



Thomas Telford House
Sun Valley Business Park
Winnall Close
Winchester SO23 0LB

Crayfern Homes

F.A.O. Kevin Wawman

By Email only: kevin@crayfernhomes.co.uk

Our Ref: 16710/LR

23rd February 2018

Dear Kevin

RE: Orchard Business Park, North End Road, Yapton, West Sussex BN18 0GA

We are writing in regards to the intrusive investigation undertaken at the above named site.

Brief

The Soils Limited quotation (reference Q19539, dated 4th January 2018) set the scope of the investigation. The investigation was to comprise machine excavated trial holes and to conduct infiltration tests in accordance with the principles of BRE DG 365:2016 Soakaway design.

General

The site had an approximate area of 0.63ha and was located at Orchard Business Park, North End Road, Yapton, West Sussex BN18 0GA at O.S Land Ranger Grid Reference of SU 979 037.

A site location plan has been included as Figure 1.

Site Works

Site works were undertaken on the 30th and 31st January 2018 comprising the excavation of two hand dug trial pits (TP1 and TP2) and the excavation of five trial pits using a JCB 3CX (TP3, TP4, TP5, TP6 and TP6A) at locations and depths proposed by the client ranging between 0.40m (TP6) and 0.76m bgl (TP5).

Following the construction of the trial holes, two repeat infiltration tests, in accordance of the principles of BRE DG365:2016, were carried out within five of the trial holes (TP1, TP2, TP4, TP5 and TP6A). The repeat tests within TP2, TP4 and TP5) were left running during night hours.

The trial pit TP3 was filled for a second test before leaving the site and was left to run overnight. On return, the next morning the trial pit was dry, therefore no readings were taken in order to calculate an infiltration rate.

In trial hole TP6, only one test was undertaken due to the quick infiltration rates recorded within the first test, which would not allow for a second infiltration test to run overnight, as the trial hole would be dry on the following morning.

A trial hole location plan is included as Figure 2.

Upon completion the trial holes were backfilled with arisings and mounded over to allow for future settlement.

Ground Conditions

The ground conditions encountered during the site investigation have been summarised in Table 1.

Made Ground/Topsoil (MG/TS) River Terrace Deposits (RTD)

Table 1 – Summary of Ground Conditions

Strata	Depth Encountered (m bgl)		Typical Description
	Top	Base	
MG/TS	G.L.	0.30 - 0.75	MG: Turf over orangey brown slightly gravelly slightly sandy slightly clayey SILT. Sand was fine to coarse. Occasional fine glass, brick and concrete fragments were encountered. Gravel was fine angular flint. Occasional carbonised material was noted. Occasional rootlets were encountered. TS: Turf over soft orangey brown slightly gravelly slightly sandy CLAY. Sand was fine to coarse. Gravel was fine angular flint. Frequent carbonised material was noted. Occasional rootlets were noted.
RTD	0.30 – 0.75 ¹	0.30 – 0.76 ¹	Soft to firm light orangey brown CLAY to light orangey brown slightly clayey fine SAND. Rare fine angular flint gravel and carbonised material was noted. Rare rootlets were encountered.

Notes: ¹ encountered to base of trial hole

Infiltration Testing

Infiltration tests were performed in trial pits TP1, TP2, TP3, TP4, TP5, TP6 and TP6A, in order to provide guidance on the suitability of the ground for the adoption of a surface water drainage system.

The tests were undertaken at depths from 0.40m (TP6) to 0.76m bgl (TP5), within the Made Ground and the River Terrace Deposits. The excavation depths were as specified

by the client so that the results could be utilised for construction of permeable pavements. The tests comprised pouring water from a drum (~100gal) or piping water via a water tanker into the open trial hole, the drop in water level over time was then recorded to give an indication of soakage potential.

BRE DG365:2016 states that for an accurate infiltration rate to be obtained a soakage pit needs to be filled three times in quick succession. Each test is completed once 75% of the water present has drained away, in order to determine whether or not the underlying ground conditions may be suitable for surface water drainage.

Table 2 presents the infiltration test results performed within all trial holes.

Table 2 - Infiltration Test Results

Trial Hole (Test No.)	Test Stratum	Test Depth (m bgl)	Infiltration Rate (m/sec)	Notes
TP1(1)	MG	0.74	1.18×10^{-4}	
TP1(2)	MG	0.72	1.06×10^{-5}	Data extrapolated after 100 minutes in order to calculate an indicative infiltration rate.
TP2(1)	MG	0.70	3.03×10^{-6}	Data extrapolated after 221 minutes in order to calculate an indicative infiltration rate.
TP2(2)	MG	0.70	2.95×10^{-6}	
TP3(1)	MG	0.75	5.88×10^{-6}	Data extrapolated after 212 minutes in order to calculate an indicative infiltration rate.
TP3(2)	MG	0.75	N/A	The water within the trial hole had been drained before any measurements of the levels could be recorded inbetween.
TP4(1)	RTD	0.70	2.63×10^{-6}	Data extrapolated after 165 minutes in order to calculate an indicative infiltration rate.
TP4(2)	RTD	0.70	1.86×10^{-6}	Data extrapolated after 956 minutes in order to calculate an indicative infiltration rate.
TP5(1)	RTD	0.76	4.25×10^{-6}	Data extrapolated after 116 minutes in order to calculate an indicative infiltration rate.
TP5(2)	RTD	0.76	3.91×10^{-6}	
TP6(1)	RTD	0.70	4.06×10^{-5}	
TP6A(1)	RTD	0.40	1.00×10^{-4}	
TP6A(2)	RTD	0.40	4.38×10^{-5}	

The first tests within trial holes TP2, TP3, TP4 and TP5 were stopped just before the end of the day, for a second fill to follow, to allow for the tests to run overnight. The tests were stopped when sufficient data was available in order for the infiltration rates of 1.06×10^{-5} m/sec, 5.88×10^{-6} m/sec, 2.63×10^{-6} m/sec and 4.25×10^{-6} m/sec respectively, to be extrapolated.

The indicative infiltration rates of 1.06×10^{-5} m/sec and 1.86×10^{-6} m/sec were extrapolated from the repeat tests within TP1 and TP4 respectively.

Full results are included within Appendix A.

Conclusions

Infiltration rates of between 1.86×10^{-6} m/sec (TP4) and 1.18×10^{-4} m/sec (TP1) were calculated from the test locations. A rate of **1.86×10^{-6} m/sec** could be utilised for the construction of permeable pavements with associated attenuation on site.

the above infiltration rate provided for the test carried out in TP4 is based on extrapolated data and therefore, if used, should only be adopted with caution.

Additionally, the tests within TP1, TP2 and TP3 were performed in Made Ground which is typically not considered suitable for the construction of soakaways/pavements given the inherent variability of Made Ground (i.e. the potential for instability / collapse) and the potential for contaminants to be contained within the soil which could be mobilised through the movement of water within the soakaway/pavement.

Finally, the presence of potential Asbestos Containing Material (ACM) within the Made Ground in the form of cement-bound fragments, as identified in TP1 within the Phase II Ground Investigation Report carried on site, (Report ref:16671:Phase II/GIR, December 2017), will need to be considered within the proposed development. Further investigation of the Made Ground may be necessary to delineate the extent of any potential ACM and the advise of a specialist asbestos consultant / removal contractor sought.

Should permeable pavements be considered for the development then these should be placed as far from the proposed footings as possible, (ideally >10m), in order to avoid the potential for instability and collapse – particularly within the Made Ground.

Soils described as the Lewes Nodular Chalk Formation were encountered within the Phase II Ground Investigation Report carried on site, (Report ref:16671:Phase II/GIR, December 2017), directly below the River Terrace Deposits, at depths ranging between 2.20m and 3.80m bgl, and therefore there is the potential for dissolution, albeit this is more of a risk from conventional soakaways where there infiltration is focused in a particular area. In this instance, the soakaways proposed will take the form of permeable pavement and therefore the infiltration will be over a wide area, similar to the natural drainage of the ground.

As the Chalk is a vitally important aquifer, the Environment Agency and local authority must be consulted when planning pavement installations where chalk lies below the site even where it is mantled with superficial deposits.

Consultation with the Environment Agency must be sought regarding any use which may have an impact on groundwater resources.

The following attachments make up the remainder of this letter report.

Figure 1. Site Location Plan

Figure 2. Trial Hole Location Plan

Appendix A. Field Data

Should you have any further questions please do not hesitate to contact the undersigned.

Yours Sincerely



Olia Kontogianni BSc MSc

Graduate Geotechnical Engineer

ok@soilslimited.co.uk

Figure 1 – Site location Plan

Figure number
1

Title
Site Location Map

Project
Orchard Business Park, North End Road, Yapton,
West Sussex BN18 0GA

Date
February 2018

Client
Crayfern Homes

Reference
16710

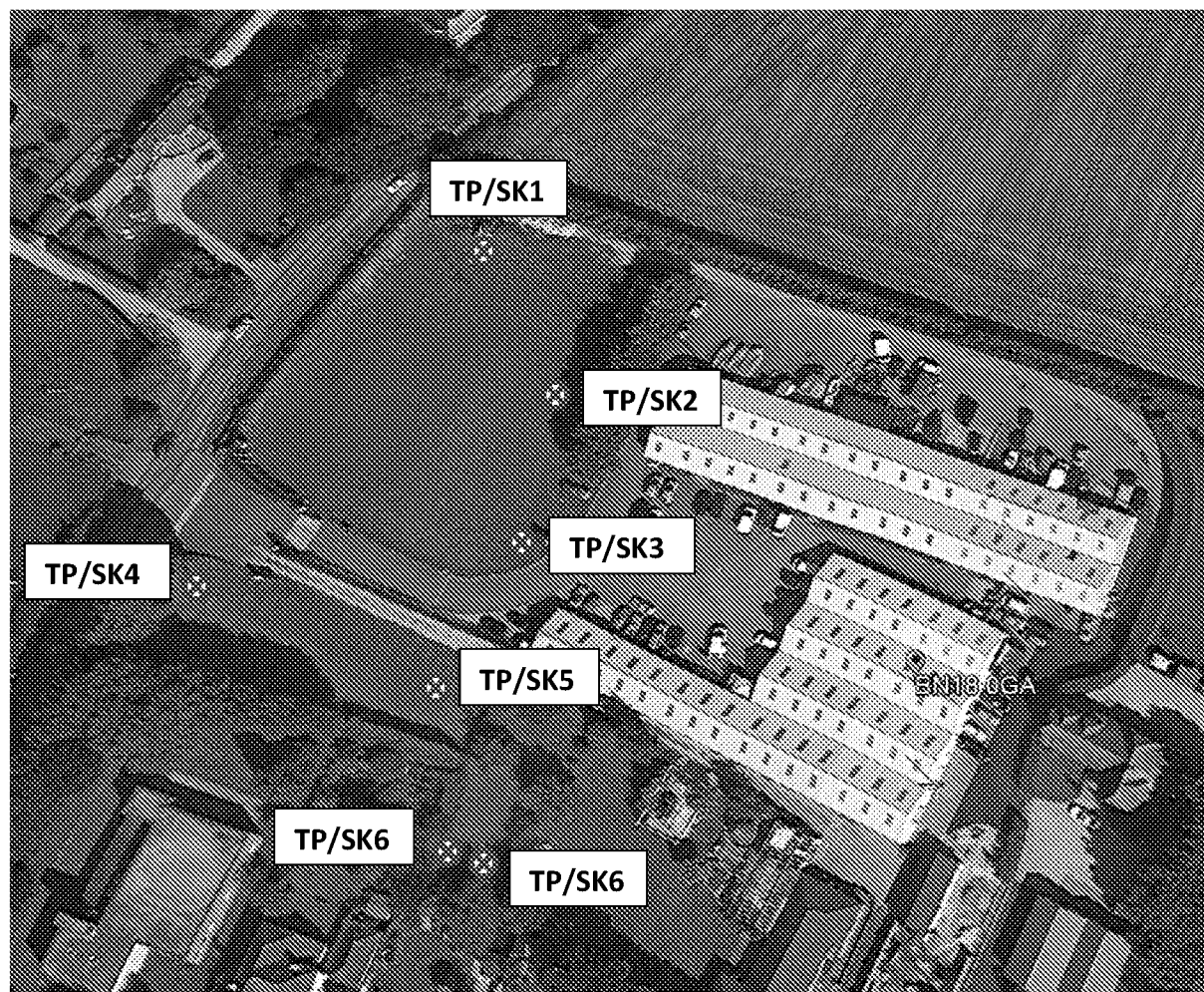
Figure 2. Trial Hole Location Plan

Figure number

2

Title

Trial hole location plan

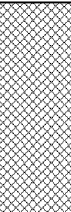
Project

Orchard Business Park, North End Road, Yapton,
West Sussex BN18 0GA

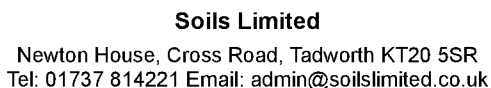
Date

February 2018

Appendix A. Field Data

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP2 Sheet 1 of 1		
		Project Name: Orchard Business Park		Project No.: 16710		Method:		Hole Type TP	
Location: North End Road, Yapton				Plant:		Support:		Scale 1:25	
Client:		Trial Pit Length: m		Trial Pit Width: m		Logged By GB			
Dates: 30/01/2018		Level:		Co-ords:					
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	D+J		0.70			Turf over soft orangey brown slightly silty slightly sandy CLAY. Sand is fine to coarse. Rare fine brick fragments. Rare fine angular flint gravel. Occasional rootlets. MADE GROUND		
	0.50	D+J							
	0.70	D+J							
							End of Pit at 0.70m		
1 2 3 4 5									
General Remarks: Roots observed to 0.70m bgl. No groundwater encountered.								Sample Type D: Disturbed B: Bulk J: Jar W: Water	
Groundwater Remarks:									

[illegible]



Trial Pit No.

TP4

Sheet 1 of 1

Project Name: Orchard Business Park

Project No.: 16710

Method:	
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Hole Type

Location: North End Road, Yapton

Plant:

TP

Support:

Scale

Support:

1:25

Client:

Trial Pit Length: m

Trial Pit Width: m

Logged

Dates: 30/01/2018

Level:

Co-ords:

Logged By
GB

1
2
3
4
5

General Remarks:

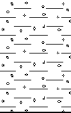
Roots observed to 0.70m bgl. No groundwater encountered.

Sample Type

D: Disturbed
B: Bulk
J: Jar
W: Water

Groundwater Remarks:

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP5 Sheet 1 of 1	
Project Name: Orchard Business Park				Project No.: 16710		Method:		Hole Type TP
Location: North End Road, Yapton						Plant:		
Client:				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 30/01/2018				Level:		Co-ords:		Logged By GB
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	D+J		0.30			Turf over soft orangey brown slightly sandy CLAY. Sand is fine to coarse. Frequent carbonised material. Rare fine angular flint gravel. Occasional rootlets. TOPSOIL	
	0.50	D+J					Soft to firm light orangey brown CLAY. Rare fine angular flint gravel. Rare rootlets. Rare fine carbonised material. RIVER TERRACE DEPOSITS	
	0.76	D+J		0.76		End of Pit at 0.76m		
1 2 3 4 5								
General Remarks: Roots observed to 0.76m bgl. No groundwater encountered.								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP6 Sheet 1 of 1			
Project Name: Orchard Business Park				Project No.: 16710		Method:		Hole Type TP		
Location: North End Road, Yapton						Plant:				
Client:				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25		
Dates: 30/01/2018				Level:		Co-ords:		Logged By GB		
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.20	D+J		0.30			Turf over soft orangey brown slightly sandy CLAY. Sand is fine to coarse. Rare fine angular flint gravel. Frequent to occasional fine brick fragments and carbonised material. Rare fine glass fragments. Occasional rootlets. MADE GROUND			
	0.50	D+J					0.70		Soft to firm light orangey brown CLAY. Rare fine angular flint gravel. Rare fine carbonised material. Rare rootlets. RIVER TERRACE DEPOSITS	
	0.70	D+J							End of Pit at 0.70m	
General Remarks: Roots observed to 0.70m bgl. No groundwater encountered. Groundwater Remarks: Sample Type D: Disturbed B: Bulk J: Jar W: Water										

		Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk			Trial Pit Log		Trial Pit No. TP6A Sheet 1 of 1	
Project Name: Orchard Business Park				Project No.: 16710		Method:		Hole Type TP
Location: North End Road, Yapton						Plant:		
Client:				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 30/01/2018				Level:		Co-ords:		Logged By GB
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	D+J					Turf over soft orangey brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is fine to coarse angular flint. Frequent brick fragments and carbonised material. Rare fine glass fragments. Occasional rootlets. MADE GROUND	
	0.40	D+J		0.30 0.40			Soft to firm light orangey brown CLAY. Rare fine angular flint gravel. Rare rootlets. Rare fine carbonised material. RIVER TERRACE DEPOSITS	
							End of Pit at 0.40m	
1 2 3 4 5								
General Remarks: Roots observed to 0.40m bgl. No groundwater encountered.								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								

Soakaway Calculations

Sealaway Test No.	TP1/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

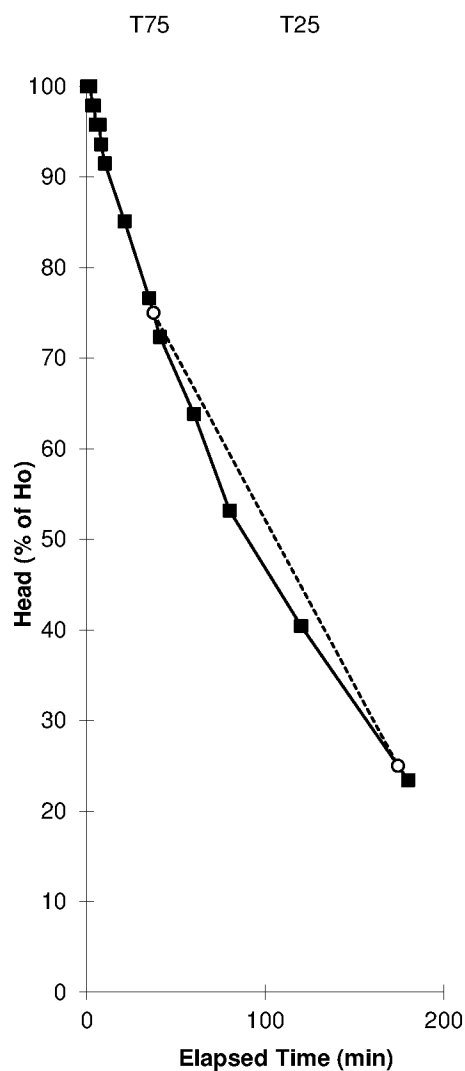
Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.74 m
Width of Pit	0.50 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.47 m
$ap50$	1.205 m ²
$Vp75-25$	0.1175 m ³
$t75-25$	137.1 min
water used	0.2350 m ³
$\dot{q}$	1.185E-05 m/sec.

Field Data

Depth to Water	Elegand Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.27	0.1	100	0.47
0.27	2.0	100	0.47
0.28	3.0	98	0.46
0.28	4.0	98	0.46
0.29	5.0	96	0.45
0.29	6.0	96	0.45
0.29	7.0	96	0.45
0.30	8.0	94	0.44
0.31	10.0	91	0.43
0.34	21.0	85	0.40
0.38	35.0	77	0.36
0.40	41.0	72	0.34
0.44	60.0	64	0.30
0.49	80.0	53	0.25
0.55	120.0	40	0.19
0.63	180.0	23	0.11

T75	37.250	75
T25	174.375	25
T75-25	137.125	Derived from Best Fit



Comments

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

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Soakaway Calculations

Soakaway Test No.	TP1/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

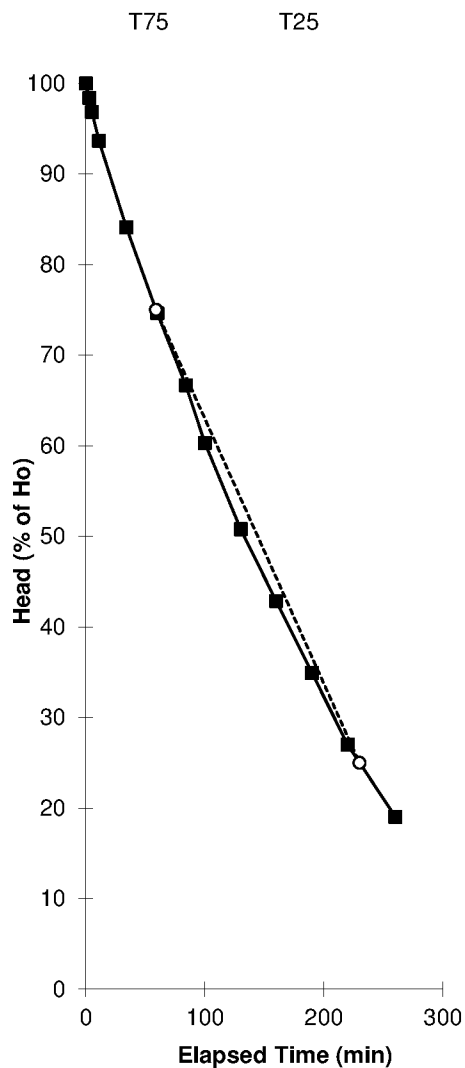
Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.72 m
Width of Pit	0.50 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.63 m

ap50	1.445 m2
Vp75-2%	0.1575 m3
e75-2%	171.1 min
water used	0.3150 m3
$\dot{\epsilon}$	1.062E-05 m/sec.

Field Data

Depth to	Elsaped	Head of	Head of
Water	Time	Water	Water
(m)	(min)	(% of Ho)	(m)
0.09	0.1	100	0.63
0.10	3.0	98	0.62
0.11	5.0	97	0.61
0.13	11.0	94	0.59
0.19	34.0	84	0.53
0.25	60.0	75	0.47
0.3	84.0	67	0.42
0.34	100.0	60	0.38
0.4	130.0	51	0.32
0.45	160.0	43	0.27
0.5	190.0	35	0.22
0.55	220.0	27	0.17
0.6	260.0	19	0.12



T75	58.917	75
T25	230.000	25
T75-25	171.083	Derived from Best Fit

Comments

Data were extrapolated after 100 minutes to calculate an infiltration rate.

SOILS LIMITED

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Soakaway Calculations

Soakaway Test No.	TP2/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

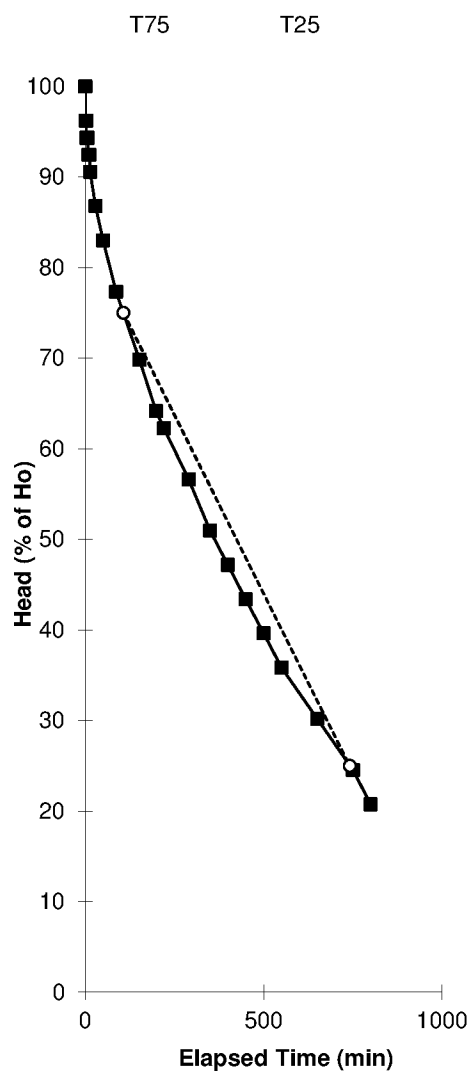
Depth of Pit	0.70 m
Width of Pit	0.75 m
Length of Pit	0.90 m
Depth of Pit Soaked	0.53 m

ap50	1.5495 m2
Vp75-25	0.178875 m3
t75-25	634.4 min
water used	0.3578 m3
i	3.033E-06 m/sec.

Field Data

Depth to Water (m)	Elapsed Time (min)	Head of Water (% of Ho)	Head of Water (m)
0.17	0.1	100	0.53
0.17	1.0	100	0.53
0.19	2.0	96	0.51
0.19	3.0	96	0.51
0.2	4.0	94	0.50
0.20	5.0	94	0.50
0.2	7.0	94	0.50
0.21	9.0	92	0.49
0.21	10.0	92	0.49
0.21	12.0	92	0.49
0.22	14.0	91	0.48
0.24	29.0	87	0.46
0.26	50.0	83	0.44
0.29	87.0	77	0.41
0.33	152.0	70	0.37
0.36	199.0	64	0.34
0.37	221.0	62	0.33
0.40	290.0	57	0.30
0.43	350.0	51	0.27
0.45	400.00	47	0.25
0.47	450.00	43	0.23
0.49	500.00	40	0.21
0.51	550.00	36	0.19
0.54	650.00	30	0.16
0.57	750.00	25	0.13
0.59	800.0	20.75	0.11

T75	107.313	75
T25	741.667	25
T75-25	634.354	Derived from Best Fit



Comments

Data were extrapolated after 221 minutes to calculate an infiltration rate.

SOILS LIMITED

Newton House, Cross Road, Tadworth
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Soakaway Calculations

Sealaway Test No.	TP2/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

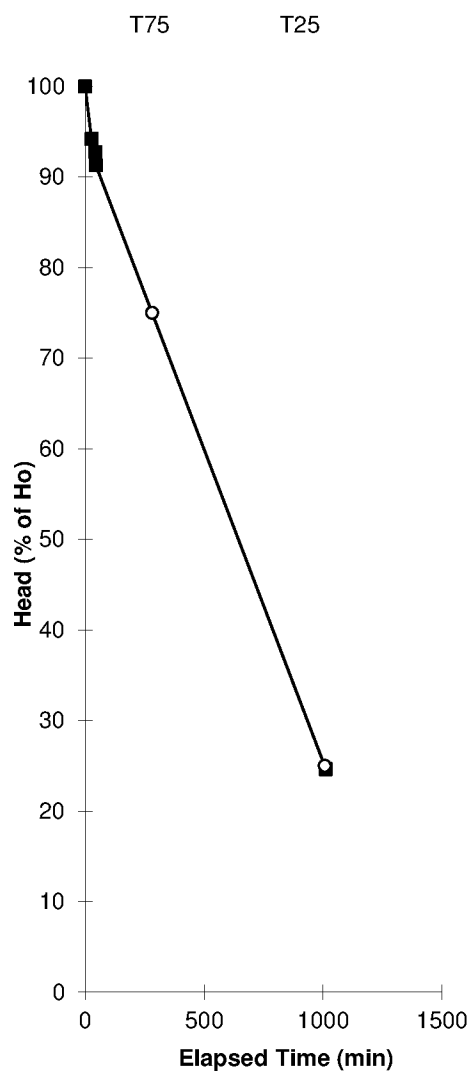
Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.70 m
Width of Pit	0.75 m
Length of Pit	0.90 m
Depth of Pit Soaked	0.69 m

α_{p50}	1.8135 m2
Ψ_{p75-25}	0.232875 m3
ϵ_{75-25}	725.3 min
water used	0.4658 m3
f	2.951E-06 m/sec.

Field Data

Depth to Water	Elegand Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.01	0.1	100	0.69
0.05	27.0	94	0.65
0.06	43.0	93	0.64
0.07	45.0	91	0.63
0.53	1012.0	25	0.17



T75	281.495	75
T25	1006.745	25
T75-25	725.250	Derived from Best Fit

Comments

SOILS LIMITED

Newton House, Cross Road, Tadworth
Surrey, KT20 5SR

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Soakaway Calculations

Soakaway Test No.	TP3/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

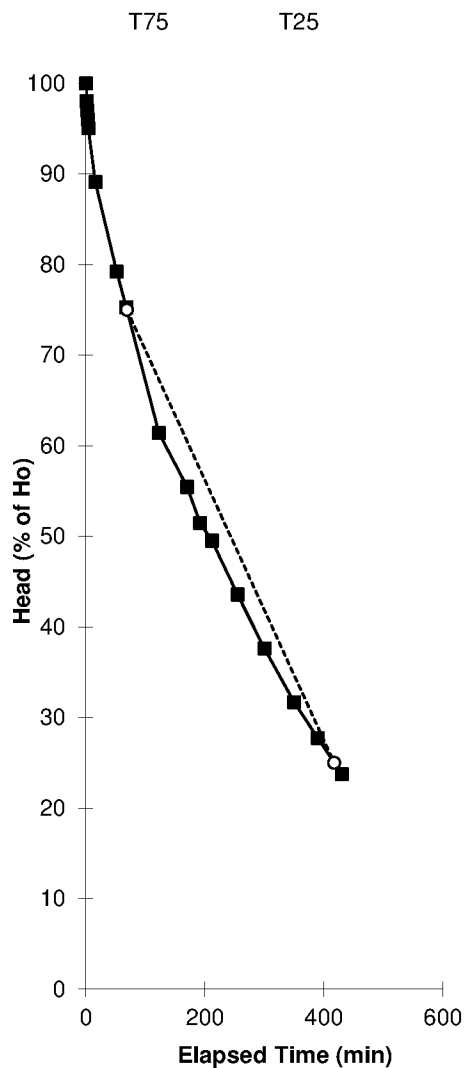
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.75 m
Width of Pit	0.80 m
Length of Pit	1.20 m
Depth of Pit Soaked	0.51 m
$ap50$	1.97 m ²
$Vp75-25$	0.2424 m ³
$t75-25$	348.5 min
water used	0.4848 m ³
f	$5.884E-06$ m/sec.

Field Data

Depth to Water	Elsaped Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.245	0.1	100	0.51
0.26	1.0	98	0.50
0.26	2.0	97	0.49
0.27	3.0	96	0.49
0.27	4.0	95	0.48
0.30	16.0	89	0.45
0.35	52.0	79	0.40
0.37	68.0	75	0.38
0.44	123.0	61	0.31
0.47	170.0	55	0.28
0.49	192.0	51	0.26
0.50	212.0	50	0.25
0.53	255.0	44	0.22
0.56	300.0	38	0.19
0.59	350.0	32	0.16
0.61	390.0	28	0.14
0.63	430.0	24	0.12
T75	68.982	75	
T25	417.500	25	
T75-25	348.518	Derived from Best Fit	



Comments

Data were extrapolated after 212 minutes to calculate an infiltration rate.

SOILS LIMITED

**Newton House, Cross Road, Tadworth
Surrey, KT20 5SR**

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Facsimile: 01737 812 557

Soakaway Calculations

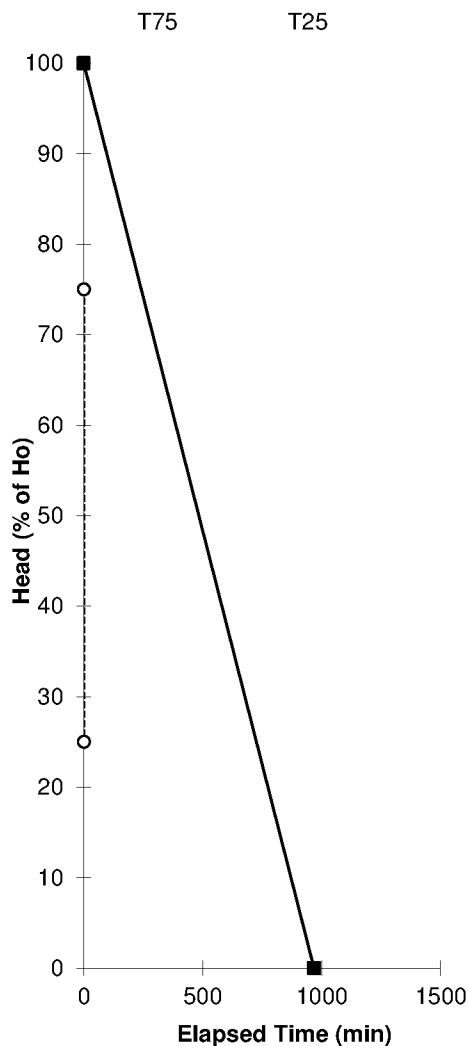
Soakaway Test No.	TP3/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.75 m
Width of Pit	0.80 m
Length of Pit	1.20 m
Depth of Pit Soaked	0.68 m
ap50	2.32 m ²
q _{p75-25}	0.3264 m ³
c75-25	N/A min
water used	0.6528 m ³
f	N/A

Field Data

[illegible]

Comments

The trial pit was dry on the following day when the water level was to be measured.

SOILS LIMITED

**Newton House, Cross Road, Tadworth
Surrey, KT20 5SR**

Telephone: 01737 814 221
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Soakaway Calculations

Sealaway Test No.	TP4/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

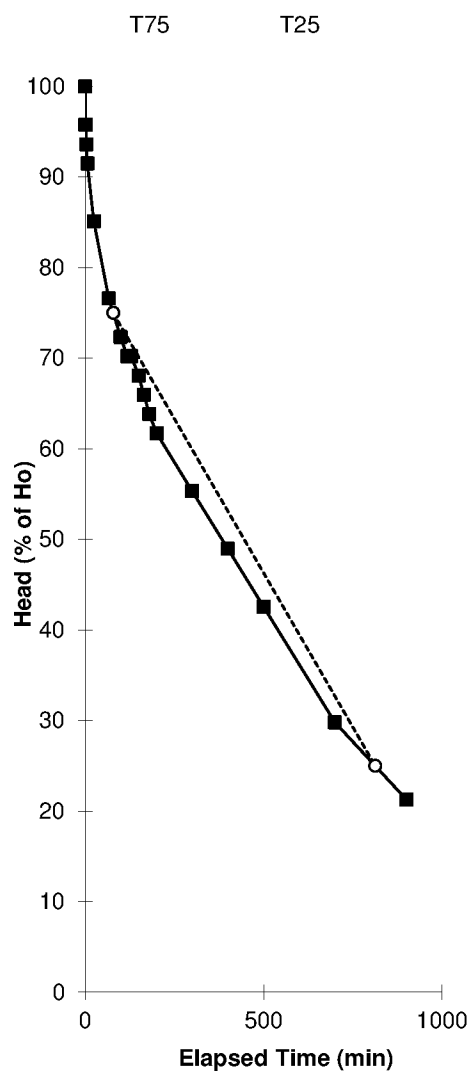
Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.70 m
Width of Pit	0.85 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.47 m
ap50	1.7195 m ²
Vp75-25	0.19975 m ³
t75-25	734.1 min
water used	0.3995 m ³
f	2.637E-06 m/sec.

Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.23	0.1	100	0.47
0.25	1.0	96	0.45
0.25	2.0	96	0.45
0.26	4.0	94	0.44
0.27	6.0	91	0.43
0.30	24.0	85	0.40
0.34	66.0	77	0.36
0.36	99.0	72	0.34
0.37	118.0	70	0.33
0.37	129.0	70	0.33
0.38	150.0	68	0.32
0.39	165.0	66	0.31
0.4	180.0	64	0.30
0.41	200.0	62	0.29
0.44	300.0	55	0.26
0.47	400.0	49	0.23
0.5	500.0	43	0.20
0.56	700.0	30	0.14
0.6	900.0	21	0.10

T75	78.375	75
T25	812.500	25
T75-25	734.125	Derived from Best Fit



Comments

Data were extrapolated after 165 minutes to calculate an infiltration rate.

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Soakaway Calculations

Soakaway Test No.	TP4/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

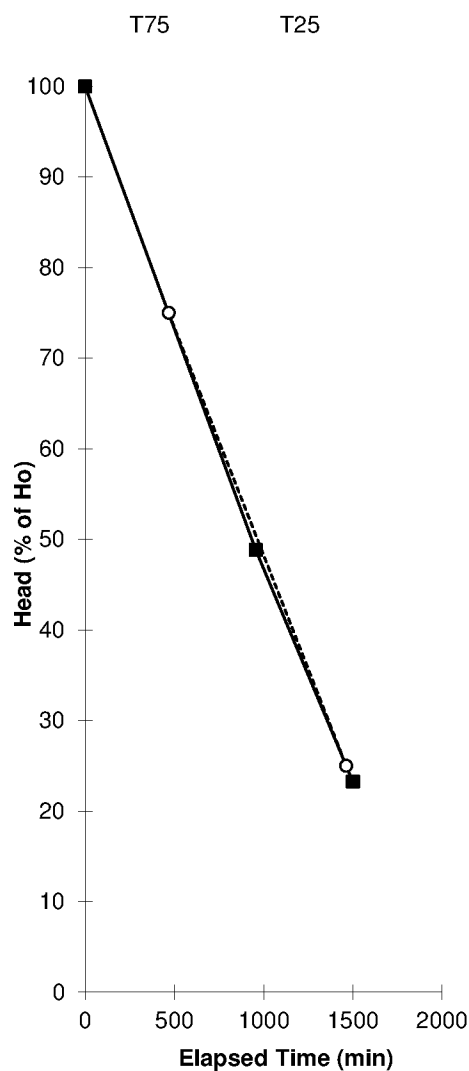
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.70 m
Width of Pit	0.85 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.43 m
$ap50$	1.6455 m ²
$Vp75-25$	0.18275 m ³
$t75-25$	994.9 min
water used	0.3655 m ³
$\dot{q}$	1.860E-06 m/sec.

Field Data

Depth to Water	Elonged Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.27	0.1	100	0.43
0.49	956.0	49	0.21
0.6	1500.0	23	0.10



T75	468.000	75
T25	1462.909	25
T75-25	994.909	Derived from Best Fit

Comments

Data were extrapolated after 956 minutes to calculate an infiltration rate.

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Soakaway Calculations

Soakaway Test No.	TP5/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

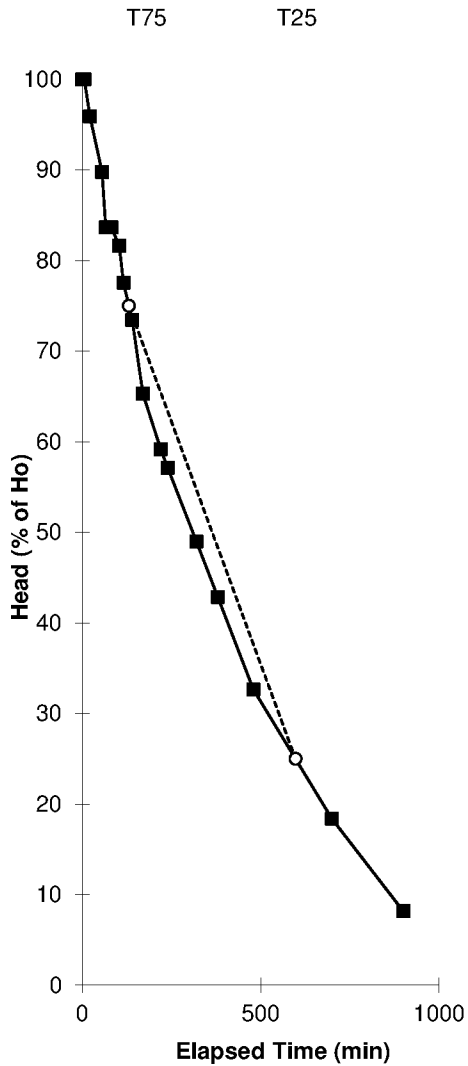
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.76 m
Width of Pit	0.80 m
Length of Pit	1.10 m
Depth of Pit Soaked	0.49 m
ap50	1.811 m ²
q _{p75-25}	0.2156 m ³
t ₇₅₋₂₅	466.9 min
water used	0.4312 m ³
f	4.250E-06 m/sec.

Field Data

Depth to Water	Eapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.27	0.1	100	0.49
0.27	6.0	100	0.49
0.29	22.0	96	0.47
0.32	56.0	90	0.44
0.35	66.0	84	0.41
0.35	82.0	84	0.41
0.36	104.0	82	0.40
0.38	116.0	78	0.38
0.4	140.0	73	0.36
0.44	170.0	65	0.32
0.47	220.0	59	0.29
0.48	240.0	57	0.28
0.52	320.0	49	0.24
0.55	380.0	43	0.21
0.6	480.0	33	0.16
0.67	700.0	18	0.09
0.72	900.0	8	0.04
T75	131.000	75	
T25	597.857	25	
T75-25	466.857	Derived from Best Fit	



Comments

Data were extrapolated after 116 minutes to calculate an infiltration rate.

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Soakaway Calculations

Soakaway Test No.	TP5/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

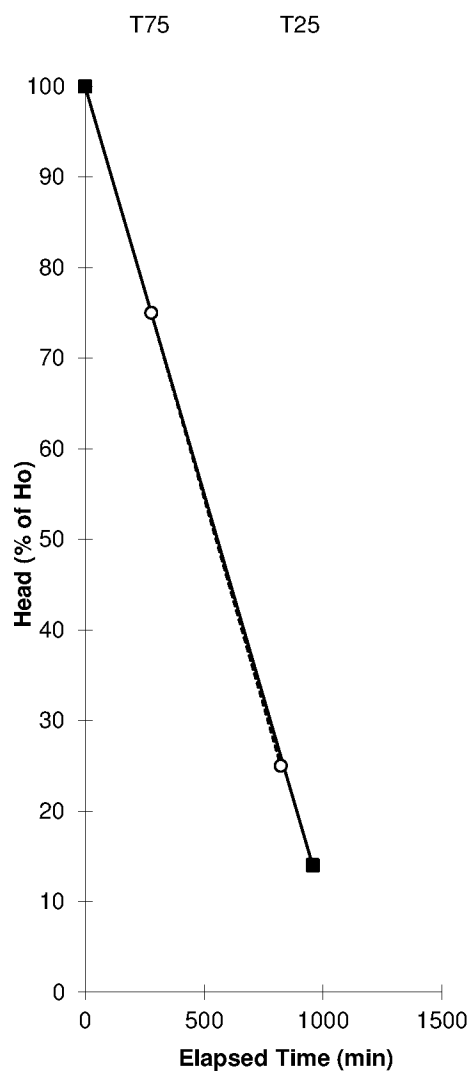
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.76 m
Width of Pit	0.80 m
Length of Pit	1.10 m
Depth of Pit Soaked	0.57 m
ap50	1.963 m2
Vp75-25	0.2508 m3
t75-25	545.0 min
water used	0.5016 m3
f	3.907E-06 m/sec.

Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.19	0.1	100	0.57
0.68	956.0	14	0.08



T75	278.000	75
T25	823.000	25
T75-25	545.000	Derived from Best Fit

Comments

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Soakaway Calculations

Soakaway Test No.	TP6/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

Field Test

Trial Pit Log (include details of groundwater):

See trial Pit record

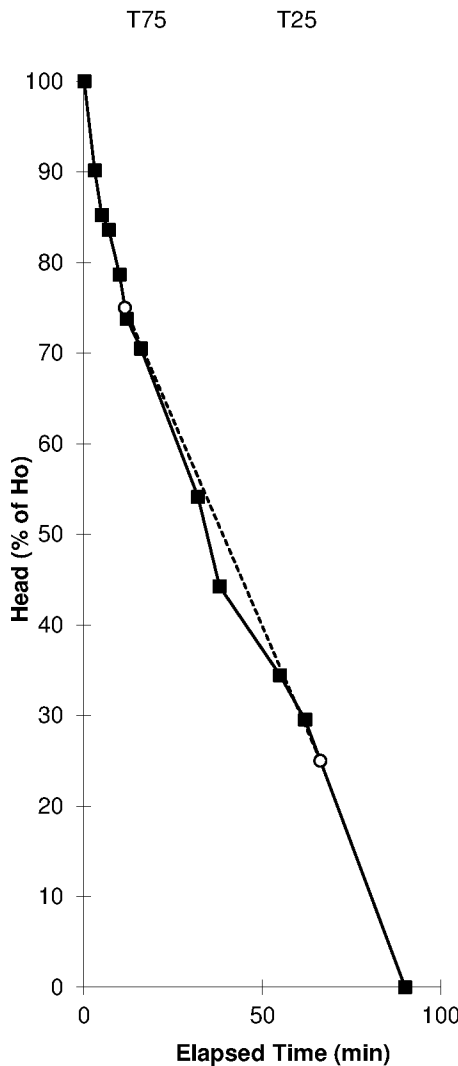
Depth of Pit	0.70 m
Width of Pit	0.90 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.61 m

ap50	2.059 m2
vp75-25	0.2745 m3
ev5-25	54.8 min
water used	0.5490 m3
$\dot{e}$	4.056E-05 m/sec.

Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.09	0.1	100	0.61
0.15	3.0	90	0.55
0.18	5.0	85	0.52
0.19	7.0	84	0.51
0.22	10.0	79	0.48
0.25	12.0	74	0.45
0.27	16.0	70	0.43
0.37	32.0	54	0.33
0.43	38.0	44	0.27
0.49	55.0	34	0.21
0.52	62.0	30	0.18
0.70	90.0	0	0.00

T75	11.500	75
T25	66.278	25
T75-25	54.778	Derived from Best Fit



Comments

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Soakaway Calculations

Soakaway Test No.	TP6A/SK1
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

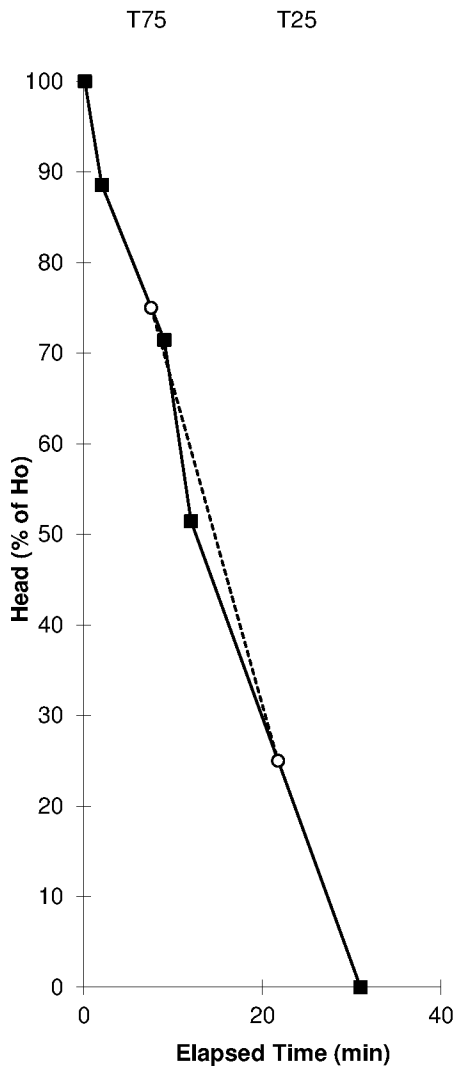
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.40 m
Width of Pit	0.50 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.35 m
ap50	1.025 m ²
v _{p75-25}	0.0875 m ³
t ₇₅₋₂₅	14.2 min
water used	0.1750 m ³
i	1.000E-04 m/sec.

Field Data

Depth to Water	Elsaped Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
0.05	0.1	100	0.35
0.09	2.0	89	0.31
0.15	9.0	71	0.25
0.22	12.0	51	0.18
0.4	31.0	0	0.00



T75	7.542	75
T25	21.764	25
T75-25	14.222	Derived from Best Fit

Comments

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Soakaway Calculations

Soakaway Test No.	TP6A/SK2
Contract:	Orchard Business Park, North End Road, Yapton, BN18 0GA
Contract No.	16710

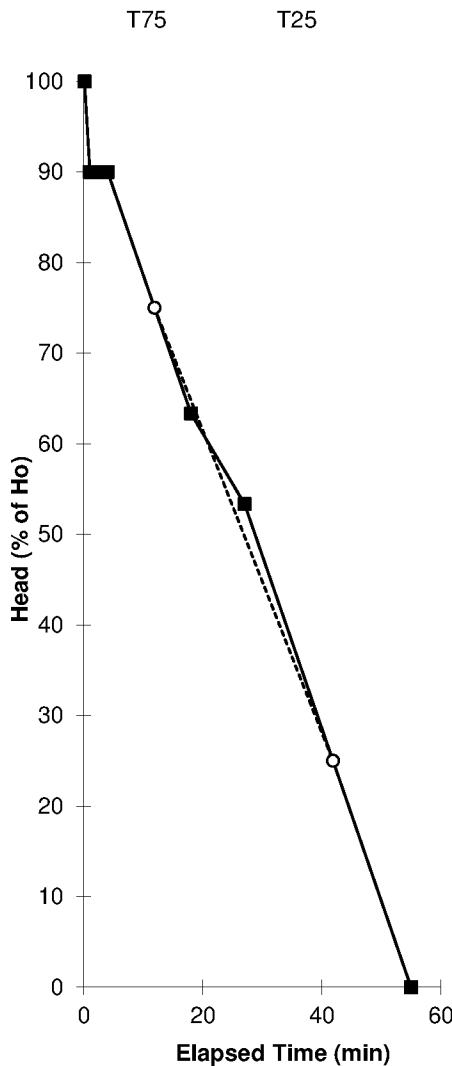
Field Test

Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	0.40 m
Width of Pit	0.50 m
Length of Pit	1.00 m
Depth of Pit Soaked	0.30 m
$ap50$	0.95 m ²
v_{p75-25}	0.075 m ³
t_{75-25}	30.0 min
water used	0.1500 m ³
i	4.386E-05 m/sec.

Field Data

<u>Depth to</u>	<u>Elapsed</u>	<u>Head of</u>	<u>Head of</u>
<u>Water</u>	<u>Time</u>	<u>Water</u>	<u>Water</u>
(m)	(min)	(% of Ho)	(m)
0.1	0.1	100	0.30
0.13	1.0	90	0.27
0.13	2.0	90	0.27
0.13	3.0	90	0.27
0.13	4.0	90	0.27
0.21	18.0	63	0.19
0.24	27.0	53	0.16
0.40	55.0	0	0.00
T75	11.875	75	
T25	41.875	25	
T75-25	30.000	Derived from Best Fit	



Comments

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