End: 14/11/2025		Sheet: 1 of 1							
Method/Plant Used: 2.5T Bobcat		Co-ordinates: NT				Ground Level: NT									
Description of Strata	Legend	Depth (m bgl) (thickness)	Well Cnstr.	Samples/Tests									Laboratory Test Details		
				Depth	No	Type									
Dark brown, humic, very clayey, silty, gravelly SAND. Gravel is fine to medium, subangular to rounded of flint. Frequent, subangular, fine to medium, gravel-sized fragments of brick. Occasional whole bricks, large pieces of concrete, wood and plastic sheeting (MADE GROUND)		(0.9)													
Firm and stiff, brown, silty, sandy, slightly gravelly CLAY. (Gravel is fine to coarse, subrounded to subangular of flint. (RIVER TERRACE DEPOSITS)		0.9 (0.8)													
Firm, light brown, very clayey, sandy, slightly gravelly, slightly chalky SILT. Gravel is fine to medium, subrounded of flint. (RIVER TERRACE DEPOSITS)		1.7 (0.46) 2.2													

Dimensions (m)			Water level observations (depths in metres below gl)					
Length	Width	Depth	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
1.50	0.60	2.165	13/11/2025	Dry	-	-	-	
Remarks No roots present in trial pit. No groundwater encountered. Trial pit backfilled with arisings. Soil infiltration test carried out						By		Scale 01:25
						Logged	JC	
						Checked	DN	



TRIAL PIT LOG

Project: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU				Project No. 25-127.03	Trial Pit: SP13
Client: Bugler Developments Limited			Start: 13/11/2025	End: 14/11/2025	Sheet: 1 of 1
Method/Plant Used: 2.5T Bobcat		Co-ordinates: NT		Ground Level: NT	

Description of Strata	Legend	Depth (m bgl) (thickness)	Well Constr.	Samples/Tests									Laboratory Test Details
				Depth	No	Type							
Firm, brown, very silty, sandy, slightly gravelly CLAY. Gravel is fine to medium, subrounded to rounded of flint. (Reworked TOPSOIL)		(0.6) 0.6											

Dimensions (m)			Water level observations (depths in metres below gl)					
Length	Width	Depth	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
1.10	0.60	0.60	13/11/2025	Dry	-	-	-	

Remarks	By		Scale 01:25
No groundwater encountered. Trial pit backfilled with arisings. Soil infiltration test carried out	Logged	JC	
	Checked	DN	



Dimensions (m)			Water level observations (depths in metres below gl)					
Length	Width	Depth	Date	Water strike	Water level (after 20mins)	Flow	Standing level	Remarks
0.80	0.60	0.60	13/11/2025	Dry	-	-	-	
						By		
					Logged	JC		
					Checked	DN	Scale 01:25	



SP11 Hole



SP12 Hole



SP13 Hole and Arisings



SP11 Arisings



SP12 Arisings



SP14 Hole



SP14 Arisings

Appendix

II Soil Infiltration Results

Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP11-1

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.3m(l) x 0.6m(w) x 2.1m(d)
Start Water Level: 1.2m

Actual Storage Volume: **1.64 m³**
Effective Depth: **0.90 m**

Time (mins)	Depth BGL (m)
0	1.200
1	1.310
2	1.380
3	1.450
4	1.490
5	1.530
10	1.600
20	1.630
30	1.680
40	1.720
50	1.750
60	1.790
80	1.820
120	1.890

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

Effective Storage Volume, V : **1.3m x 0.6m x 0.9m**
 V : **0.702 m³**

V_{p75-25} : **0.351 m³**

Effective Internal Surface Area, a_{p50} : **1.17m² + 0.54m² + 0.78m²**

a_{p50} : **2.490 m²**

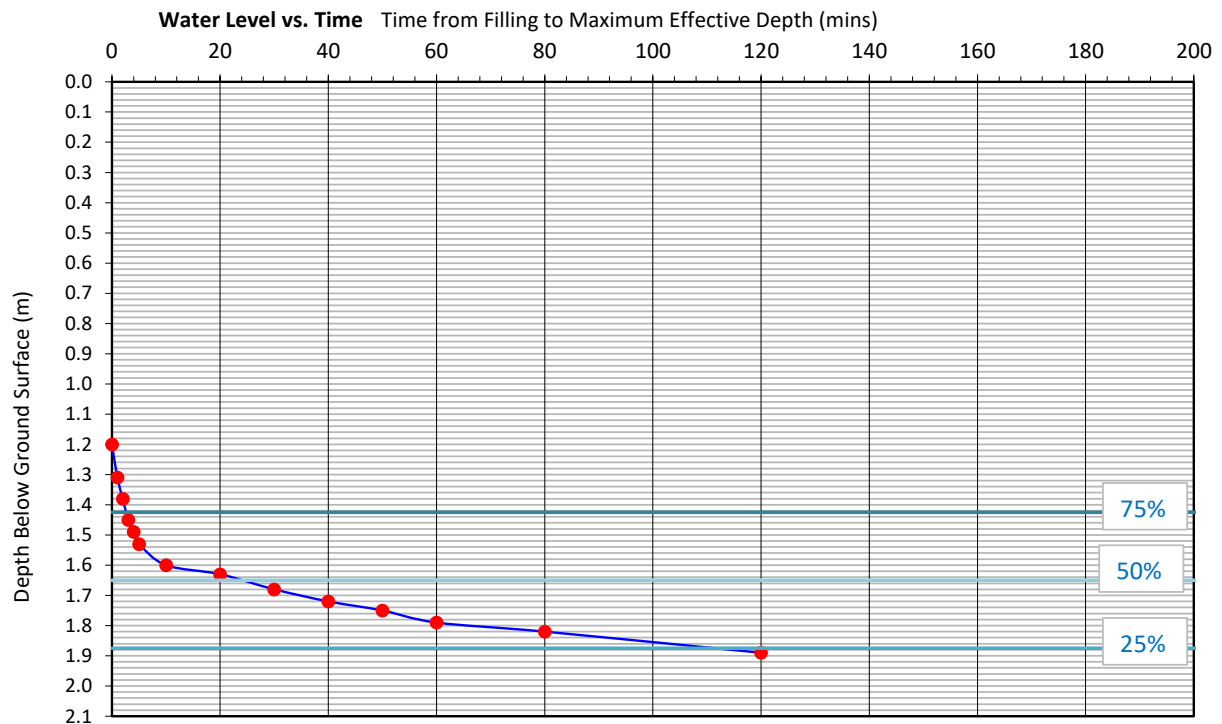
Time of water level fall, t_{p75-25} : **110 - 3 mins**

t_{p75-25} : **107 mins**

t_{p75-25} : **6420 secs**

Soil infiltration rate, f : **0.351/(2.49 x 6420)**

f : **2.20E-05 ms⁻¹**



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP11-2

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.3m(l) x 0.6m(w) x 2.1m(d)
Start Water Level: 1.22m

Actual Storage Volume: 1.64 m³
Effective Depth: 0.88 m

Time (mins)	Depth BGL (m)
0	1.220
1	1.280
2	1.320
3	1.360
4	1.400
5	1.430
10	1.500
20	1.550
40	1.630
62	1.720
88	1.800
111	1.820
168	1.860
231	1.910

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

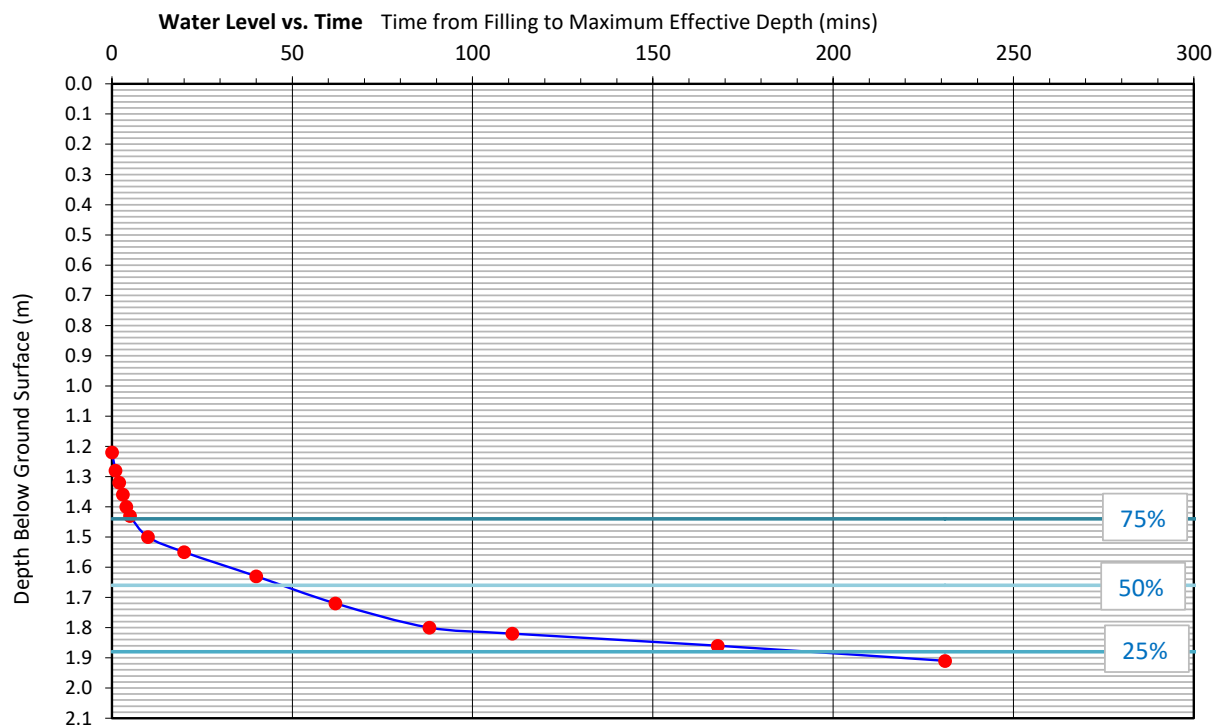
Effective Storage Volume, V : 1.3m x 0.6m x 0.88m
 V : 0.6864 m³

V_{p75-25} : 0.343 m³

Effective Internal Surface Area, a_{p50} : 1.144m² + 0.528m² + 0.78m²
 a_{p50} : 2.452 m²

Time of water level fall, t_{p75-25} : 200 - 30 mins
 t_{p75-25} : 170 mins
 t_{p75-25} : 10200 secs

Soil infiltration rate, f : 0.3432/(2.452 x 10200)
 f : 1.37E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP11-3

Date: 14/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.3m(l) x 0.6m(w) x 2.1m(d)
Start Water Level: 1.27m

Actual Storage Volume: 1.64 m³
Effective Depth: 0.83 m

Time (mins)	Depth BGL (m)
0	1.270
5	1.410
10	1.480
21	1.590
32	1.680
50	1.740
60	1.780
83	1.800
124	1.830
243	1.880
359	1.920

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

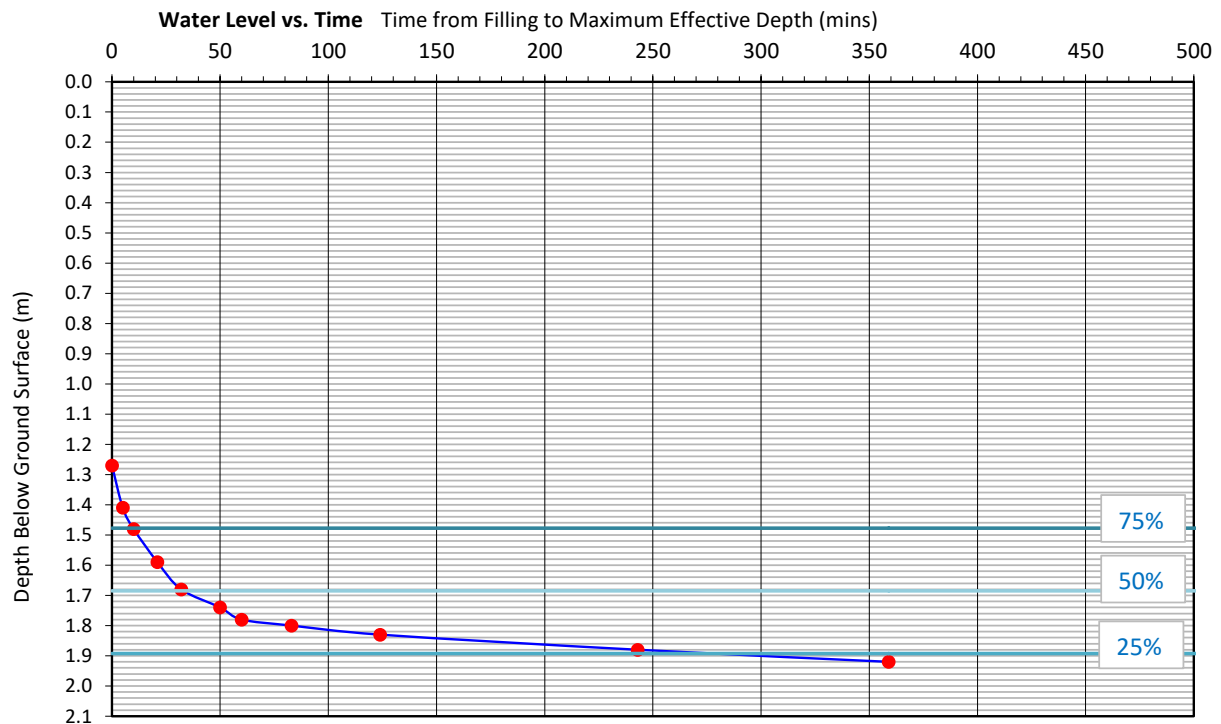
Effective Storage Volume, V : 1.3m x 0.6m x 0.83m
 V : 0.6474 m³

V_{p75-25} : 0.324 m³

Effective Internal Surface Area, a_{p50} : 1.079m² + 0.498m² + 0.78m²
 a_{p50} : 2.357 m²

Time of water level fall, t_{p75-25} : 270 - 10 mins
 t_{p75-25} : 260 mins
 t_{p75-25} : 15600 secs

Soil infiltration rate, f : 0.3237/(2.357 x 15600)
 f : 8.80E-06 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP12-1

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.5m(l) x 0.6m(w) x 2.2m(d)
Start Water Level: 1.31m

Actual Storage Volume: 1.98 m³
Effective Depth: 0.89 m

Time (mins)	Depth BGL (m)
0	1.310
1	1.340
2	1.370
3	1.400
4	1.430
5	1.480
20	1.580
31	1.670
58	1.790
118	1.870
177	1.940
243	1.990

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

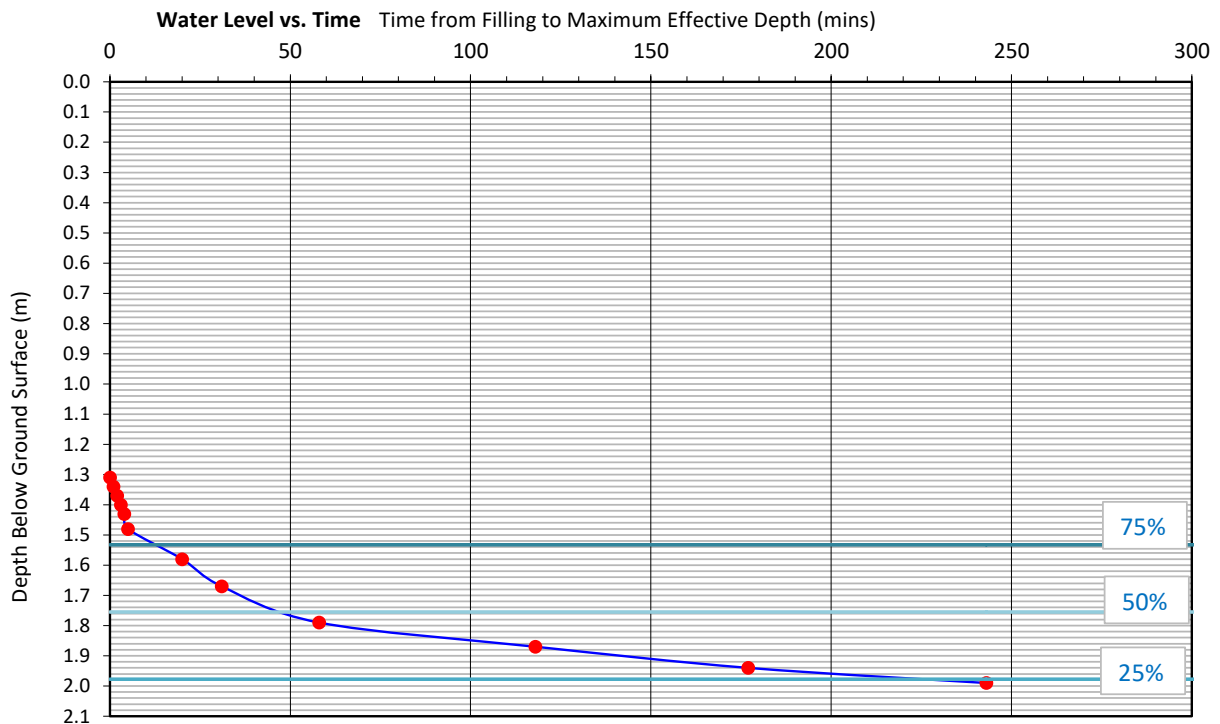
Effective Storage Volume, V : 1.5m x 0.6m x 0.89m
 V : 0.801 m³

V_{p75-25} : 0.401 m³

Effective Internal Surface Area, a_{p50} : 1.335m² + 0.534m² + 0.9m²
 a_{p50} : 2.769 m²

Time of water level fall, t_{p75-25} : 220 - 15 mins
 t_{p75-25} : 205 mins
 t_{p75-25} : 12300 secs

Soil infiltration rate, f : 0.4005/(2.769 x 12300)
 f : 1.18E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP12-1

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.5m(l) x 0.6m(w) x 2.2m(d)
Start Water Level: 1.23m

Actual Storage Volume: 1.98 m³
Effective Depth: 0.97 m

Time (mins)	Depth BGL (m)
0	1.230
1	1.260
2	1.280
3	1.300
4	1.310
5	1.330
17	1.410
29	1.670
58	1.830
78	1.900
136	1.950
203	2.000

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

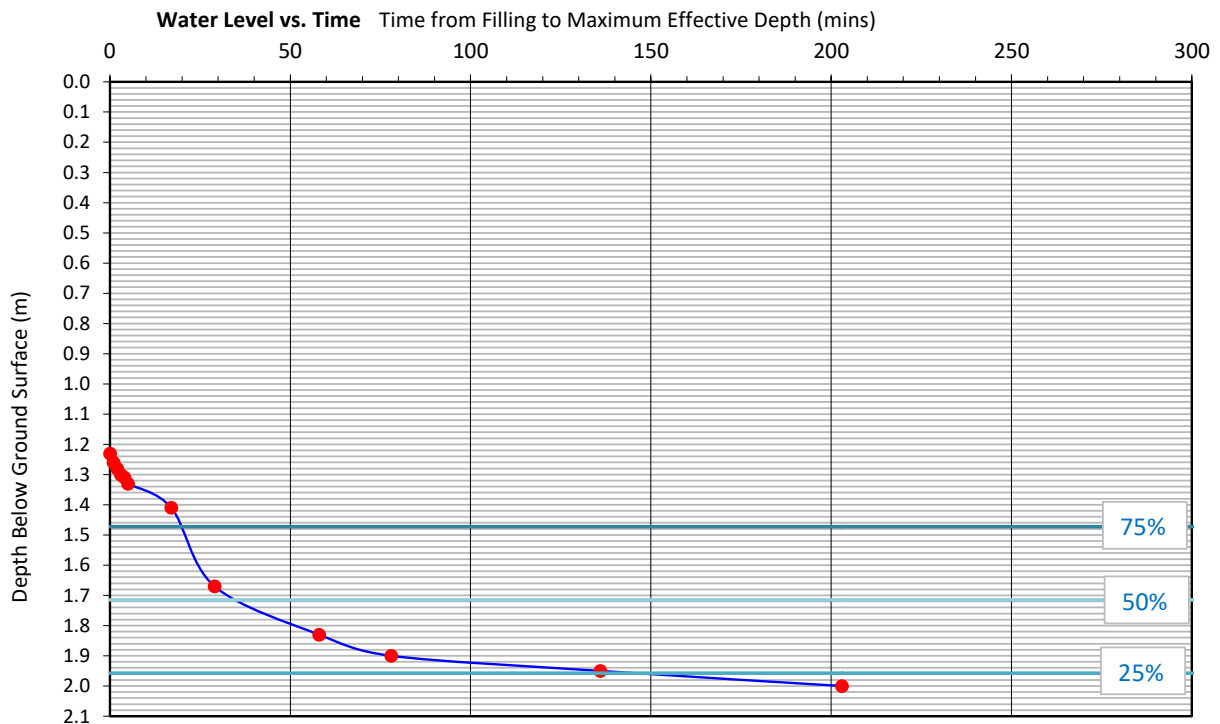
Effective Storage Volume, V : 1.5m x 0.6m x 0.97m
 V : 0.873 m³

V_{p75-25} : 0.437 m³

Effective Internal Surface Area, a_{p50} : 1.455m² + 0.582m² + 0.9m²
 a_{p50} : 2.937 m²

Time of water level fall, t_{p75-25} : 155 - 15 mins
 t_{p75-25} : 140 mins
 t_{p75-25} : 8400 secs

Soil infiltration rate, f : 0.4365/(2.937 x 8400)
 f : 1.77E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP12-1

Date: 14/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.5m(l) x 0.6m(w) x 2.2m(d)
Start Water Level: 1.27m

Actual Storage Volume: 1.98 m³
Effective Depth: 0.93 m

Time (mins)	Depth BGL (m)
0	1.270
1	1.310
2	1.350
3	1.380
4	1.410
5	1.440
14	1.530
29	1.670
63	1.780
84	1.840
123	1.880
154	1.910
201	1.930
245	1.950
302	1.990

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

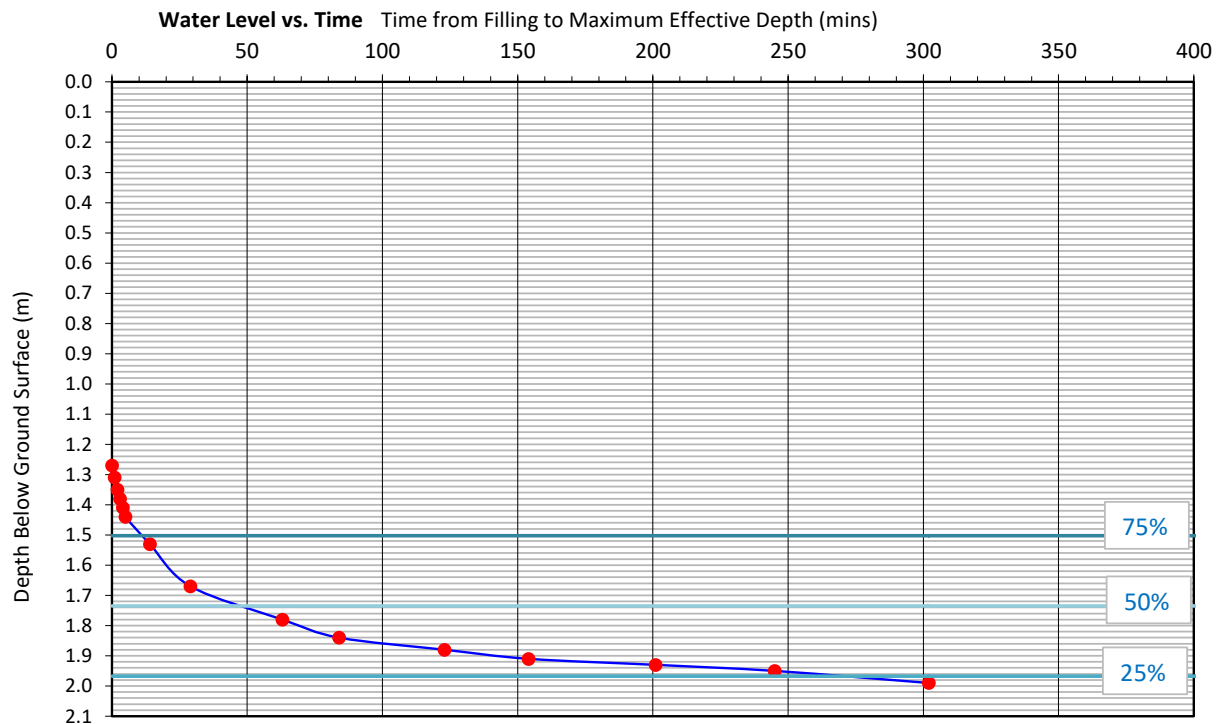
Effective Storage Volume, V : 1.5m x 0.6m x 0.93m
 V : 0.837 m³

V_{p75-25} : 0.419 m³

Effective Internal Surface Area, a_{p50} : 1.395m² + 0.558m² + 0.9m²
 a_{p50} : 2.853 m²

Time of water level fall, t_{p75-25} : 275 - 18 mins
 t_{p75-25} : 257 mins
 t_{p75-25} : 15420 secs

Soil infiltration rate, f : 0.4185/(2.853 x 15420)
 f : 9.51E-06 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP13-1

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.1m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.2m

Actual Storage Volume: 0.40 m³
Effective Depth: 0.40 m

Time (mins)	Depth BGL (m)
0	0.200
1	0.210
2	0.220
3	0.230
4	0.240
5	0.250
10	0.280
15	0.300
21	0.330
32	0.350
45	0.390
56	0.430
77	0.470
86	0.490
91	0.500

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

Effective Storage Volume, V : 1.1m x 0.6m x 0.4m
 V : 0.264 m³

V_{p75-25} : 0.132 m³

Effective Internal Surface Area, a_{p50} : 0.44m² + 0.24m² + 0.66m²

a_{p50} : 1.340 m²

Time of water level fall, t_{p75-25} : 91 - 15 mins

t_{p75-25} : 76 mins

t_{p75-25} : 4560 secs

Soil infiltration rate, f : 0.132/(1.34 x 4560)

f : 2.16E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP13-2

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.1m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.17m

Actual Storage Volume: 0.40 m³
Effective Depth: 0.43 m

Time (mins)	Depth BGL (m)
0	0.170
1	0.170
2	0.180
3	0.190
4	0.200
5	0.200
10	0.230
15	0.250
20	0.270
30	0.320
61	0.400
75	0.430
89	0.470
98	0.490
110	0.510

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

Effective Storage Volume, V : 1.1m x 0.6m x 0.43m
 V : 0.2838 m³

V_{p75-25} : 0.142 m³

Effective Internal Surface Area, a_{p50} : 0.473m² + 0.258m² + 0.66m²
 a_{p50} : 1.391 m²

Time of water level fall, t_{p75-25} : 100 - 21 mins
 t_{p75-25} : 79 mins
 t_{p75-25} : 4740 secs

Soil infiltration rate, f : 0.1419/(1.391 x 4740)
 f : 2.15E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP13-2

Date: 14/11/2025

Readings Recorded By: JC

Pit Dimensions: 1.1m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.21m

Actual Storage Volume: 0.40 m³
Effective Depth: 0.39 m

Time (mins)	Depth BGL (m)
0	0.210
1	0.220
2	0.220
3	0.220
4	0.230
5	0.240
10	0.250
15	0.270
20	0.290
30	0.320
60	0.400
70	0.430
90	0.460
120	0.480
140	0.490
180	0.510

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

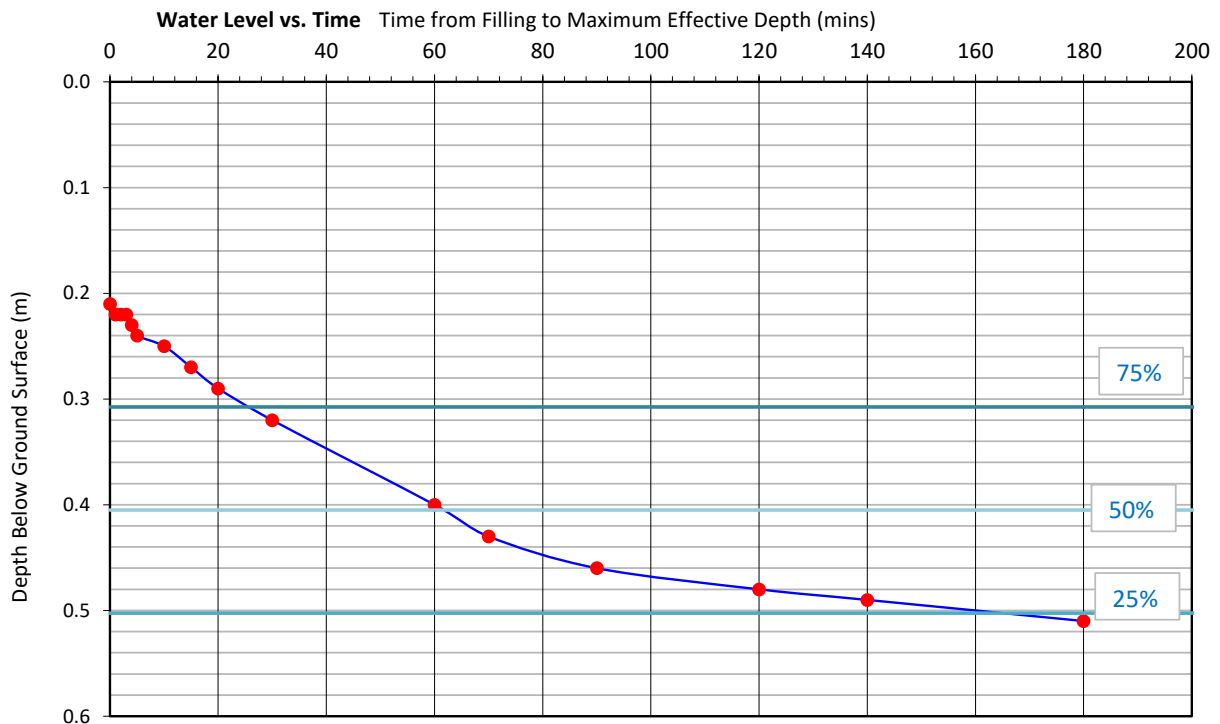
Effective Storage Volume, V : 1.1m x 0.6m x 0.39m
 V : 0.2574 m³

V_{p75-25} : 0.129 m³

Effective Internal Surface Area, a_{p50} : 0.429m² + 0.234m² + 0.66m²
 a_{p50} : 1.323 m²

Time of water level fall, t_{p75-25} : 160 - 16 mins
 t_{p75-25} : 144 mins
 t_{p75-25} : 8640 secs

Soil infiltration rate, f : 0.1287/(1.323 x 8640)
 f : 1.13E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP14-1

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 0.8m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.15m

Actual Storage Volume: 0.29 m³
Effective Depth: 0.45 m

Time (mins)	Depth BGL (m)
0	0.150
1	0.160
2	0.180
3	0.185
4	0.195
5	0.200
9	0.235
12	0.255
20	0.300
30	0.355
49	0.450
71	0.555
83	0.600

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

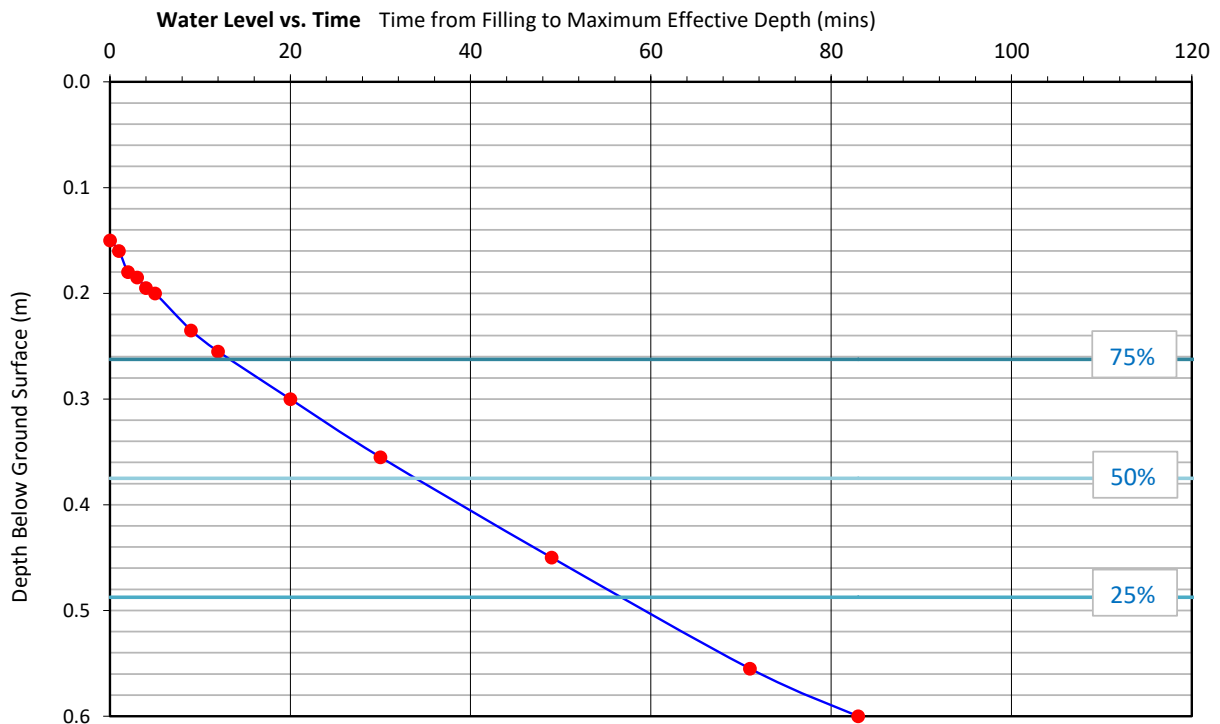
Effective Storage Volume, V : 0.8m x 0.6m x 0.45m
 V : 0.216 m³

V_{p75-25} : 0.108 m³

Effective Internal Surface Area, a_{p50} : 0.36m² + 0.27m² + 0.48m²
 a_{p50} : 1.110 m²

Time of water level fall, t_{p75-25} : 58 - 14 mins
 t_{p75-25} : 44 mins
 t_{p75-25} : 2640 secs

Soil infiltration rate, f : 0.108/(1.11 x 2640)
 f : 3.69E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP14-2

Date: 13/11/2025

Readings Recorded By: JC

Pit Dimensions: 0.8m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.17m

Actual Storage Volume: 0.29 m³
Effective Depth: 0.43 m

Time (mins)	Depth BGL (m)
0	0.170
1	0.170
2	0.180
3	0.190
13	0.195
17	0.200
23	0.220
28	0.235
38	0.260
56	0.310
78	0.350
99	0.385
140	0.440
185	0.510
249	0.570

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

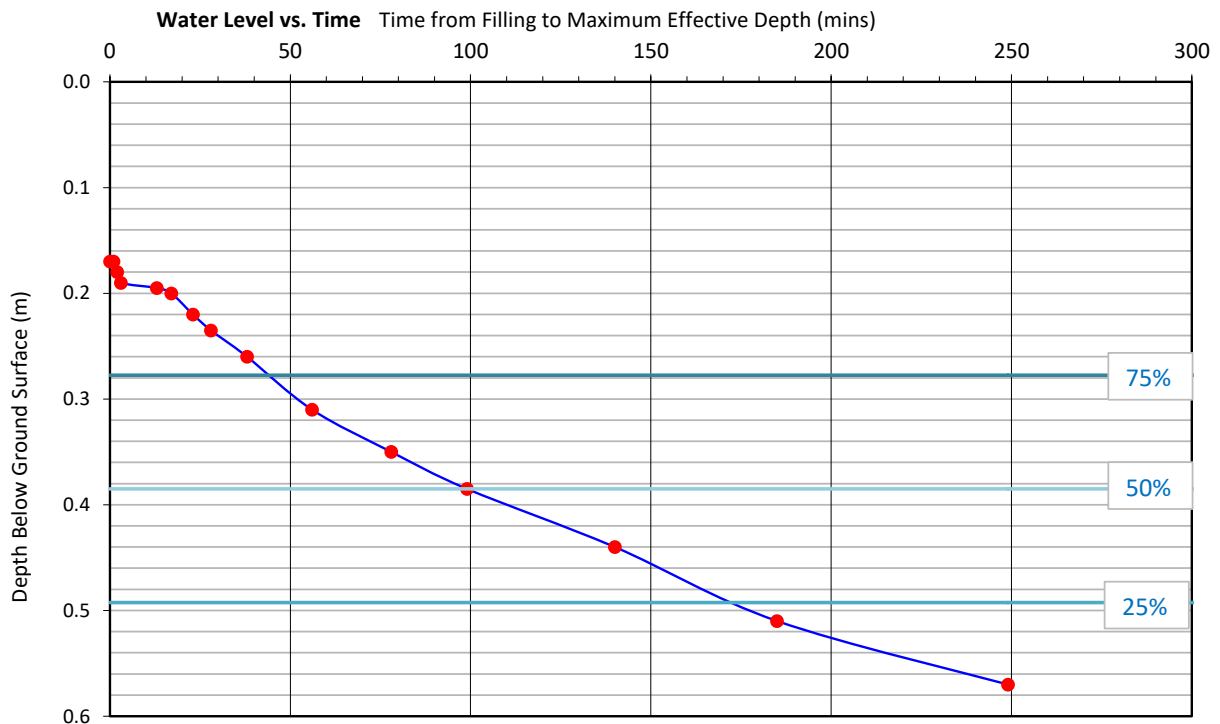
Effective Storage Volume, V : 0.8m x 0.6m x 0.43m
 V : 0.2064 m³

V_{p75-25} : 0.103 m³

Effective Internal Surface Area, a_{p50} : 0.344m² + 0.258m² + 0.48m²
 a_{p50} : 1.082 m²

Time of water level fall, t_{p75-25} : 170 - 45 mins
 t_{p75-25} : 125 mins
 t_{p75-25} : 7500 secs

Soil infiltration rate, f : 0.1032/(1.082 x 7500)
 f : 1.27E-05 ms⁻¹



Soil Infiltration Test

25-127.03: Ashcroft House, 100 Kingston Lane, Shoreham, BN43 6YU



Test Pit SP14-3

Date: 14/11/2025

Readings Recorded By: JC

Pit Dimensions: 0.8m(l) x 0.6m(w) x 0.6m(d)
Start Water Level: 0.19m

Actual Storage Volume: 0.29 m³
Effective Depth: 0.41 m

Time (mins)	Depth BGL (m)
0	0.190
1	0.190
2	0.195
3	0.195
4	0.195
5	0.200
10	0.215
15	0.220
29	0.255
48	0.280
66	0.320
120	0.420
154	0.450
192	0.495
237	0.550
252	0.560

$$\text{Soil infiltration rate, } f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

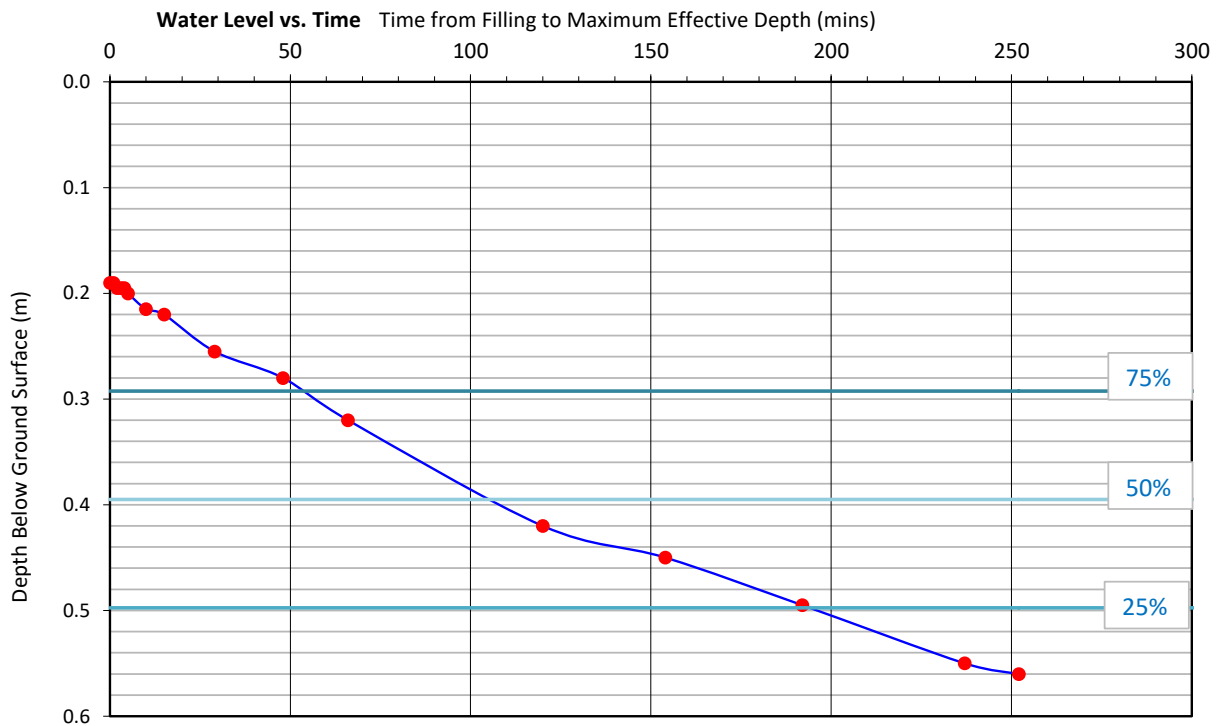
Effective Storage Volume, V : 0.8m x 0.6m x 0.41m
 V : 0.1968 m³

V_{p75-25} : 0.098 m³

Effective Internal Surface Area, a_{p50} : 0.328m² + 0.246m² + 0.48m²
 a_{p50} : 1.054 m²

Time of water level fall, t_{p75-25} : 195 - 53 mins
 t_{p75-25} : 142 mins
 t_{p75-25} : 8520 secs

Soil infiltration rate, f : 0.0984/(1.054 x 8520)
 f : 1.10E-05 ms⁻¹



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