Drainage Impact Assessment

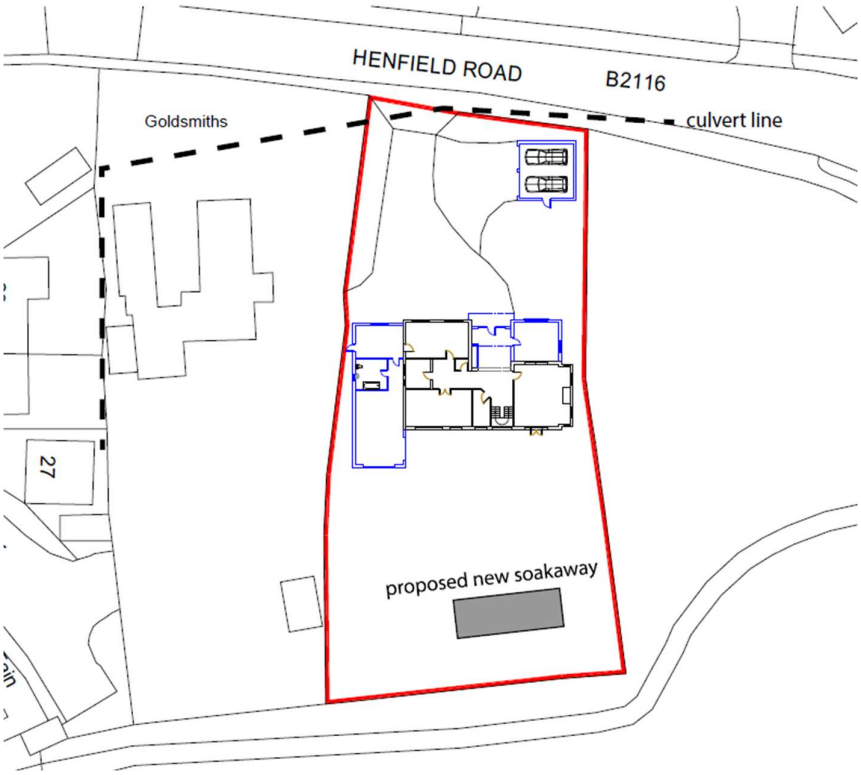
Date: 25th April 2025

Ref: DIA/GTG/250425

Site Address:

Gessings, Henfield Road, Albourne, Hassocks, West Sussex, BN6 9DD.

Location map with culvert line and proposed new soakaway position.



Drainage assessment.

The property has a culvert running across the front of the site parallel to the road. For the most of its length, the culvert line is it under the verge and outside of the property boundary. The culvert then runs diagonally across the front west corner of the property before continuing diagonally across the front garden of the neighbouring property (Goldsmiths). In wet weather the front garden of the property becomes waterlogged and heavy/torrential rain causes surface water run off the neighbouring village green and puddle on the front lawn.

Drainage Plan.

The front garden is considered unsuitable for soakaways. The surface water from the proposed garage and extension will be taken to a new soakaway positioned in the rear garden which has permeable soil. The existing house currently has soakaways in the rear garden and there has never been any issues with the dispersion of water during the 13 years we have occupied the property. The site measure around 0.34 acres and there is ample space for additional soakaways at the back/south end of the property. The existing soakaways for the existing garaging on the West side of the property will be assessed and resized accordingly, again positioned at the rear of the property.

Soakaway infiltration test to BRE 365

Soakaway tests were carried out on site during April 2025 in accordance with BRE 365.
Two test pits were dug to depths of 1,000mm and 1,200mm and no groundwater was encountered.
See attached soakaway test results which demonstrate good ground permeability with soil infiltration rate for the TP1 at 5.3E-5 and 4.3E-5.

Soakaway Design

The size and shape of the soakaway will be designed in accordance with BRE 365 (attached) once existing soakaways have been assessed and deemed if suitable for use.

Conclusion:

The property has sufficient space and suitable ground conditions with good drainage characteristics to accommodate the required soakaways for the additional roof area.

Date: 25/04/2025

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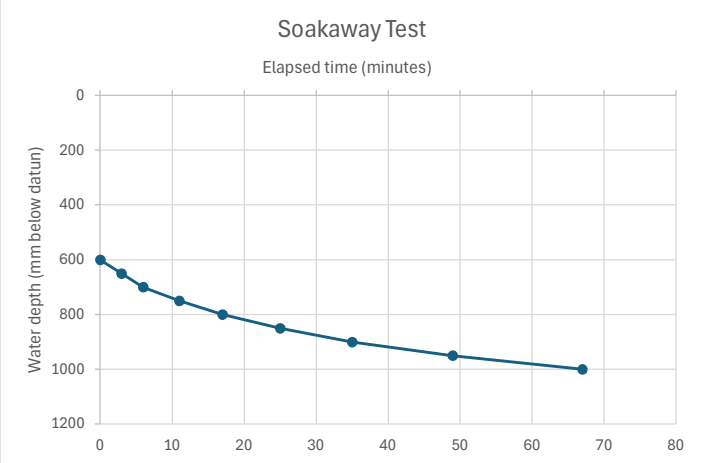
Soakaway Test

Site: Gessings, Henfield Road, Albourne

Trial Pit No:	TP1
Length (mm)	350
Width (mm)	350
Depth (mm)	1000
Test No:	1
Datum Height:	0.0mm agl
Granular infill:	None

Elapsed time (minutes)	Water depth (mm below datum)
0	600
3	650
6	700
11	750
17	800
25	850
35	900
49	950
67	1000



Start water depth for analysis (mmbgl)	600mm		
75% effective depth (mmbgl)	700mm	Elapsed time (mins)	6
50% effective depth (mmbgl)	800mm		
25% effective depth (mmbgl)	900mm	Elapsed time (mins)	35
Base of soakage zone (mmbgl)	1,000mm		

Volume outflow between 75% and 25% effective depth (m^3)	0.037
Mean surface area of outflow (m^2)	0.403
(side area at 50% effective depth + base area)	
Time for outflow between 75% and 25% effective depth (mins)	29

Soil infiltration rate (m/s): 5.3E-5

Notes: Results processed following BRE 365 (2007)

Date: 25/04/2025

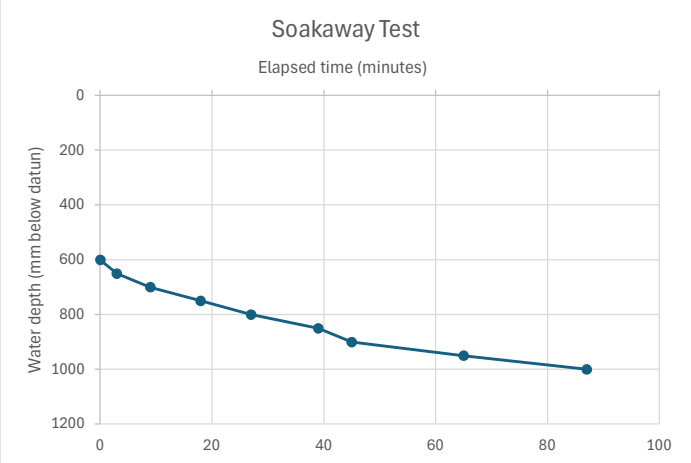
DBP CONSULTING

Soakaway Test

Site: Gessings, Henfield Road, Albourne

Trial Pit No:	TP1
Length (mm)	350
Width (mm)	350
Depth (mm)	1000
Test No:	2
Datum Height:	0.0mm agl
Granular infill:	None

Elapsed time (minutes)	Water depth (mm below datum)
0	600
3	650
9	700
18	750
27	800
39	850
45	900
65	950
87	1000



Start water depth for analysis (mmbgl)	600mm		
75% effective depth (mmbgl)	700mm	Elapsed time (mins)	9
50% effective depth (mmbgl)	800mm		
25% effective depth (mmbgl)	900mm	Elapsed time (mins)	45
Base of soakage zone (mmbgl)	1,000mm		

Volume outflow between 75% and 25% effective depth (m^3)	0.037
Mean surface area of outflow (m^2)	0.403
(side area at 50% effective depth + base area)	
Time for outflow between 75% and 25% effective depth (mins)	36

Soil infiltration rate (m/s): 4.3E-5

Notes: Results processed following BRE 365 (2007)

Date: 25/04/2025

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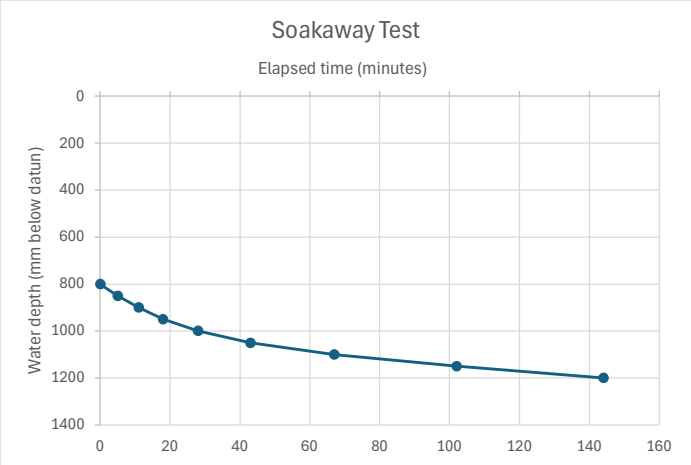
Soakaway Test

Site: Gessings, Henfield Road, Albourne

Trial Pit No:	TP2
Length (mm)	350
Width (mm)	350
Depth (mm)	1,200
Test No:	1
Datum Height:	0.0mm agl
Granular infill:	None

Elapsed time (minutes)	Water depth (mm below datum)
0	800
6	850
11	900
18	950
28	1,000
43	1,050
67	1,100
102	1,150
144	1,200



Start water depth for analysis (mmbgl)	800mm		
75% effective depth (mmbgl)	900mm	Elapsed time (mins)	11
50% effective depth (mmbgl)	1,000mm		
25% effective depth (mmbgl)	1,100mm	Elapsed time (mins)	67
Base of soakage zone (mmbgl)	1,200mm		

Volume outflow between 75% and 25% effective depth (m^3)	0.037
Mean surface area of outflow (m^2)	0.403
(side area at 50% effective depth + base area)	
Time for outflow between 75% and 25% effective depth (mins)	56

Soil infiltration rate (m/s): 2.7E-5

Notes: Results processed following BRE 365 (2007)

Date: 25/04/2025

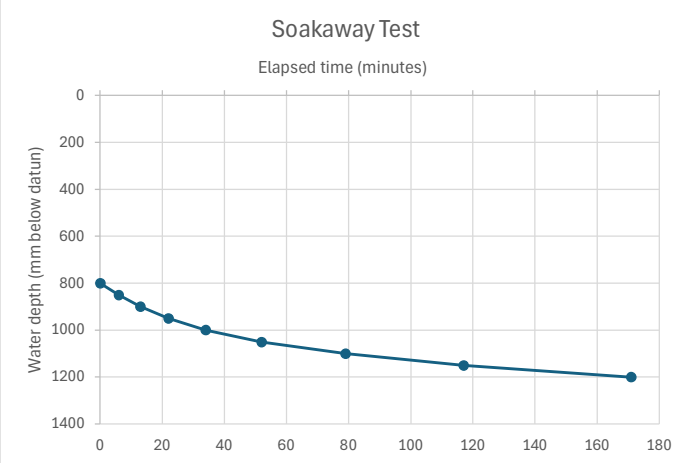
DBP CONSULTING

Soakaway Test

Site: Gessings, Henfield Road, Albourne

Trial Pit No:	TP2
Length (mm)	350
Width (mm)	350
Depth (mm)	1,200
Test No:	2
Datum Height:	0.0mm agl
Granular infill:	None

Elapsed time (minutes)	Water depth (mm below datum)
0	800
6	850
13	900
22	950
34	1,000
52	1,050
79	1,100
117	1,150
171	1,200



Start water depth for analysis (mmbgl)	800mm		
75% effective depth (mmbgl)	900mm	Elapsed time (mins)	13
50% effective depth (mmbgl)	1,000mm		
25% effective depth (mmbgl)	1,100mm	Elapsed time (mins)	79
Base of soakage zone (mmbgl)	1,200mm		

Volume outflow between 75% and 25% effective depth (m^3)	0.037
Mean surface area of outflow (m^2)	0.403
(side area at 50% effective depth + base area)	
Time for outflow between 75% and 25% effective depth (mins)	66

Soil infiltration rate (m/s): 2.3E-5

Notes: Results processed following BRE 365 (2007)