PADDOCK GEO ENGINEERING

Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN

GROUND INVESTIGATION – BRE365 INFILTRATION TESTING

Green Square Group

September 2021

P21-264inf

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ISSUE	DATE	Written by:	Comment
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For and on behalf of Paddock Geo Engineering Limited			

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GROUND INVESTIGATION – BRE365 INFILTRATION TESTING

TAPPERS FARM, OFF OXFORD ROAD, BODICOTE, BANBURY, OX15 4BN

Further to instructions received from PHG Consulting Engineers on behalf of Green Square Space; the Client, infiltration has been carried out to the BRE365 methodologies at the above site in relation to assessing the infiltration properties of the underlying ground.

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.

Scope of Works

The works comprised the forming of 8no. machine excavated trial pits, with infiltration testing within all trial pits to the BRE365 methodology.

Terms of Reference

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

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

Sitework

The sitework was carried out on the 16th and 17th August 2021 and comprised the forming of 8no. machine excavated trial pits to depths of between 0.50m and 1.70m below ground level (bgl) for infiltration testing to the BRE 365 methodology.

The trial pit positions were undertaken on site in an area clear of obstruction and any buried services following a Cable Avoidance Tool (CAT) and Signal Generator survey and inspection of service plans, where available. The test location is indicated on the enclosed Exploratory Location Plan presented in Appendix B and were located on the edges of the site to allow the continued use of the site.

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

The trial pit was reinstated with compacted arisings to make safe on completion of the logging and testing.

Encountered Strata

A log of the Trial Pit and an Exploratory Location Plan showing the positions investigated are presented in Appendix C and B, respectively.

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

Encountered Strata

Encountered Strata – Trial Pit Strata	Exploratory Hole and Basal Depth (m begl)							
	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8
MADE GROUND Hardcore over pale grey mottled orange red very sandy cobbly very angular to angular fine to coarse GRAVEL of brick, slab, concrete, flint, igneous rock, clinker and macadam,. Cobbles are very angular to angular brick and concrete.	0.40	-	-	-	-	-	-	-
TOPSOIL TYPE MADE GROUND Grass onto orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular fine to coarse brick, flint and limestone.	-	0.20	0.30	0.35	0.30	0.30	0.20	0.20
MARLSTONE ROCK FORMATION Firm orange brown very sandy CLAY.	0.90	-	-	-	-	-	-	-
Medium dense orange brown slightly to very gravelly slightly to very clayey fine to coarse SAND.	-	0.70	1.30	1.10	0.90	-	0.50	0.70
Medium dense orange brown clayey GRAVEL with high cobble content.	-	-	1.70	1.40	1.30	1.00	-	-
Total Depth (m bgl)	**0.90**	**0.70**	**1.70**	**1.40**	**1.30**	**1.00**	**0.50**	**0.70**

Groundwater Details

No ground water was encountered within any of the exploratory position to the maximum depth investigated of 1.70m bgl.

Laboratory Analysis

No lab analysis was carried out.

Surface Water Soakaways

Infiltration testing was carried out within all eight trial pits to the BRE365 methodology to provide an estimate infiltration factor for the subject site.

All of the trial pits tested soils which were considered to be Marlstone Rock Formation deposits and three cycles were undertaken within each trial pit.

The trial pits were formed to a depth of between 0.50m and 1.70m bgl and filled with between 0.40m and 0.50m of water at the base to limit the water used and trial pit instability. Therefore, for the infiltration calculations an invert incoming pipe level slightly above the filled water level was employed.

The results are presented in Appendix E and are summarised in the table below.

Infiltration Factors

Trial Pit	Soil Tested	Test Depth	Infiltration Factor (ms^{-1})			
			Cycle 1	Cycle 2	Cycle 3	Mean
SA1	Marlstone Rock Formation	0.40-0.90	1.31E-05	8.72E-06	8.61E-06	1.01E-05
SA2		0.30-0.70	3.64E-05	3.13E-05	1.32E-05	2.70E-05
SA3		1.20-1.70	1.48E-04	8.98E-05	5.59E-05	9.79E-05
SA4		1.00-1.40	1.53E-04	1.19E-04	9.80E-05	1.23E-04
SA5		0.80-1.30	1.99E-04	8.93E-05	7.48E-05	1.21E-04
SA6		0.50-1.00	5.34E-05	4.99E-05	3.56E-05	4.63E-05
SA7		0.00-0.50	4.58E-05	4.44E-05	3.57E-05	4.20E-05
SA8		0.20-0.70	4.88E-05	3.41E-05	2.25E-05	3.51E-05

Given the infiltration testing results, the tested shallow and deeper Marlstone Rock Formation are considered to be suitable for the construction of effective infiltration features.

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 outside of the agreed scope of work.

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 possible 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.

APPENDIX A

Site Plan (After PGH Consulting Engineers)

GENERAL NOTES

1. Do Not Scale.
2. The contractor is to check and verify all buildings and site dimensions all levels, including sewer invert levels, before works start on site. The contractor is to comply in all aspects with the current building legislation, British Standards, building regulations etc.
3. Positions of existing services/statutory undertakers apparatus adjacent to or crossing proposed excavations are to be checked by the contractor prior to starting work.
4. This drawing is to be read in conjunction with and checked against all other drawings, Engineering Details, Specification and any structural, geotechnical or other specialist document provided.
5. Any anomaly or contradiction between any of the above is to be reported to Greensquare.
6. This drawing is schematic for clarity only, positions of pipes and manholes may vary due to site conditions.

ROAD AND SEWER ADOPTION NOTES

1. All works for adoption under a Section 38 agreement shall be carried out to the approval of Oxfordshire County Council.
2. All works for adoption under a Section 104 agreement shall be carried out to the National Water Council guide 'Sewers for Adoption' 8th edition and Thames Water requirements.
3. Streetlighting positions to be pegged on site and agreed by the Local Authority PRIOR to erection commencing.

DRAINAGE NOTES

1. All private drainage shall be in accordance with BS8301 and relevant sections of Approved Document H of the Building Regulations.
2. The contractor is to check the level of existing sewers being used as outfalls or crossing proposed drainage runs PRIOR to laying any pipes. Any discrepancies are to be reported to the Engineer
3. Private house drainage will be flexibly jointed plastic or clay pipework. Diameter 100mm unless shown otherwise.
4. All connections for House Drainage shall be 100mm unless noted otherwise and must extend 500mm behind the back of footway/homezone road. All connections when laid shall be plugged, protected as necessary and marked with a stake for future use.
5. For private drains where cover to pipes is less than 900mm in vehicular areas or 600mm in other areas protection in the form of a 100mm thick concrete pad shall be provided over the pipe granular surround.
6. Where pipes pass through screen walls, footings or retaining walls lintels are to be provided over. Under buildings pipes shall be surrounded with 150mm thickness of granular material. Where drains pass within 1m of buildings the wall foundation shall be taken down below the invert of the pipe.
7. Where drains do not exceed 600mm deep, plastic or clay access fittings minimum diameter 225mm shall be used. Elsewhere proprietary plastic or precast concrete inspection chambers shall be used. Unless shown otherwise FW inspection chambers are to be 750mm below dpc level and SW chambers and rodding eyes to be 600mm below dpc.
8. All gullies and rainwater downpipes connected directly to drains are to be roddable.
9. House levels shown are dpc and adjacent garage floors are to be 150mm lower unless shown otherwise. Levels at drainage access points are inverts.
10. Drainage runs should be laid at a minimum of 5.0m form the rear of properties where practical to allow for future extensions.
11. All drainage shall be laid upstream and each run between manholes shall be laid complete prior to backfilling. Where this is not practical trial holes or other means of identifying the line and level of services shall be carried out prior to works commencing.
12. All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.
13. All low spots on hardstanding areas to have yard gullies/ACO.

LEGEND

- Foul Water Sewer/Lateral Drain (adoptable)
- Foul Water Manhole (adoptable)
- Adopted Foul Water Sewer (existing)
- Surface Water Sewer (adoptable)
- Surface Water Manhole (adoptable)
- 134.50 — Building D.P.C. Level
- 135.50* — Proposed Finished Ground Level
- 600UB — Additional Underbuild (below d.p.c. as shown)
- 500RW — Retaining Wall - (Height shows difference in levels - finished level at bottom and top).
- Steps (to be Part M Compliant)
- Porous Paving (adoptable)

Rev.	Date	Details	By.	Chk.

Amendments

Client:

GreenSquare

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Project:

GreenSquare Group
Oxford Road
Bodicote

Drawing Title:

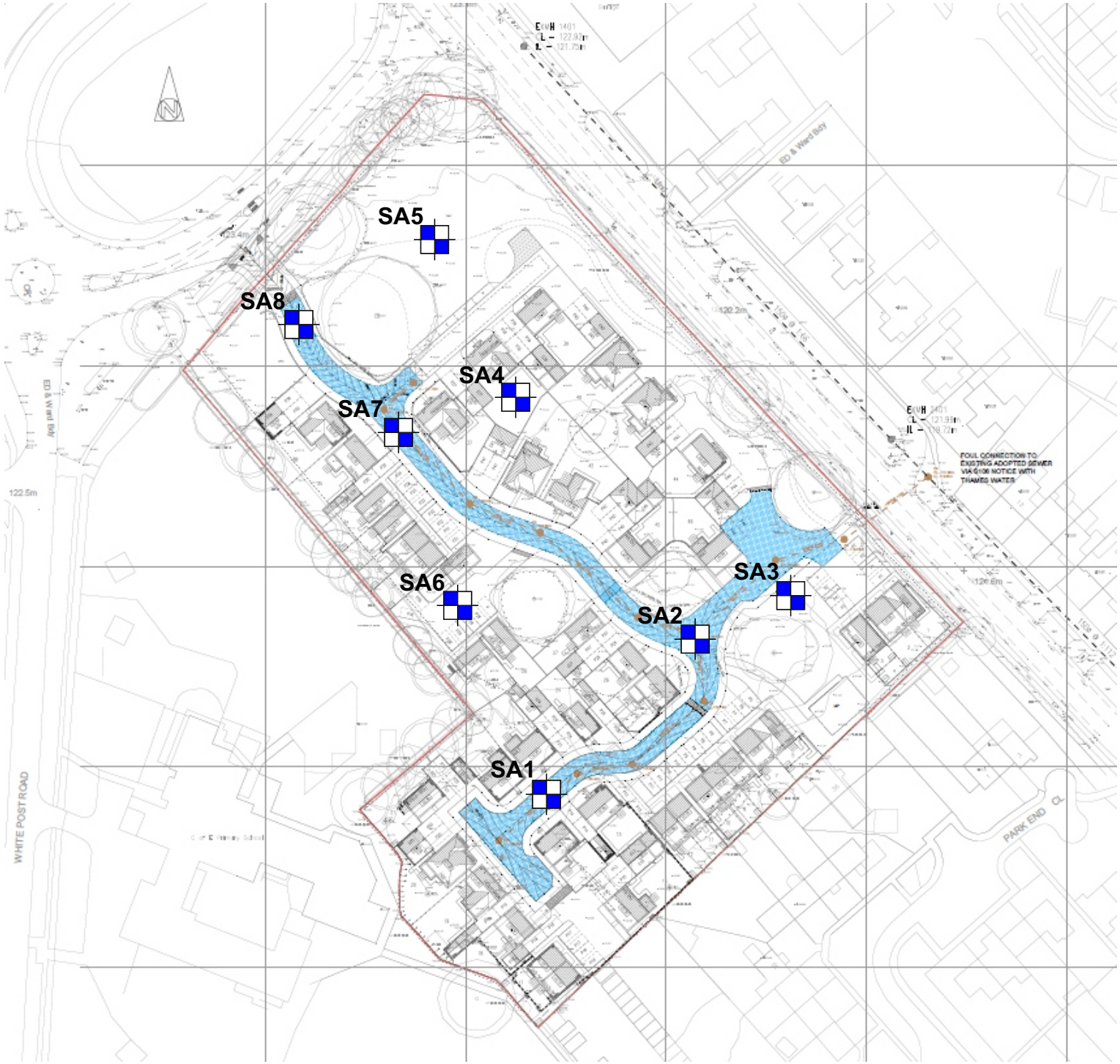
Engineering Layout

Drawn:	Chk:	Status:	Scale:
TL	SJD	Planning	1:500 @ A1

Date:	Job No.	Drg. No.	Rev.
May-21	2192	100	

APPENDIX B

Exploratory Point Location Plan



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Exploratory Point Location Plan

**Tappers Farm,
off Oxford Road,
Bodicote,
Banbury,
OX15 4BN.**

Green Square Group

September 2021

Infiltration testing Locations

**Not to scale.
All positions are approximate.
Based on
Engineering Layout
by PHG Consulting Engineers
Job No. 2192 Drawing No. 100**

APPENDIX C

Trial Pit Logs

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Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA1

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.20m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.40)	Hardcore over pale grey brown mottled orange red very sandy cobbly very angular to angular fine to coarse GRAVEL of brick, slate, concrete, flint, igneous rock, clinker and macadam. Cobbles are very angular to angular brick and concrete. (MADE GROUND)		
					0.40			
					(0.50)	Firm orange brown very sandy CLAY. Sand is fine to coarse. (MARLSTONE ROCK FORMATION)		
					0.90			
						Complete at 0.90m		

Remarks

No groundwater encountered.
Trial pit sides upright and stable.
Infiltration testing undertaken.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA1

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PADDOCK GEO ENGINEERING

Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA2

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.20m		Green Square Group	P21-264
	Location	**Dates** 16/08/2021-17/08/2021	**Project Contractor** PGE	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Grass onto orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular fine to coarse brick, flint and limestone. Sand is fine to coarse. (TOPSOIL TYPE MADE GROUND)		
					0.20			
					(0.50)	Medium dense orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					0.70	Complete at 0.70m		

Remarks

Infiltration testing undertaken.
Trial pit sides upright and stable.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA2

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Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.30m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/2

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	Grass onto orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular fine to caorse brick, flint and limestone. Sand is fine to coarse. (TOPSOIL TYPE MADE GROUND)		
					0.30	Medium dense orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					(1.00)	... becoming very gravelly very clayey from 1.1m depth.		
					1.30	Medium dense orange brown clayey GRAVEL with high cobble content. Gravel is angular to sub-rounded limestone. Cobbles are angular tabular limestone. (MARLSTONE ROCK FORMATION)		
					(0.40)			

Remarks

Infiltration testing undertaken.
Trial pit sides upright and stable.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA3

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PADDOCK GEO ENGINEERING

Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA3

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.30m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	2/2

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					1.70	Complete at 1.70m		

Plan

Remarks

Infiltration testing undertaken.
Trial pit sides upright and stable.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA3

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Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA4

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.30m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.35)	Grass onto pale orange brown gravelly fine to coarse SAND with frequent roots and rootlets. Gravel is angular to sub-angular fine to coarse limestone. (TOPSOIL TYPE MADE GROUND)		
					0.35	Medium dense orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					(0.75)	... becoming very gravelly very clayey from 0.80m depth.		
					1.10	Medium dense orange brown clayey GRAVEL with high cobble content. Gravel is angular to sub-rounded limestone. Cobbles are angular tabular limestone. (MARLSTONE ROCK FORMATION)		
					(0.30)			
					1.40	Complete at 1.40m		

Remarks

No groundwater encountered.
Trial pit sides upright and stable.
Infiltration testing undertaken.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA4

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PADDOCK GEO ENGINEERING

Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA5

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.40m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	Grass onto pale orange brown gravelly fine to coarse SAND with frequent roots and rootlets. Gravel is angular to sub-angular fine to coarse limestone. (TOPSOIL TYPE MADE GROUND)		
					0.30	Medium dense orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					(0.60)	... becoming very clayey very gravelly from 0.60m depth.		
					0.90	Medium dense orange brown clayey GRAVEL with high cobble content. Gravel is angular to sub-rounded limestone. Cobbles are angular tabular limestone. (MARLSTONE ROCK FORMATION)		
					(0.40)			
					1.30	Complete at 1.30m		

Remarks

Trial pit sides upright and stable.
Infiltration testing undertaken.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA5

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PADDOCK GEO ENGINEERING

Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA6

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.40m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	Grass onto pale orange brown gravelly fine to coarse SAND with frequent roots and rootlets. Gravel is angular to sub-angular fine to coarse limestone. (TOPSOIL TYPE MADE GROUND)		
					0.30	Medium dense orange brown clayey GRAVEL with high cobble content. Gravel is angular to sub-rounded limestone. Cobbles are angular tabular limestone. (MARLSTONE ROCK FORMATION)		
					(0.70)	... becoming very clayey very gravelly from 0.60m depth.		
					1.00	Complete at 1.00m		

Remarks

Trial pit sides upright and stable.
Infiltration testing undertaken.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA6

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Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA7

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.20m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Grass onto pale orange brown gravelly fine to coarse SAND with frequent roots and rootlets. Gravel is angular to sub-angular fine to coarse limestone. (TOPSOIL TYPE MADE GROUND)		
					0.20			
					(0.30)	Medium dense orange brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					0.50	Complete at 0.50m		

Remarks

No groundwater encountered.
Trial pit sides upright and stable.
Infiltration testing undertaken.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA7

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Site	Trial Pit Number
Tappers Farm, off Oxford Road, Bodicote, Banbury, OX15 4BN	SA8

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
3 Tonne Tracked excavator	0.35m x 1.20m		Green Square Group	P21-264
	Location	**Dates**	**Project Contractor**	**Sheet**
		16/08/2021-17/08/2021	PGE	1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	Grass onto pale orange brown gravelyl fine to coarse SAND with frequent roots and rootlets. Gravel is angular to sub-angular fine to coarse limestone. (TOPSOIL TYPE MADE GROUND)		
					0.20			
					(0.50)	Medium dense orange brown very gravelly very clayey fine to coarse SAND. Gravel is angular to sub-angular limestone. (MARLSTONE ROCK FORMATION)		
					0.70	Complete at 0.70m		

Remarks

No groundwater encountered.
Trial pit sides upright and stable.
Infiltration testing undertaken.

Scale (approx)	Logged By	Figure No.
1:10	TN	P21-264.SA8

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APPENDIX D

Laboratory Analysis Results – Not Used

APPENDIX E

Infiltration Testing Results

Infiltration Test to BRE365 - SA1 TEST 1

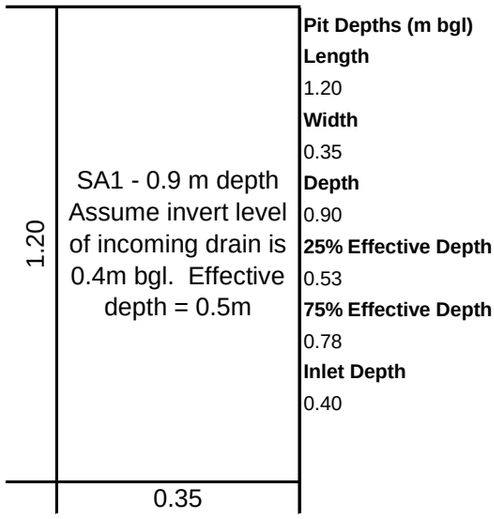
Field Data

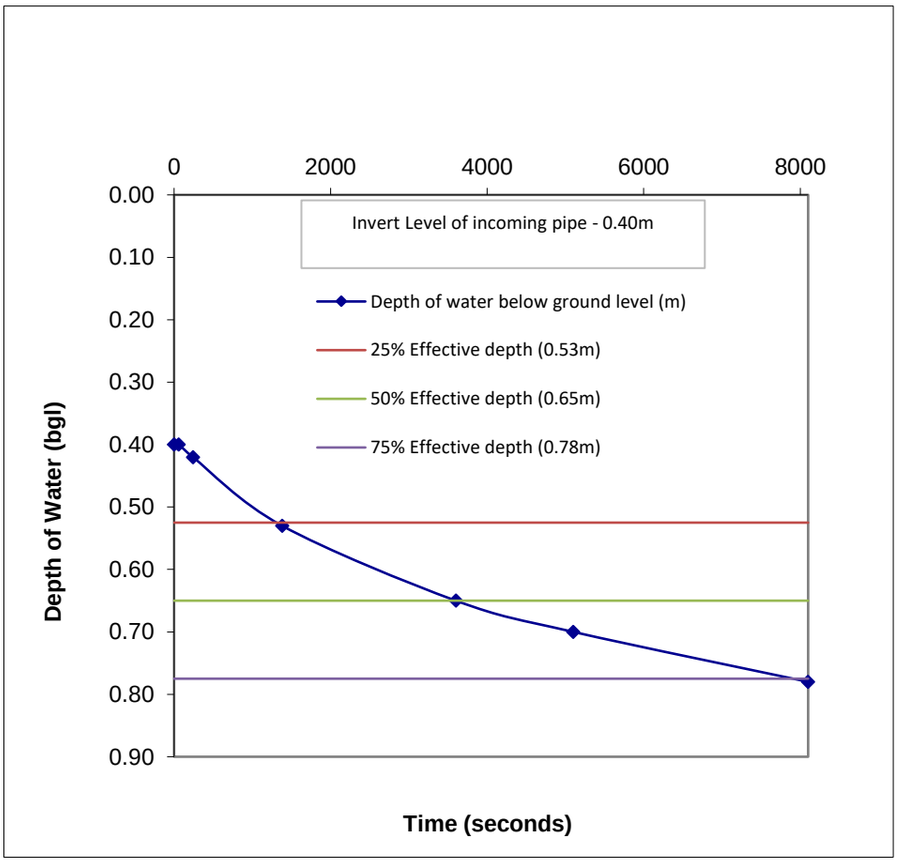
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.40
	1.0	60	0.40
	4.0	240	0.42
	23.0	1380	0.53
	60.0	3600	0.65
	85.0	5100	0.70
	135.0	8100	0.78

Linear extrapolated values for calculation

Location: SA1 **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.775-0.525)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **6720** secs

f= **1.31E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA1 TEST 2

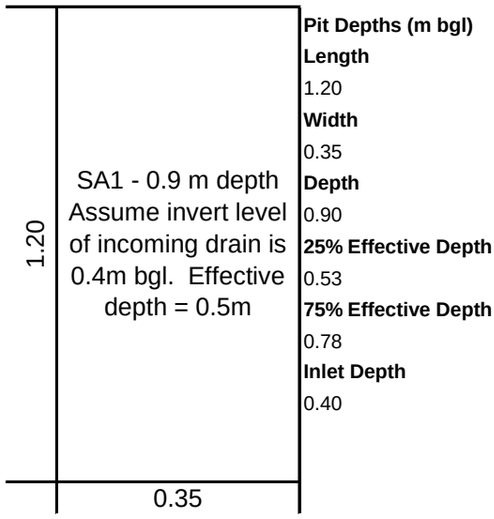
Field Data

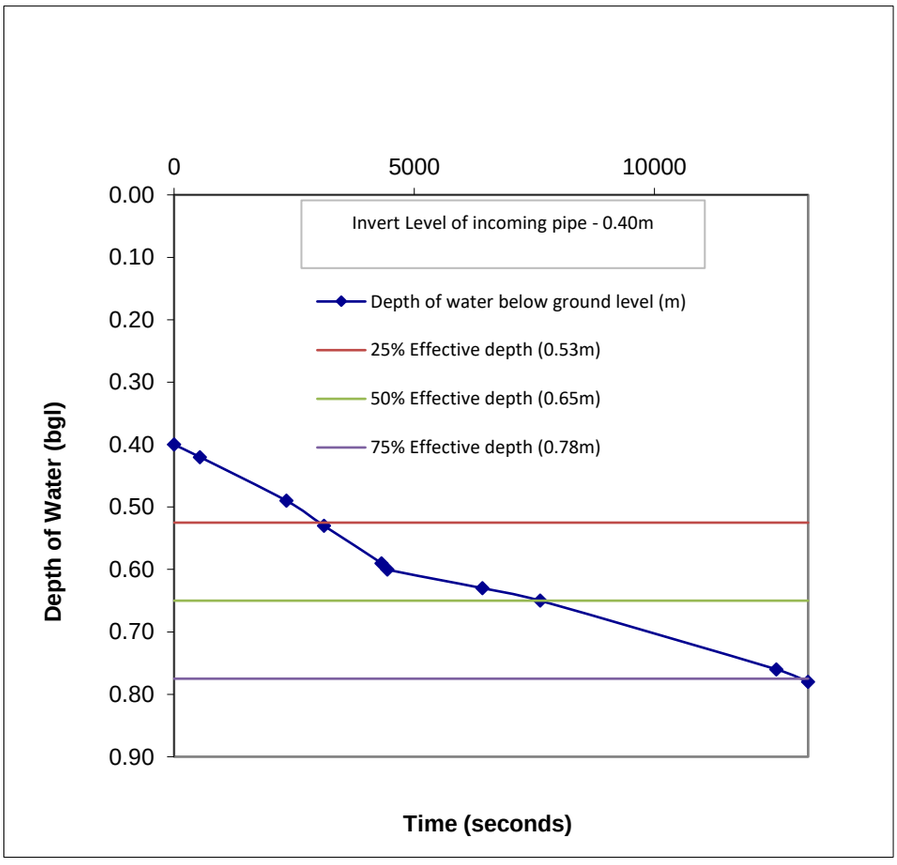
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.40
	9.0	540	0.42
	39.0	2340	0.49
	52.0	3120	0.53
	72.0	4320	0.59
	74.0	4440	0.60
	107.0	6420	0.63
	127.0	7620	0.65
	209.0	12540	0.76
	220.0	13200	0.78

Linear extrapolated values for calculation

Location: **SA1** **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.775-0.525)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **10080** secs

f= **8.72E-06** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA1 TEST 3

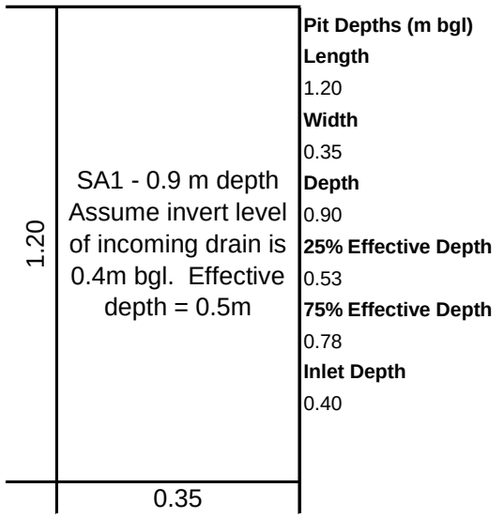
Field Data

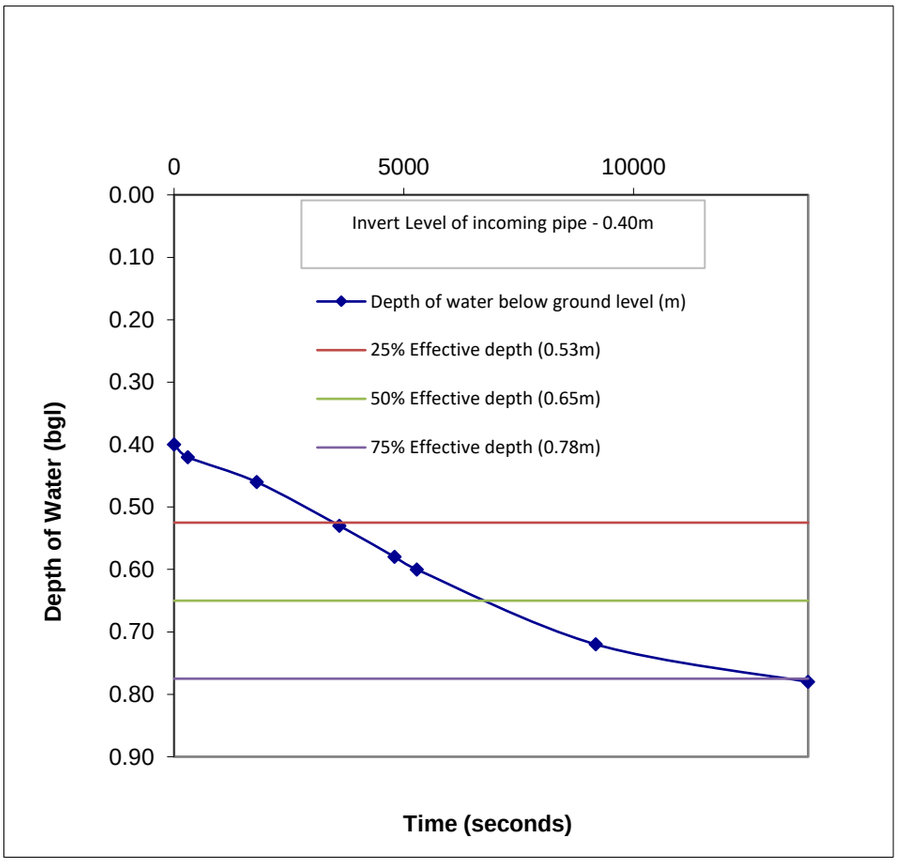
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.40
	5.0	300	0.42
	30.0	1800	0.46
	60.0	3600	0.53
	80.0	4800	0.58
	88.0	5280	0.60
	153.0	9180	0.72
	230.0	13800	0.78

Linear extrapolated values for calculation

Location: SA1 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.775-0.525)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **10200** secs

f= **8.61E-06** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA2 TEST 1

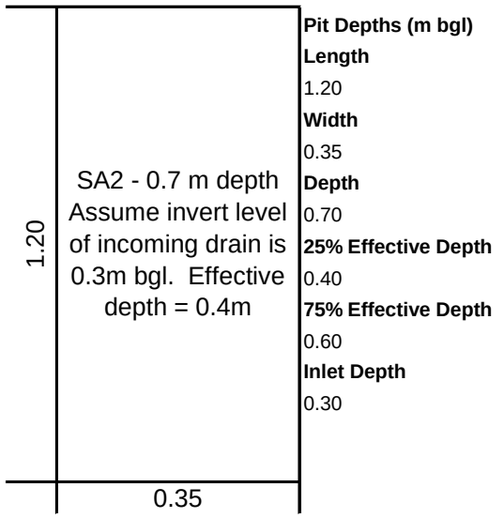
Field Data

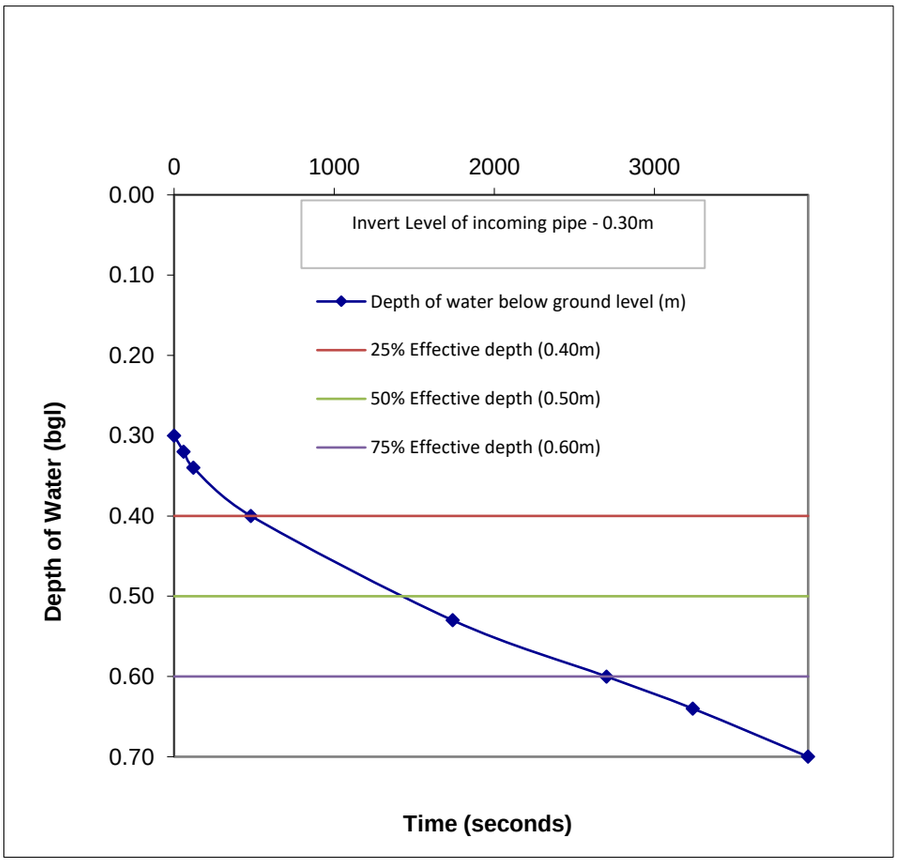
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.30
	1.0	60	0.32
	2.0	120	0.34
	8.0	480	0.40
	29.0	1740	0.53
	45.0	2700	0.60
	54.0	3240	0.64
	66.0	3960	0.70

Linear extrapolated values for calculation

Location: SA2 **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.6-0.4)
= **0.084**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.04

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **2220** secs

f= **3.64E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA2 TEST 2

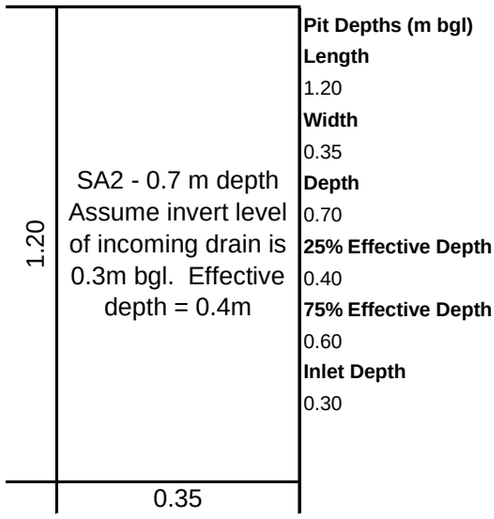
Field Data

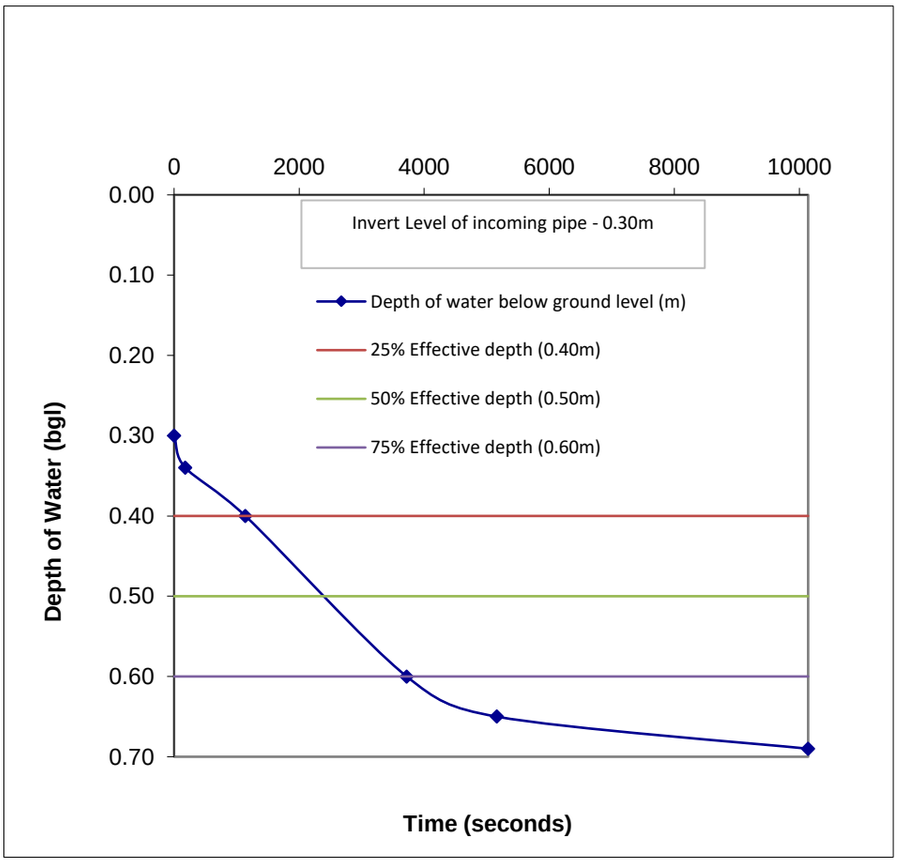
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.30
	3.0	180	0.34
	19.0	1140	0.40
	62.0	3720	0.60
	86.0	5160	0.65
	169.0	10140	0.69

Linear extrapolated values for calculation

Location: SA2 **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.6-0.4)
= **0.084**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.04

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **2580** secs

f= **3.13E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA2 TEST 3

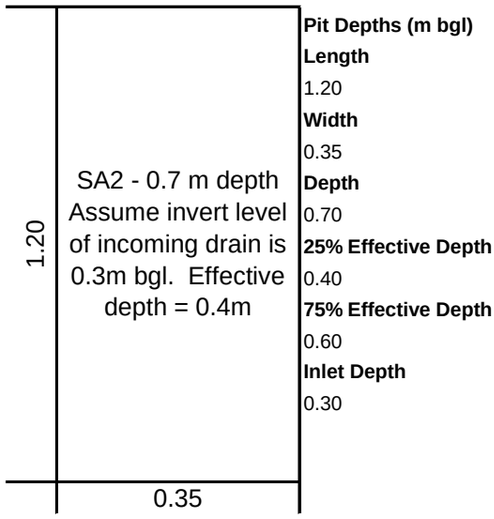
Field Data

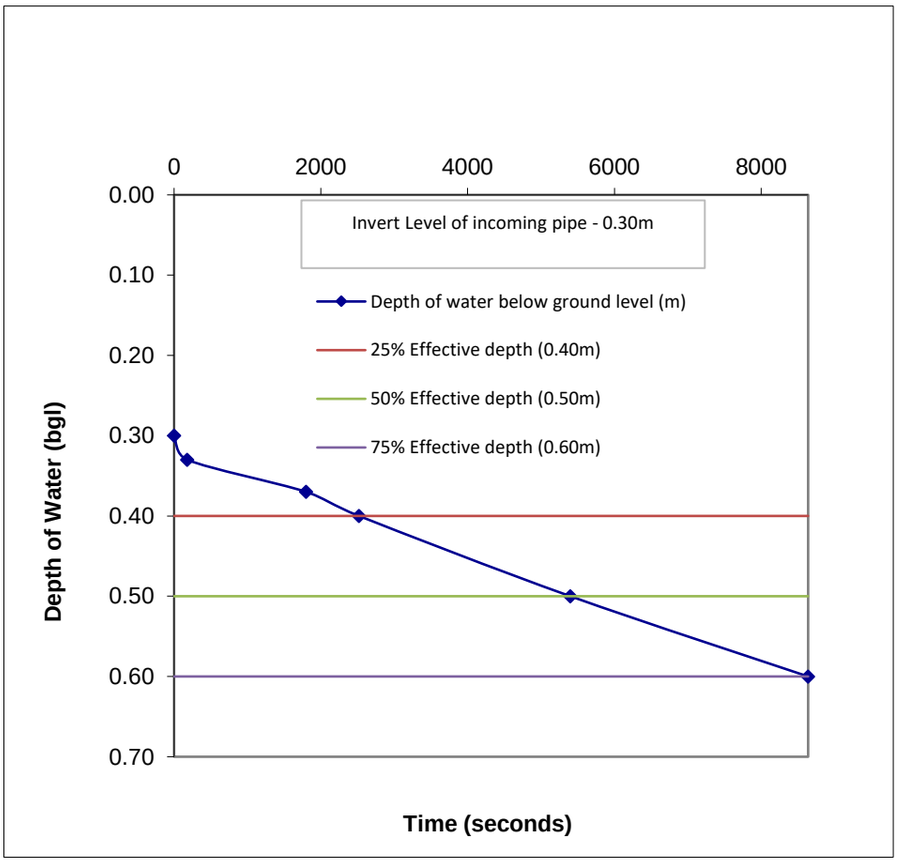
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.30
	3.0	180	0.33
	30.0	1800	0.37
	42.0	2520	0.40
	90.0	5400	0.50
	144.0	8640	0.60

Linear extrapolated values for calculation

Location: SA2 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.6-0.4)
= **0.084**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.04

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **6120** secs

f= **1.32E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA3 TEST 1

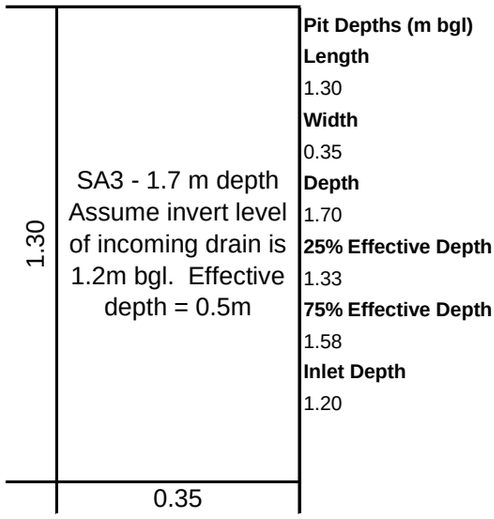
Field Data

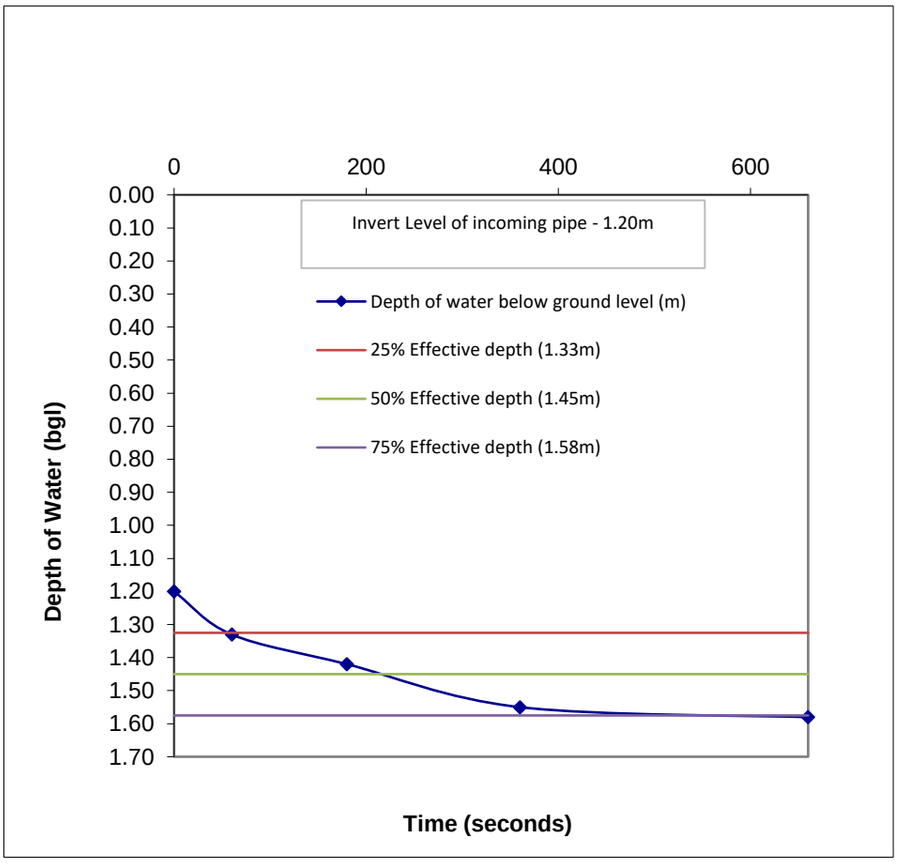
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.20
	1.0	60	1.33
	3.0	180	1.42
	6.0	360	1.55
	11.0	660	1.58

Linear extrapolated values for calculation

Location: SA3 **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.3x0.35x(1.575-1.325)
= **0.11375**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.3 x) + 2(0.35 x) + (1.3 x 0.35)
= 1.28

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **600** secs

f= **1.48E-04** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA3 TEST 2

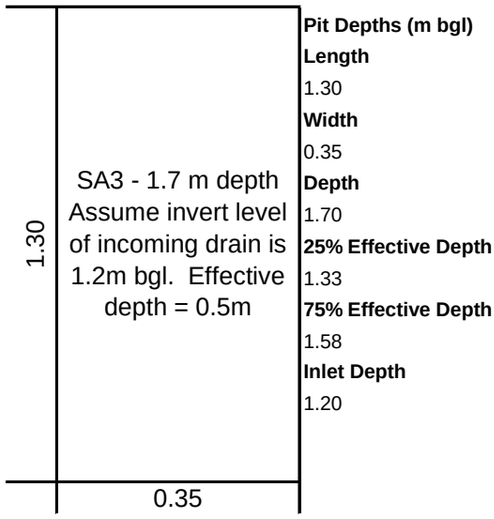
Field Data

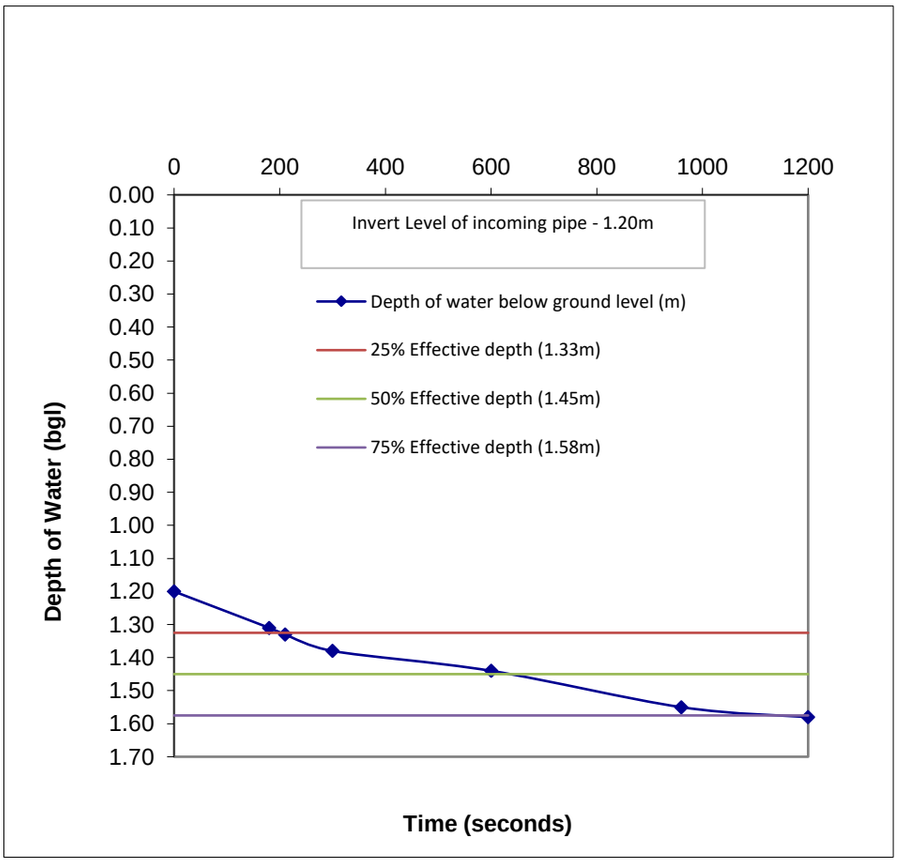
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.20
	3.0	180	1.31
	3.5	210	1.33
	5.0	300	1.38
	10.0	600	1.44
	16.0	960	1.55
	20.0	1200	1.58

Linear extrapolated values for calculation

Location: SA3 **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.3x0.35x(1.575-1.325)
= **0.11375**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.3 x) + 2(0.35 x) + (1.3 x 0.35)
= 1.28

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **990** secs

f= **8.98E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA3 TEST 3

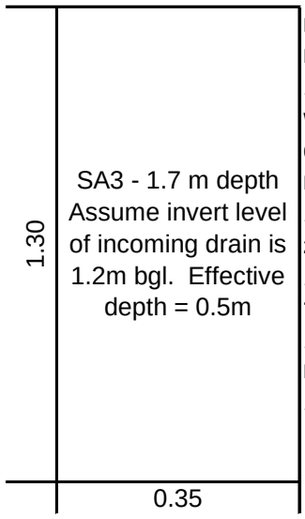
Field Data

Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.20
	3.0	180	1.27
	4.5	270	1.33
	5.0	300	1.35
	10.0	600	1.40
	15.0	900	1.45
	21.0	1260	1.51
	28.0	1680	1.56
	31.0	1860	1.58

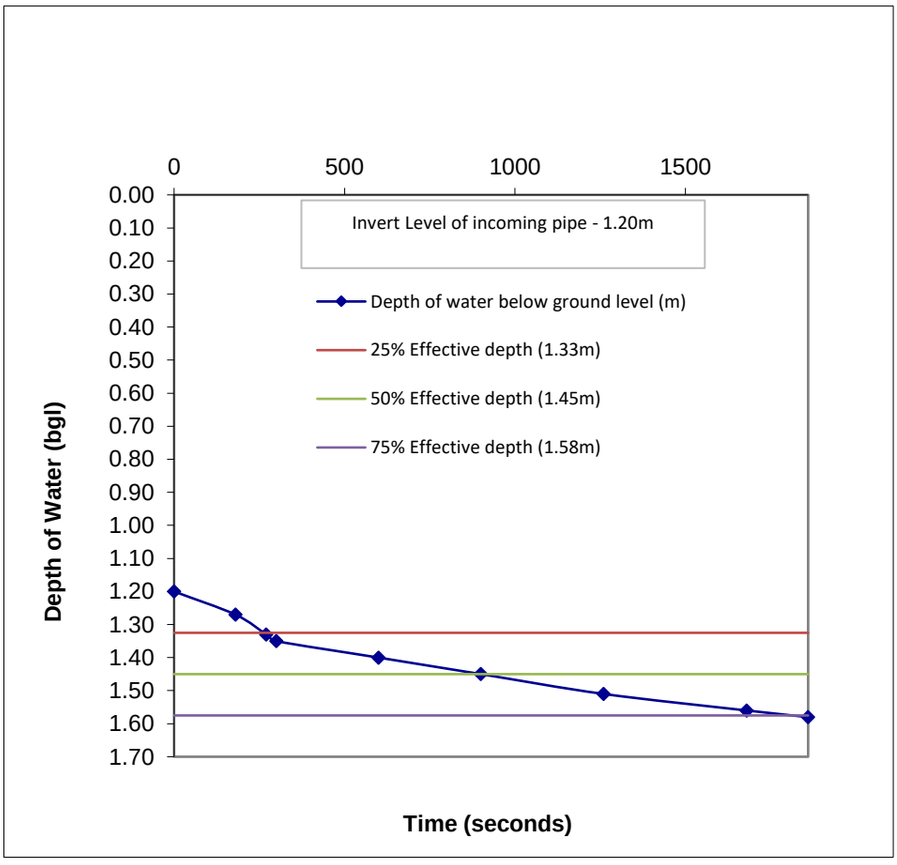
Linear extrapolated values for calculation

Location: SA3 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation



Pit Depths (m bgl)
Length
1.30
Width
0.35
Depth
1.70
25% Effective Depth
1.33
75% Effective Depth
1.58
Inlet Depth
1.20



CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.3x0.35x(1.575-1.325)
= **0.11375**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.3 x) + 2(0.35 x) + (1.3 x 0.35)
= 1.28

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1590** secs

f= **5.59E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA4 TEST 1

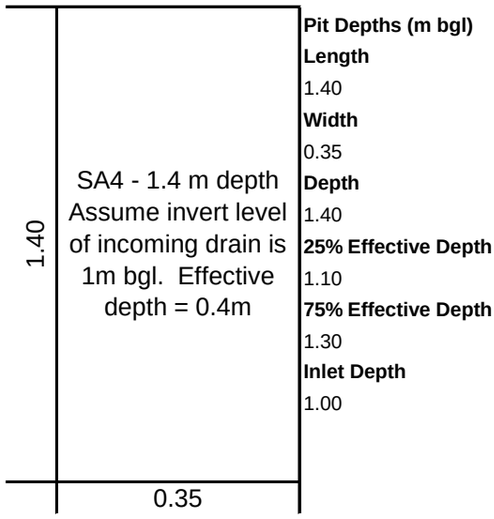
Field Data

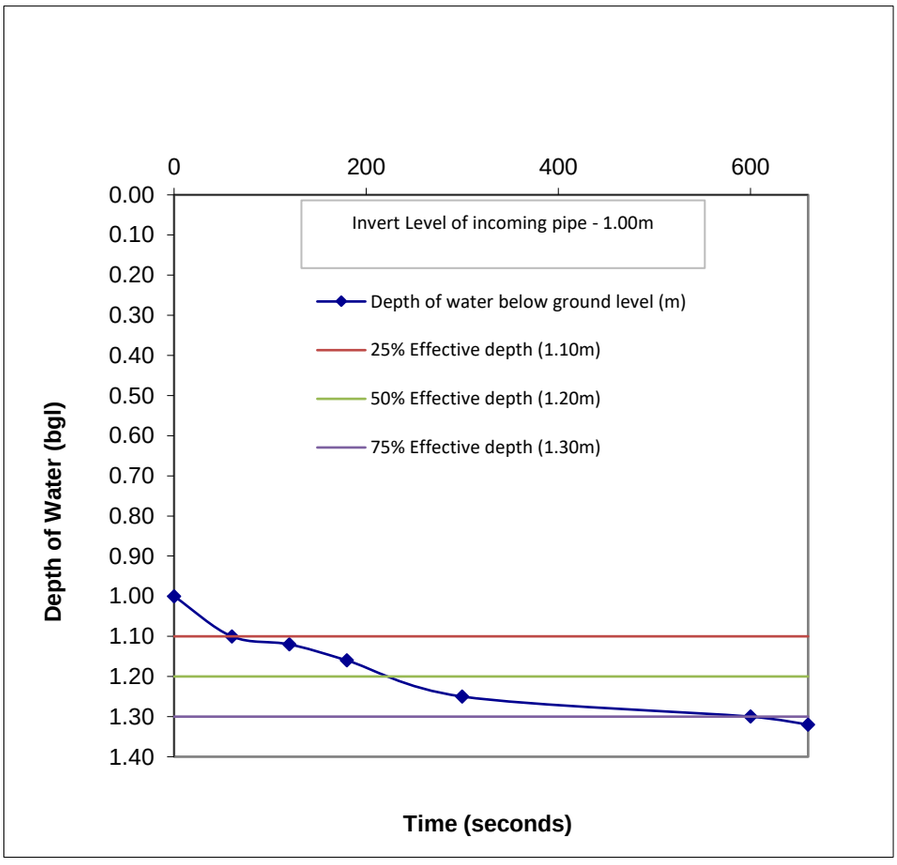
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.00
	1.0	60	1.10
	2.0	120	1.12
	3.0	180	1.16
	5.0	300	1.25
	10.0	600	1.30
	11.0	660	1.32

Linear extrapolated values for calculation

Location: SA4 **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.3-1.1)
= **0.098**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.19

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **540** secs

f= **1.53E-04** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA4 TEST 2

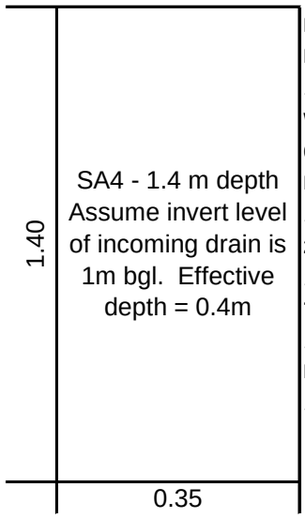
Field Data

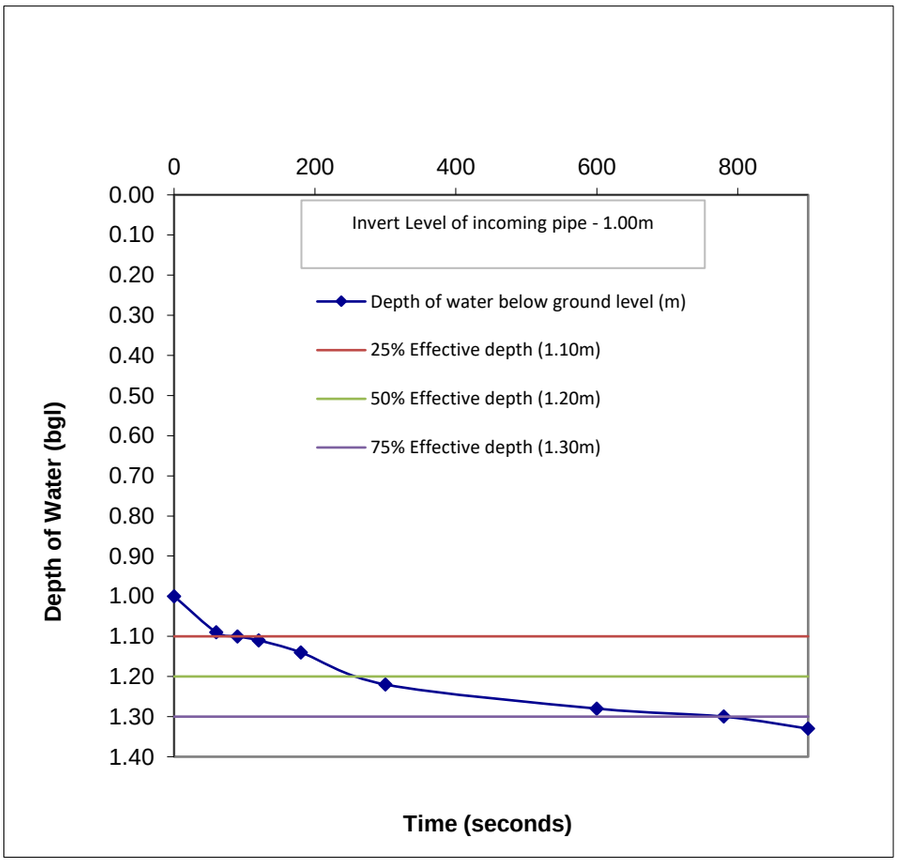
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.00
	1.0	60	1.09
	1.5	90	1.10
	2.0	120	1.11
	3.0	180	1.14
	5.0	300	1.22
	10.0	600	1.28
	13.0	780	1.30
	15.0	900	1.33

Linear extrapolated values for calculation

Location: **SA4** **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.3-1.1)
= **0.098**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.19

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **690** secs

f= **1.19E-04** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA4 TEST 3

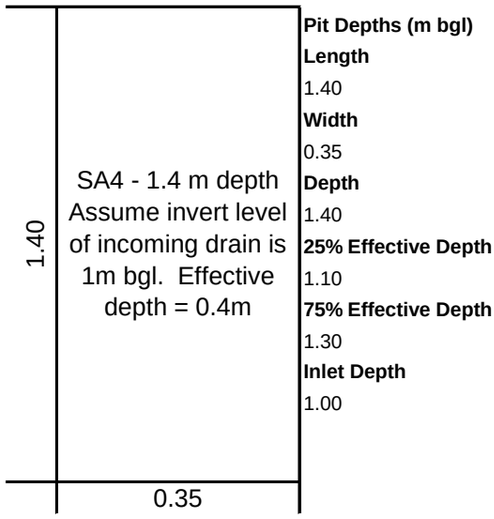
Field Data

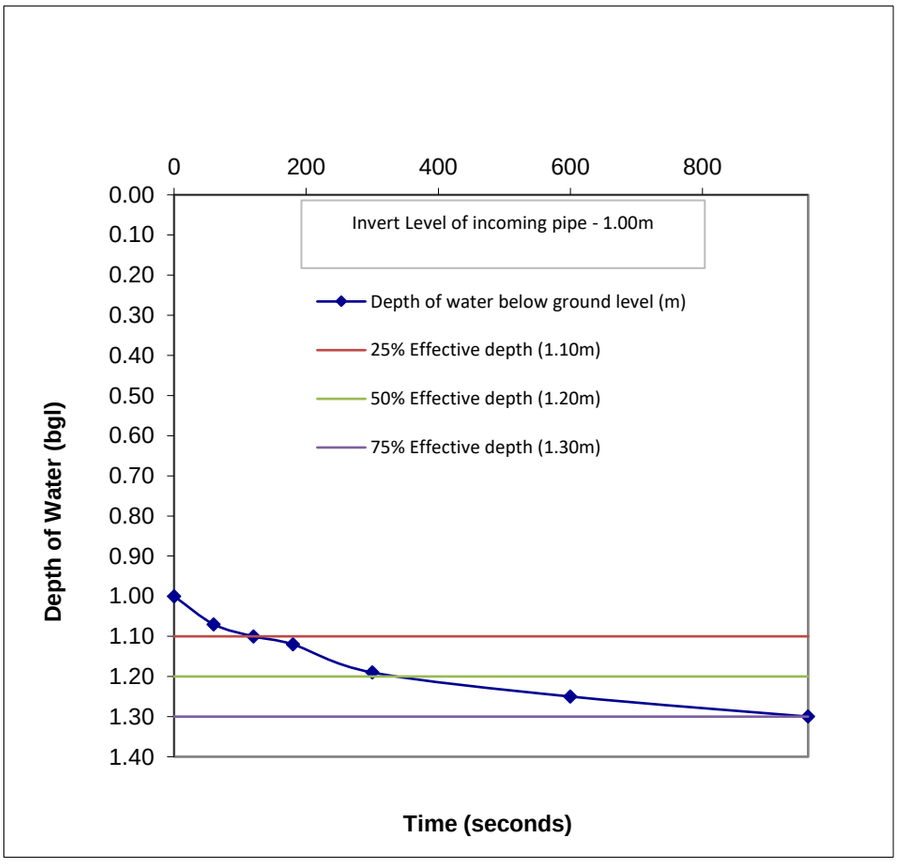
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	1.00
	1.0	60	1.07
	2.0	120	1.10
	3.0	180	1.12
	5.0	300	1.19
	10.0	600	1.25
	16.0	960	1.30

Linear extrapolated values for calculation

Location: SA4 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.3-1.1)
= **0.098**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.19

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **840** secs

f= **9.80E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA5 TEST 1

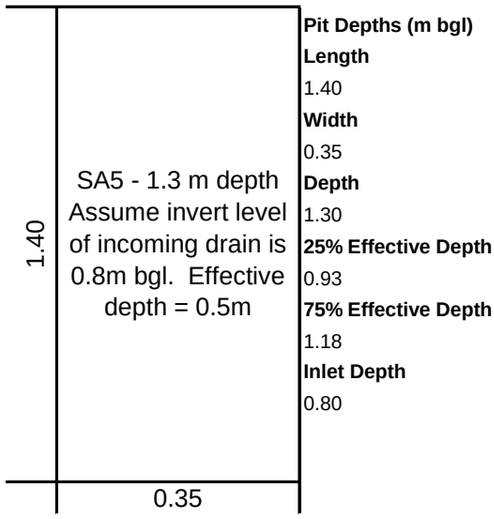
Field Data

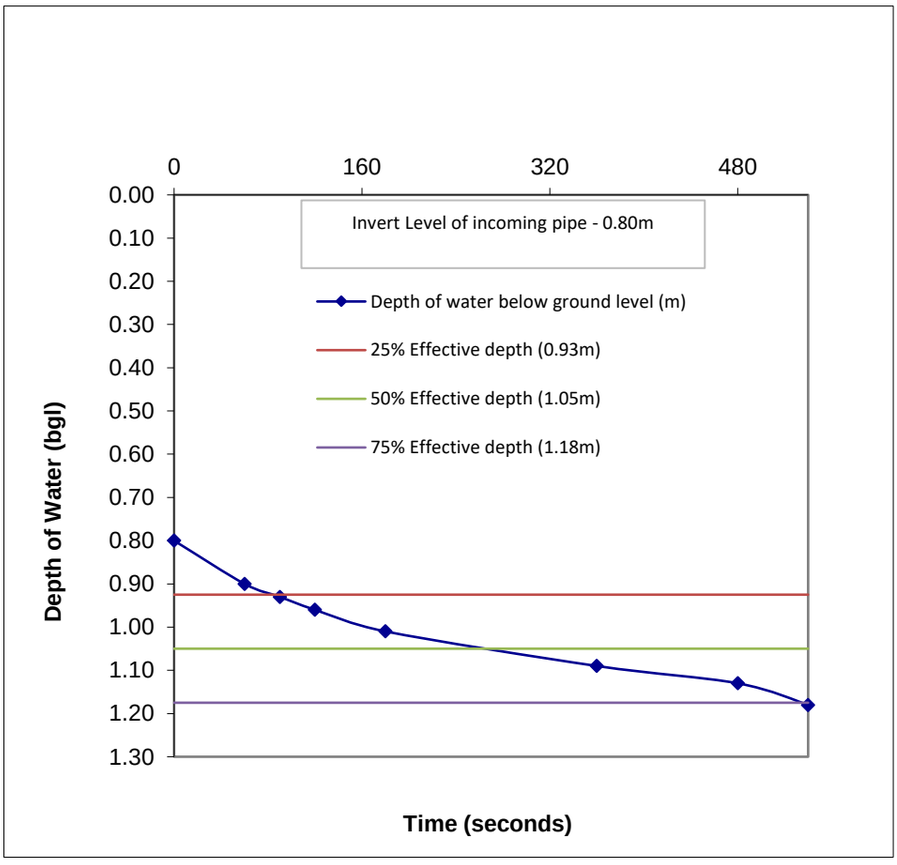
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.80
	1.0	60	0.90
	1.5	90	0.93
	2.0	120	0.96
	3.0	180	1.01
	6.0	360	1.09
	8.0	480	1.13
	9.0	540	1.18

Linear extrapolated values for calculation

Location: **SA5** **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.175-0.925)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **450** secs

f= **1.99E-04** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA5 TEST 2

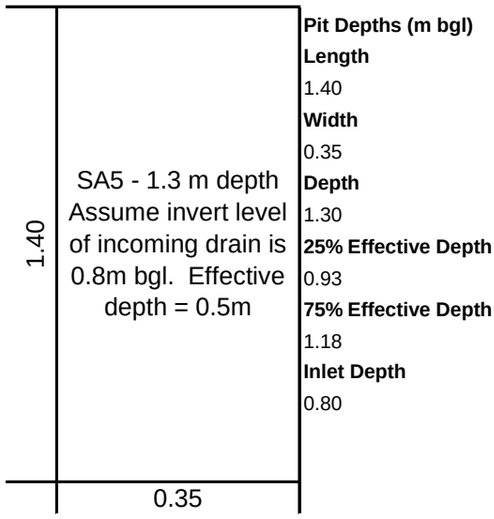
Field Data

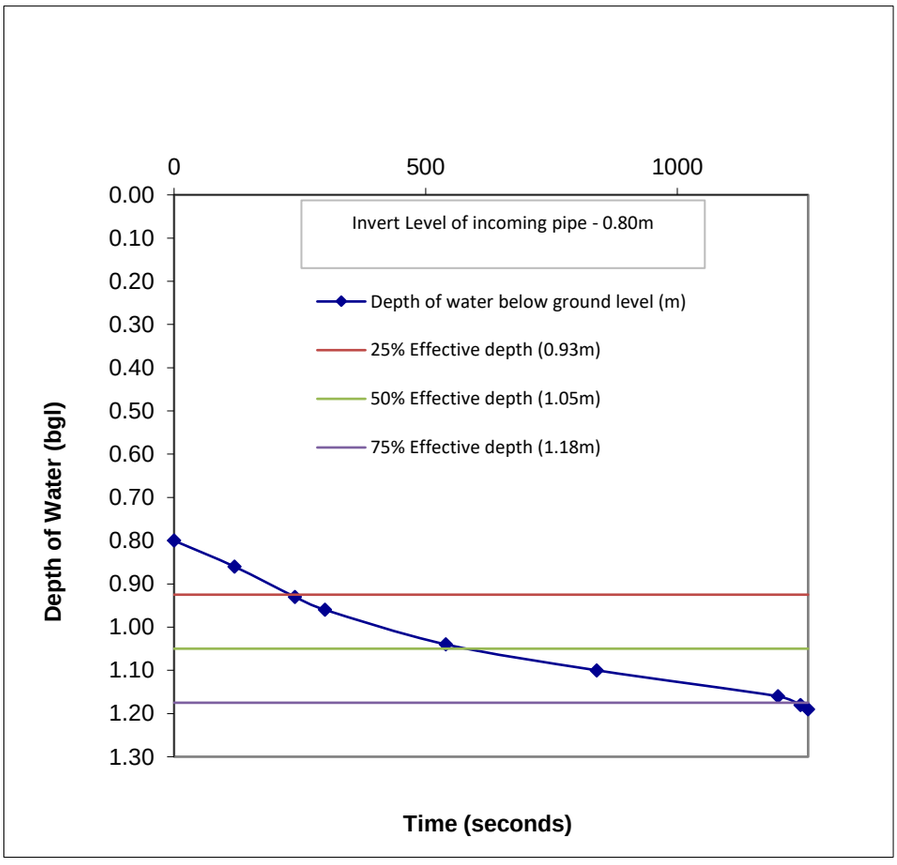
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.80
	2.0	120	0.86
	4.0	240	0.93
	5.0	300	0.96
	9.0	540	1.04
	14.0	840	1.10
	20.0	1200	1.16
	20.8	1245	1.18
	21.0	1260	1.19

Linear extrapolated values for calculation

Location: SA5 **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.175-0.925)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1005** secs

f= **8.93E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA5 TEST 3

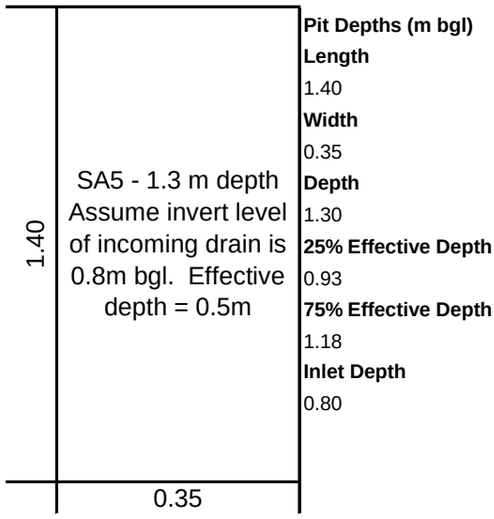
Field Data

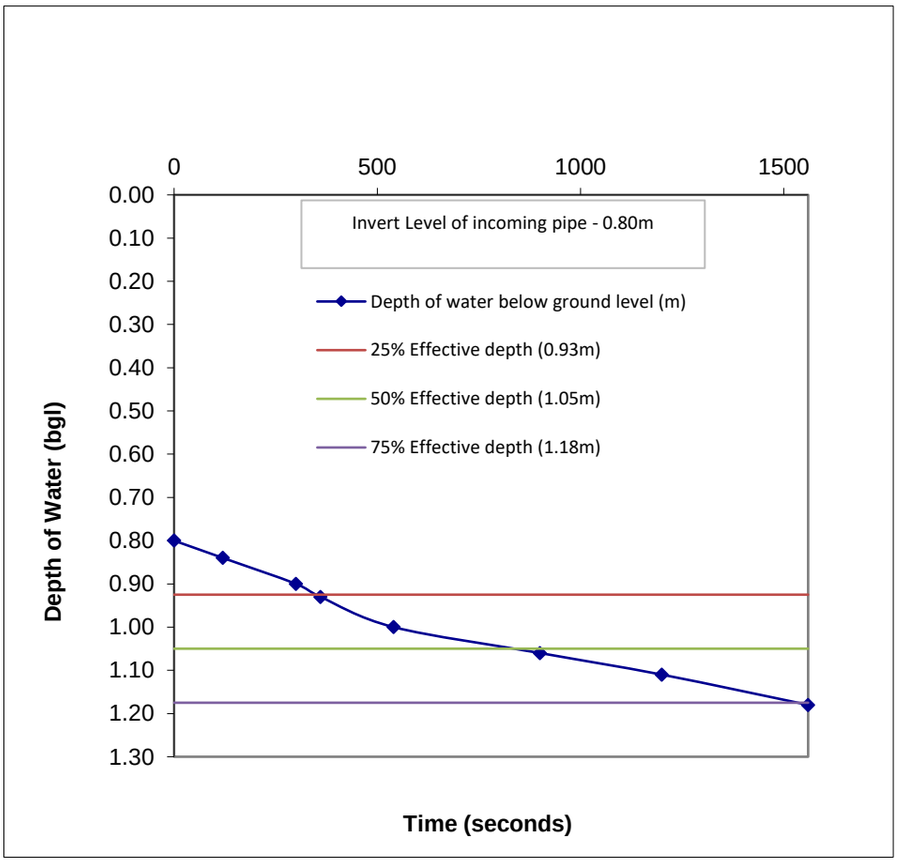
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.80
	2.0	120	0.84
	5.0	300	0.90
	6.0	360	0.93
	9.0	540	1.00
	15.0	900	1.06
	20.0	1200	1.11
	26.0	1560	1.18

Linear extrapolated values for calculation

Location: SA5 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(1.175-0.925)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1200** secs

f= **7.48E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA6 TEST 1

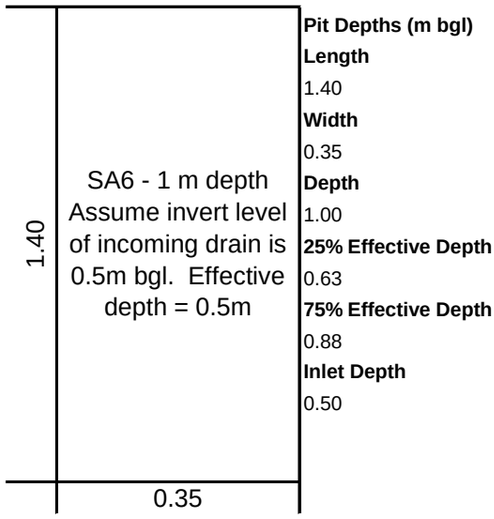
Field Data

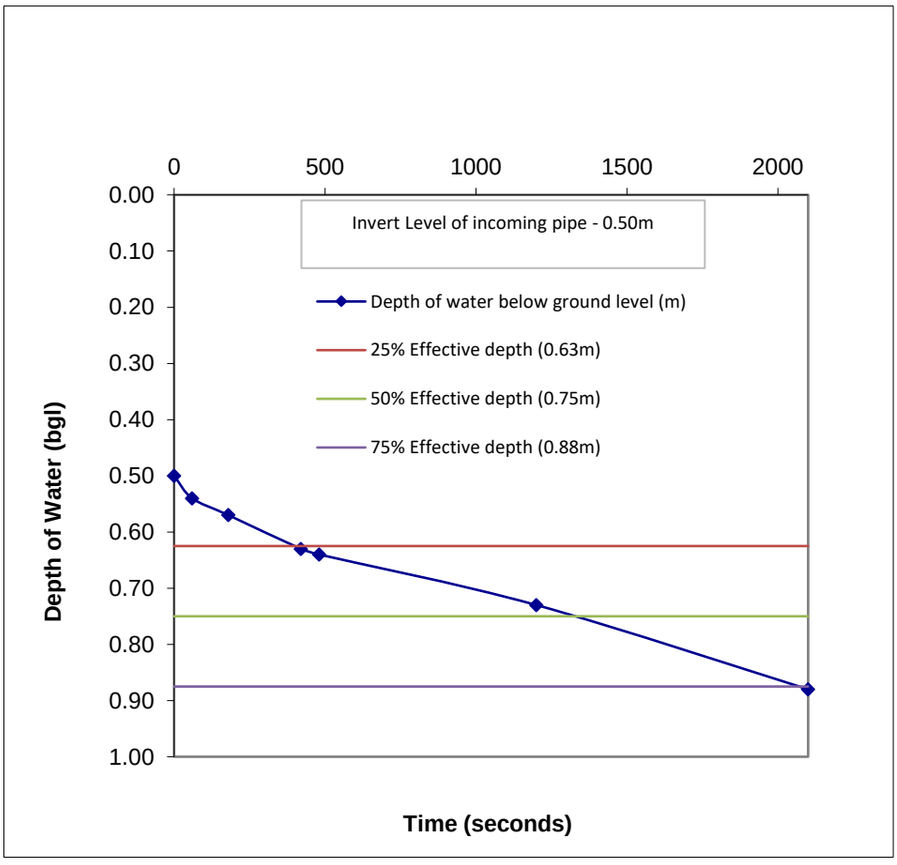
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.50
	1.0	60	0.54
	3.0	180	0.57
	7.0	420	0.63
	8.0	480	0.64
	20.0	1200	0.73
	35.0	2100	0.88

Linear extrapolated values for calculation

Location: **SA6** **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(0.875-0.625)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1680** secs

f= **5.34E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA6 TEST 2

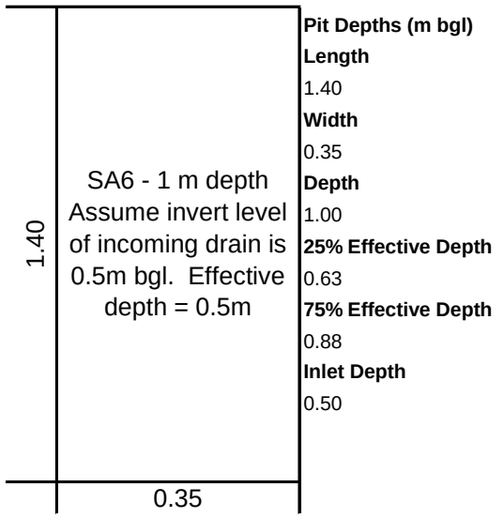
Field Data

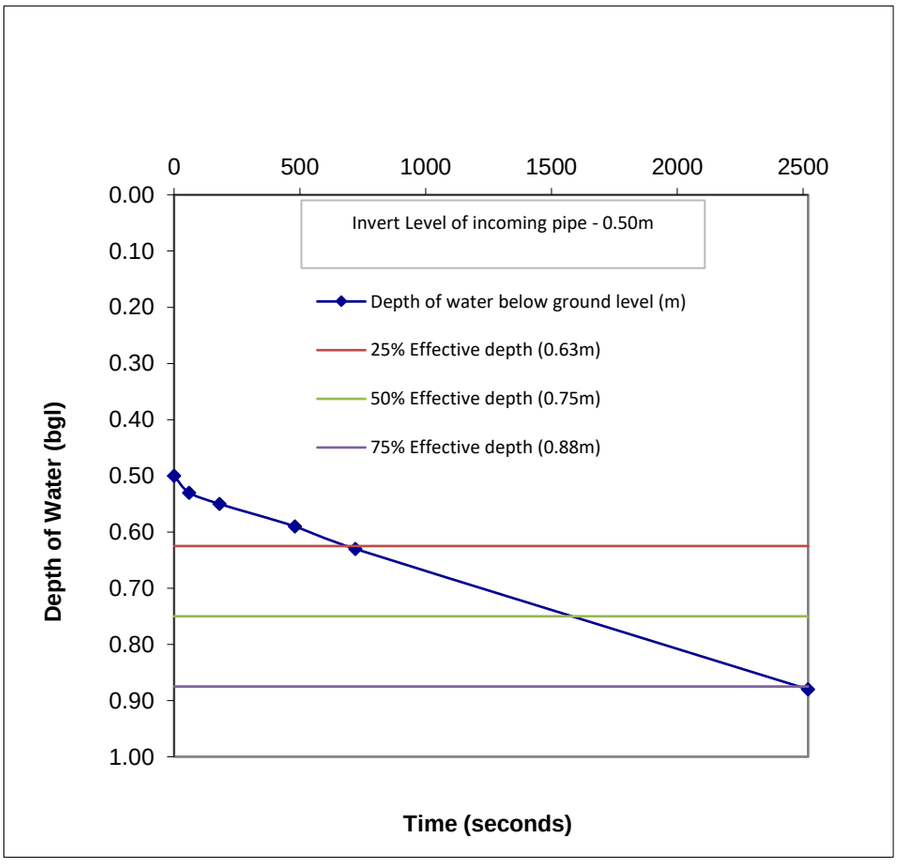
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.50
	1.0	60	0.53
	3.0	180	0.55
	8.0	480	0.59
	12.0	720	0.63
	42.0	2520	0.88

Linear extrapolated values for calculation

Location: SA6 **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(0.875-0.625)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1800** secs

f= **4.99E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA6 TEST 3

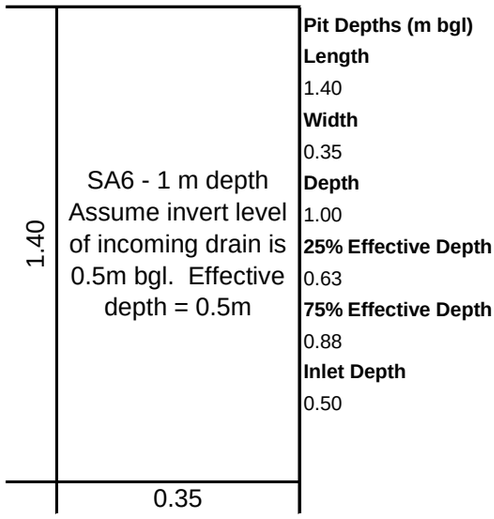
Field Data

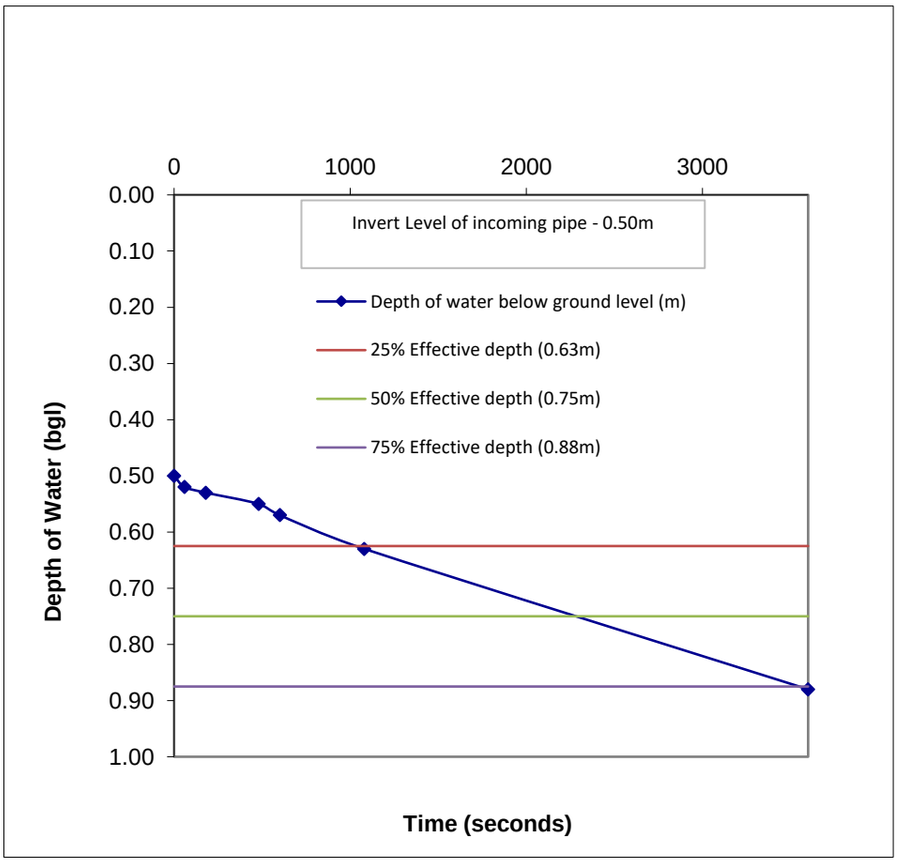
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.50
	1.0	60	0.52
	3.0	180	0.53
	8.0	480	0.55
	10.0	600	0.57
	18.0	1080	0.63
	60.0	3600	0.88

Linear extrapolated values for calculation

Location: SA6 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.4x0.35x(0.875-0.625)
= **0.1225**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.4 x) + 2(0.35 x) + (1.4 x 0.35)
= 1.365

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **2520** secs

f= **3.56E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA7 TEST 1

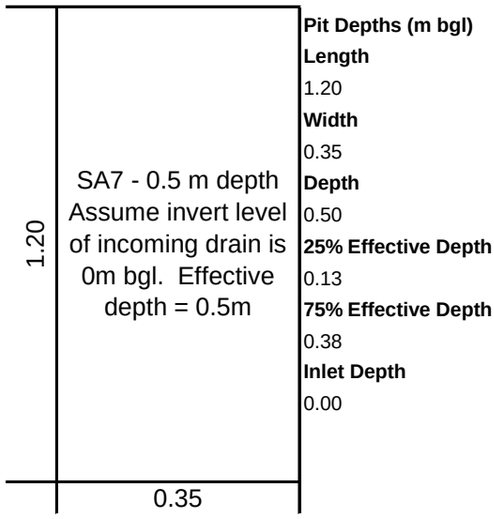
Field Data

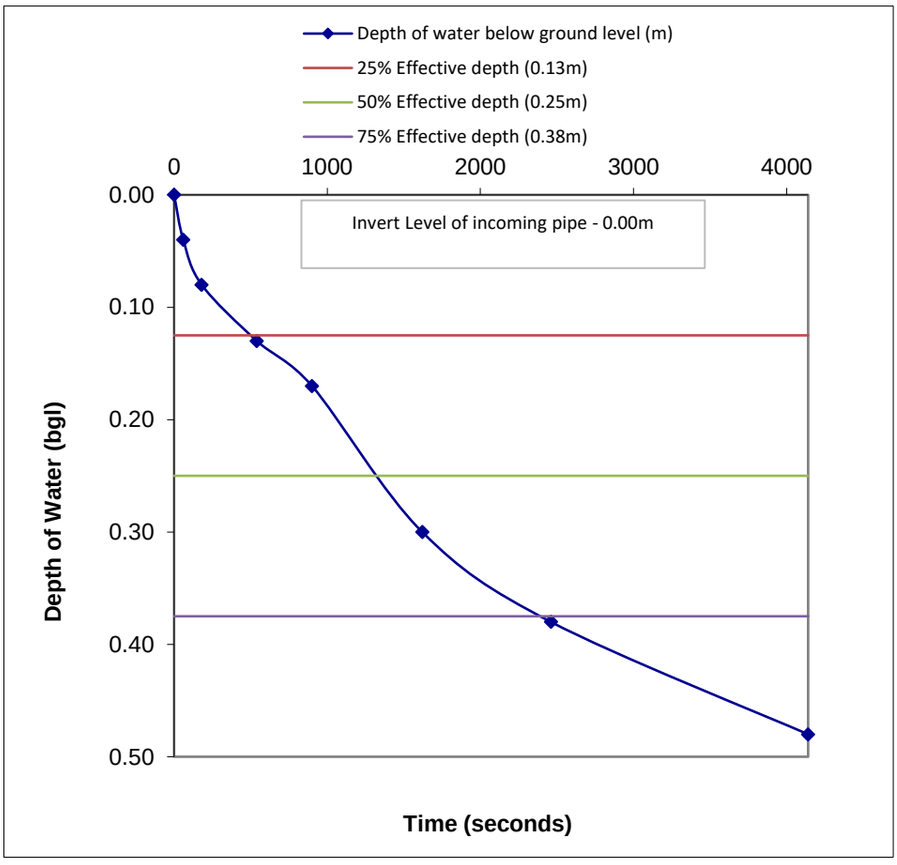
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.00
	1.0	60	0.04
	3.0	180	0.08
	9.0	540	0.13
	15.0	900	0.17
	27.0	1620	0.30
	41.0	2460	0.38
	69.0	4140	0.48

Linear extrapolated values for calculation

Location: **SA7** **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.375-0.125)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1920** secs

f= **4.58E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA7 TEST 2

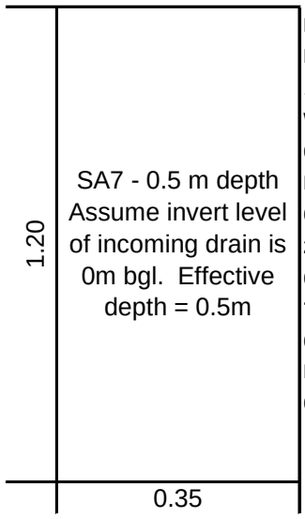
Field Data

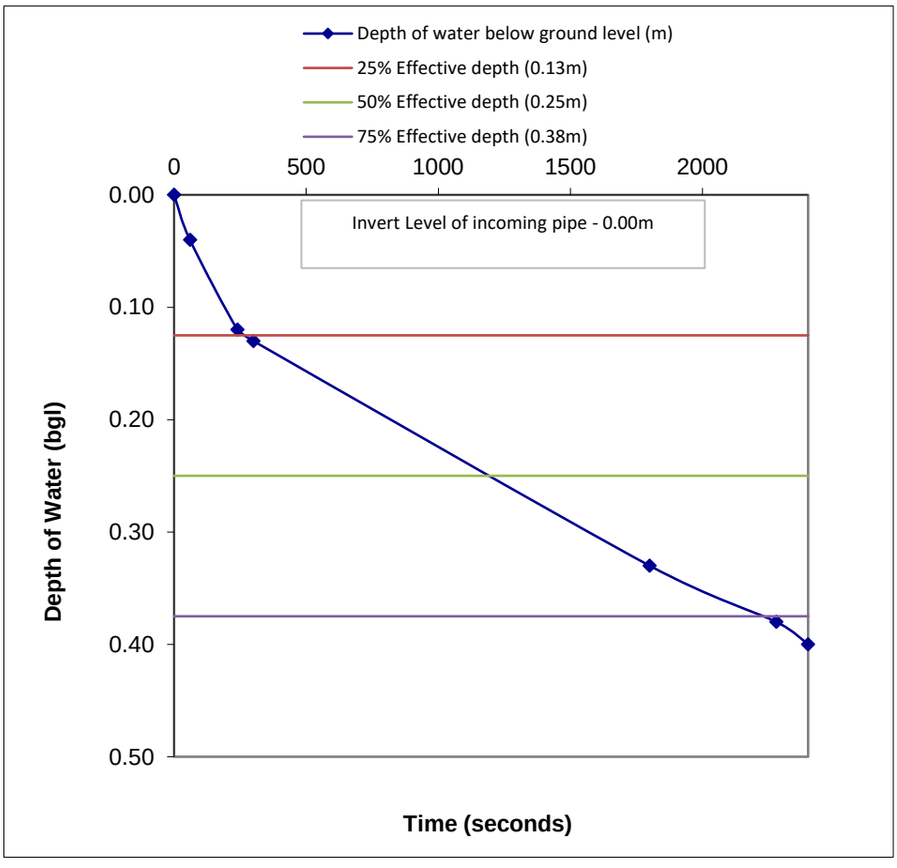
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.00
	1.0	60	0.04
	4.0	240	0.12
	5.0	300	0.13
	30.0	1800	0.33
	38.0	2280	0.38
	40.0	2400	0.40

Linear extrapolated values for calculation

Location: SA7 **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.375-0.125)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1980** secs

f= **4.44E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA7 TEST 3

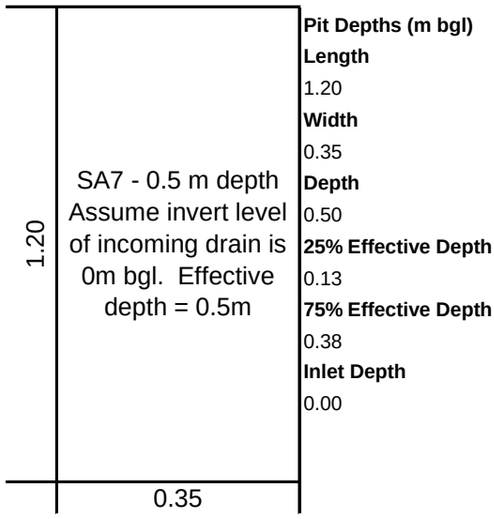
Field Data

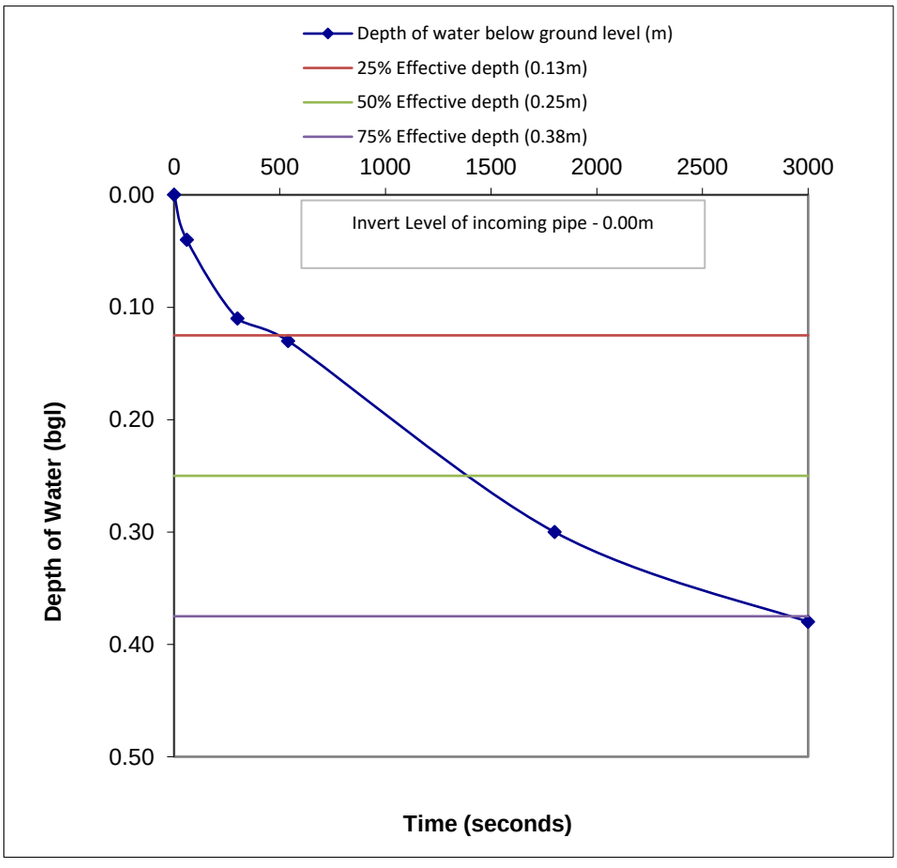
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.00
	1.0	60	0.04
	5.0	300	0.11
	9.0	540	0.13
	30.0	1800	0.30
	50.0	3000	0.38

Linear extrapolated values for calculation

Location: SA7 **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.375-0.125)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **2460** secs

f= **3.57E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA8 TEST 1

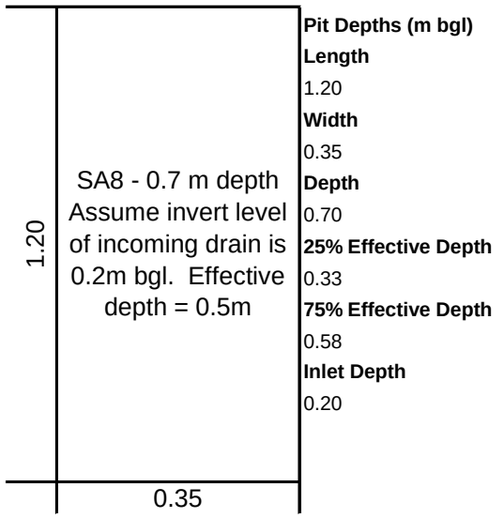
Field Data

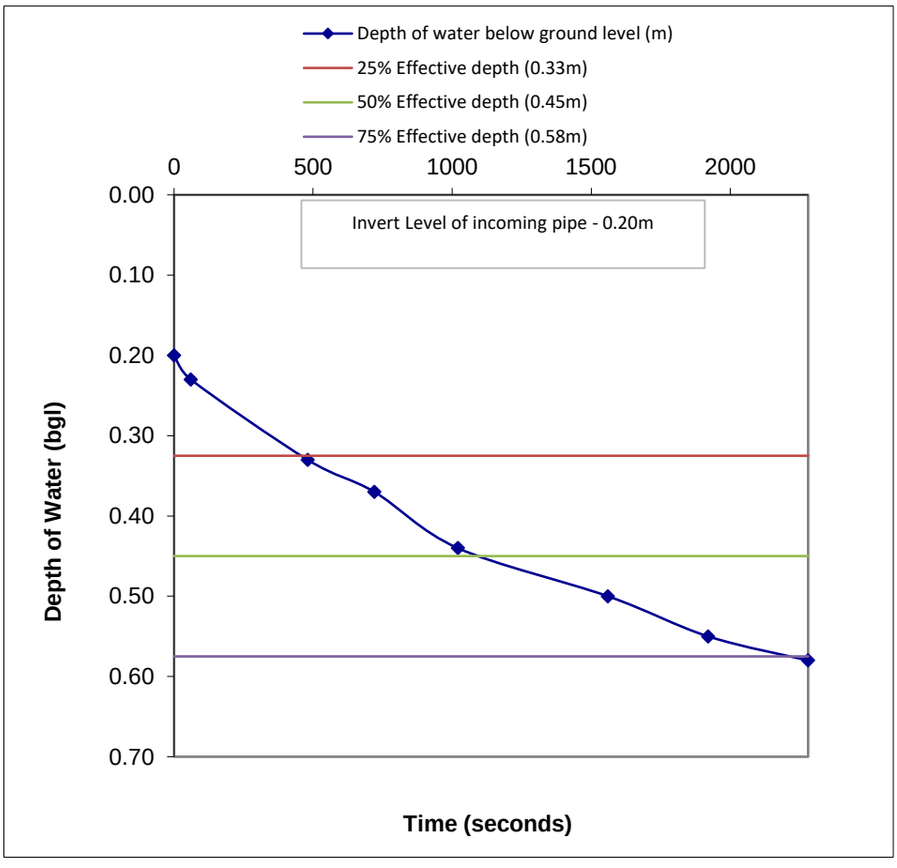
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.20
	1.0	60	0.23
	8.0	480	0.33
	12.0	720	0.37
	17.0	1020	0.44
	26.0	1560	0.50
	32.0	1920	0.55
	38.0	2280	0.58

Linear extrapolated values for calculation

Location: **SA8** **TEST 1**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.575-0.325)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **1800** secs

f= **4.88E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA8 TEST 2

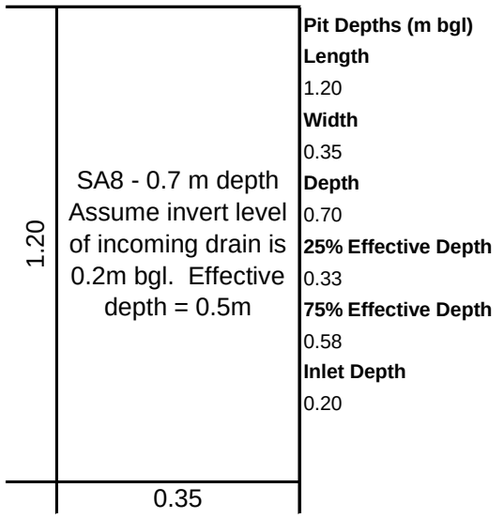
Field Data

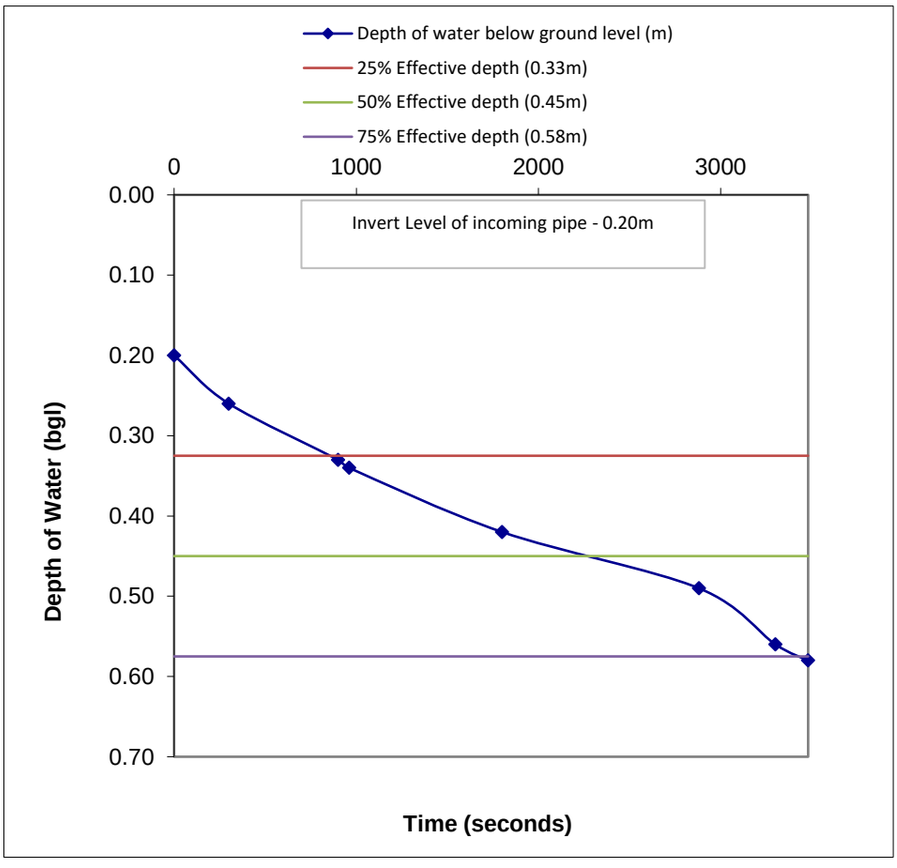
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.20
	5.0	300	0.26
	15.0	900	0.33
	16.0	960	0.34
	30.0	1800	0.42
	48.0	2880	0.49
	55.0	3300	0.56
	58.0	3480	0.58

Linear extrapolated values for calculation

Location: **SA8** **TEST 2**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.575-0.325)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **2580** secs

f= **3.41E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

Infiltration Test to BRE365 - SA8 TEST 3

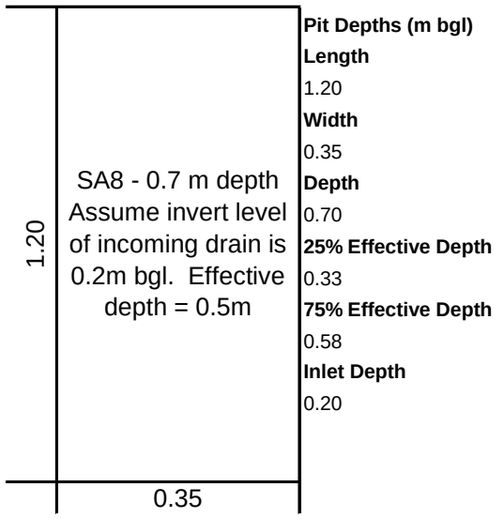
Field Data

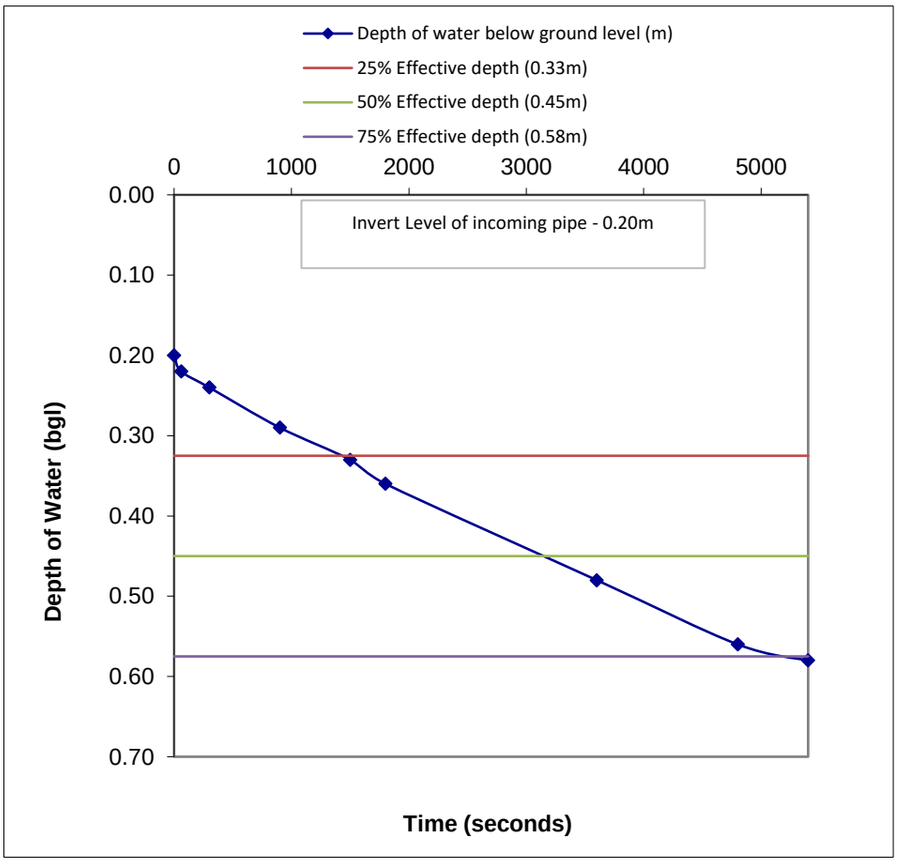
Time	Time Elapsed (min)	Time Elapsed (sec)	Depth of Water below GL (m)
	0.0	0	0.20
	1.0	60	0.22
	5.0	300	0.24
	15.0	900	0.29
	25.0	1500	0.33
	30.0	1800	0.36
	60.0	3600	0.48
	80.0	4800	0.56
	90.0	5400	0.58

Linear extrapolated values for calculation

Location: **SA8** **TEST 3**
Weather: Bright and sunny
Engineer: TN
Date: 16/08/2021

Strata Tested Marlstone Rock Formation





CALCULATION:

Soil Infiltration Rate(f) =
Vp75-25 / (ap50 x tp75-25)

Where:
Vp75-25 = effective storage volume between 75% and 25% effective depth
1.2x0.35x(0.575-0.325)
= **0.105**

ap50 = internal area of TP upto 50% effective depth + base of TP
2(1.2 x) + 2(0.35 x) + (1.2 x 0.35)
= 1.195

Tp75-25 = the time for water level to fall from 75% - 25% effective depth
= **3900** secs

f= **2.25E-05** m/s

Comment

PADDOCK GEO ENGINEERING

Client: Green Square Group
Project No: P21-264
Project: Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN

APPENDIX F

Site Photographs

Photograph of trial pit SA1.

Photograph of arisings from trial pit SA1.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA2.

Photograph of arisings from trial pit SA2.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA3.

Photograph of arisings from trial pit SA3.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA4.

Photograph of arisings from trial pit SA4.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA5.

Photograph of arisings from trial pit SA5.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA6.

Photograph of arisings from trial pit SA6.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA7.

Photograph of arisings from trial pit SA7.

PADDOCK GEO ENGINEERING

Client:	**Green Square Group**
Project No:	**P21-264**
Project Title:	**Tappers Farm, Off Oxford Road, Bodicote, Banbury, OX15 4BN**
Date Taken:	**September 2021**

Photograph of trial pit SA8.

Photograph of arisings from trial pit SA8.

PADDOCK GEO ENGINEERING

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