

MAYFLOWER WAY, ANGMERING

Proposed development for 24 No Residential Dwellings

DRAINAGE STRATEGY

Foul Drainage

There is 150mm dia. public foul sewer in Parsons Close a distance of approximately 190 metres away from the proposed development site. Levels have been calculated and a new sewer connection can be constructed that will drain by gravity from the development to the outfall. The route will take it through land owned by the Parish Council whose proposed development south of Mayflower Way will benefit from the installation of this drainage connection. The drainage strategy drawing ES1539-602-01 shows the proposed new sewer serving both developments and the connection point in Parsons Close.

Recent changes in Southern Waters criteria for connection to new sewers mean that they will offer no objection to the proposals. There will be a requirement to enter into a Section 106 sewer connection Agreement which will be a formality.

Surface Water Drainage

In line with the SUDS hierarchy the use of infiltration methods has been proposed for the discharge of surface water drainage. Tests have been undertaken and show that this proposal is a feasible solution. Groundwater monitoring on the site has been undertaken down to five metres and results showed that no groundwater was present. Details of the investigation are submitted with this strategy report.

It is proposed to install individual domestic soakaways for each property that will cater for roof water drainage. These will extend into the gravel strata situated approximately 2.6 metres below existing ground level. Prior to discharging to the soakaway the flows will pass through a silt trap which will assist in the removal of any silts washed into the system.

Domestic driveways and parking areas will be constructed of permeable block paving through which rainwater will pass into open graded granular sub base then into the sub strata to infiltrate.

The main access road will be drained by gullies that will discharge into the open graded sub base through diffuser boxes then infiltrate through the sub strata.

In line with current Environment Agency drainage criteria all infiltration proposals have been designed to cater for the 1 in 100year storm event with an additional allowance of 40% to cater for climate change.

Details of the proposed surface water drainage strategy can be found on drawing ES1539-602-01.

*Escher Silverman ES1539
March 2018*



Figure 2 – Trial Hole Location Plan



Project
Land North of Mayflower Way

Date
November 2016

Client
Mr Peter Taylor

Job Number
15306

Trial Pit Log

Trial Pit No.

TP1

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering

Method:

Hole Type

Plant:

TP

Location: Land North of Mayflower Way, off Roundstone Lane, Angmering

Support:

Scale

1:25

Client:

Trial Pit Length: m

Trial Pit Width: m

Logged By

Dates: 24-11-2016

Level:

Co-ords:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D					Black and brown slightly gravelly SILT. Gravel is fine to coarse fragments of concrete, flint and brick and occasional ash. MADE GROUND	
	0.40	J+D						
	1.00	J+D		1.00			Soft light brown very silty CLAY	1
	1.20	J+D						
	1.90	J+D		1.80			Soft light brown slight silty CLAY	2
	2.30	J+D					Rare fine to coarse sub-angular flint gravels	
	2.60	J+D		2.60			Soft light greyish brown slightly gravelly sandy CLAY. Gravel is fine to coarse angular fragments of flint. Sand is fine	
	2.90	J+D		2.80			End of Pit at 2.90m	3
								4
								5

General Remarks:

No roots observed

Sample Type

D: Disturbed

B: Bulk

J: Jar

W: Water

Groundwater Remarks:

		Soils Limited Newton House, Green Road, Teddington, KT20 5EP			Trial Pit Log		Trial Pit No. TP10 Sheet 1 of 1	
Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering.				Project No.: 15306		Method:		Hole Type TP
Location: Land North of Mayflower Way, off Roundstone Lane, Angmering				Plant:		Support:		
Client:				Trial Pit Length: m		Trial Pit Width: m		Scale 1:25
Dates: 24-11-2016			Level:		Co-ords:			Logged By
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D		0.30			Dark brown gravelly SILT. Gravel is fine to coarse fragments of flint, brick and concrete. Frequent decomposed plant material. MADE GROUND	
	0.50	J+B					Light orangish brown slightly gravelly SILT. Gravel is rare fine to coarse angular flint fragments. Rare rootlets.	
	1.20	D		1.20			Firm light orangish slightly silty CLAY.	
	1.70	D		1.80		End of Pit at 1.80m		
General Remarks:								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								



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Newton House, Cross Road, Tadworth KT20 5SR

Trial Pit Log

Trial Pit No.

TP2

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering, Brighton BN15 2RQ

Project No.: 15306

Method:

Plant:

Support:

Hole Type

TP

Scale

1:25

Logged By

Location: Land North of Mayflower Way, off Roundstone Lane, Angmering

Client:

Trial Pit Length: m

Trial Pit Width: m

Dates: 24-11-2016

Level:

Co-ords:

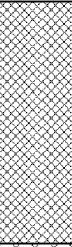
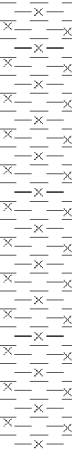
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D					Soft grey gravelly silty CLAY. Gravel is fine to coarse flint, brick and concrete. Organic odour. Occasional fine to medium roots and rootlets. MADE GROUND	
	0.50 - 0.80	B					Concrete and brick slab	
	0.80	J+D		0.90				
	1.40	J+D					Soft light brown slightly sandy CLAY. Sand is fine. Rare fine to coarse rootlets to 1.50m bgl.	1
	1.80	J+D						2
	2.20	J+D		2.20			End of Pit at 2.20m	3
								4
								5

General Remarks:

Sample Type

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

Groundwater Remarks:

		Soils Limited Newton House, Cross Road, Tadworth, KT20 5SP			Trial Pit Log		Trial Pit No. TP3 Sheet 1 of 1	
Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering.		Project No.: 15306		Method:		Hole Type TP		
Location: Land North of Mayflower Way, off Roundstone Lane, Angmering		Plant:		Support:		Scale 1:25		
Client:				Trial Pit Length: m		Trial Pit Width: m		Logged By
Dates: 24-11-2016		Level:		Co-ords:				
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	J+D					Brown slightly clayey gravelly sandy SILT. Gravel is fine to cobble sized fragments of flint, brick, concrete, glass and occasional fine ash. Occasional roots and rootlets. MADE GROUND	
	0.30 - 0.50	B						
	0.50	J						
	0.80	J		0.80			Brown slightly gravelly clayey SILT. Gravel is fine to medium fragments of ash and brick. Soft light orangish brown slightly silty CLAY.	
				1.00				
	1.30	D					Soft light orangish brown slightly silty CLAY.	
2.00	D							
2.60	D		2.60			Becoming slightly gravelly. Gravel is fine to coarse sub-angular flint		
						End of Pit at 2.60m		
General Remarks:								Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:								



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Newton House, Cross Road, Tadworth KT20 5SR

Trial Pit Log

Trial Pit No.

TP4

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering, Project No.: 15306

Method:

Hole Type

Location: Land North of Mayflower Way, off Roundstone Lane, Angmering

Plant:

TP

Support:

Scale

Client:

Trial Pit Length: m

Trial Pit Width: m

1:25

Dates: 24-11-2016

Level:

Co-ords:

Logged By

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D					Brown slightly sandy gravelly SILT. Gravel is fine to coarse sub-angular fragments of brick, flint, tile and glass and fine ash. Sand is fine to coarse. Occasional rootlets. MADE GROUND	
	0.70	J+D		0.70			Fine light brown slightly gravelly slightly sandy SILT. Gravel is rare fragments of brick, tile and chalk. Sand is fine to medium.	
	1.10	J+D		1.10			Concrete	1
	1.40	D		1.40			Light brown slightly sandy SILT. Sand is fine.	
							End of Pit at 1.40m	
								2
								3
								4
								5

General Remarks:

Sample Type

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

Groundwater Remarks:



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Newton House, Cross Road, Tadworth KT20 5SR

Trial Pit Log

Trial Pit No.

TP5

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering

Hole Type

TP

Location: Land North of Mayflower Way, off Roundstone Lane, Angmering

Support:

Scale

1:25

Client:

Trial Pit Length: m

Trial Pit Width: m

Logged By

Dates: 24-11-2016

Level:

Co-ords:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D					Brown slightly gravelly SILT. Gravel is fine to coarse sub-angular fragments of chalk, brick, concrete and occasional fine ash and glass. Occasional roots and rootlets. MADE GROUND <i>Tarmac Cobbles</i>	
	0.60	J+D					<i>Frequent fine to coarse fragments of ash.</i> <i>Concrete block</i>	
	0.90	J+D		0.80			Soft light orangey brown slightly sandy CLAY. Sand is fine.	1
	1.30 - 1.60 1.40	B D						
	1.90	D		1.90			End of Pit at 1.90m	2
								3
								4
								5

General Remarks:

Sample Type

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

Groundwater Remarks:



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Newton House, Cross Road, Tadworth, KT20 5SR

Trial Pit Log

Trial Pit No.

TP6

Sheet 1 of 1

Project Name:	Land North of Mayflower Way, off Roundstone Lane, Angmering	Project No.:	15306	Method:		Hole Type	TP
Location:	Land North of Mayflower Way, off Roundstone Lane, Angmering			Plant:		Scale	1:25
Client:		Trial Pit Length:	m	Trial Pit Width:	m	Logged By	
Dates:	24-11-2016		Level:		Co-ords:		

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	J+D					Brown gravelly SILT. Gravel is fine to coarse flint, brick, glass, concrete, ash and wood. Occasional black staining. MADE GROUND	
	0.50	D+B						
				0.80				
	1.20	D					Soft light brown slightly gravelly silty CLAY. Gravel is fine to coarse fragments of flint. Rare black staining.	1
	1.70	D		1.70				
							End of Pit at 1.70m	2
								3
								4
								5

General Remarks:	Sample Type
	D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:	



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Newton House, Cross Road, Tadworth KT20 5SR

Trial Pit Log

Trial Pit No.

TP7

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering

Method:

Hole Type

Location: Land North of Mayflower Way, off Roundstone Lane, Angmering

Plant:

TP

Support:

Scale

Client:

Trial Pit Length: m

Trial Pit Width: m

1:25

Dates: 24-11-2016

Level:

Co-ords:

Logged By

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.70	J+B					Soft black slightly silty gravelly CLAY. Gravel is fine to coarse fragments of brick, concrete, clinker and fine ash. Distinct hydrocarbon type odour. Frequent decomposed plant material. Occasional rootlets. MADE GROUND	
	0.80	J+D					Layer of black plastic film with fibres	
	1.20	J+D		1.00			Soft light brown slightly gravelly silty CLAY. Gravel is fine to coarse fragments of flint.	1
	1.80	J+D		1.80			End of Pit at 1.80m	2
								3
								4
								5

General Remarks:

Tank location

Groundwater Remarks:

Sample Type

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



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Newton House, Cross Road, Tadworth KT20 5SR

Trial Pit Log

Trial Pit No.

TP8

Sheet 1 of 1

Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering,

Project No.: 15306

Method:

Plant:

Support:

Hole Type

TP

Scale

1:25

Logged By

Client:

Trial Pit Length: m

Trial Pit Width: m

Dates:

24-11-2016

Level:

Co-ords:

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	J+D		0.30			Brown gravelly SILT with pockets of CLAY. Gravel is fine to coarse fragments of flint, brick and concrete. MADE GROUND
	0.50 - 0.80	B+J					Light orangish brown slightly clayey SILT. Occasional rootlets.
	1.50	D					Percentage clay increases with depth
	2.00	D		2.00			End of Pit at 2.00m

General Remarks:

Sample Type

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

Groundwater Remarks:

		Soils Limited 		Trial Pit Log		Trial Pit No. TP9 Sheet 1 of 1	
Project Name: Land North of Mayflower Way, off Roundstone Lane, Angmering.		Project No.: 15306		Method:		Hole Type TP	
Location: Land North of Mayflower Way, off Roundstone Lane, Angmering				Plant:		Scale 1:25	
Client:		Trial Pit Length: m		Trial Pit Width: m		Logged By	
Dates: 24-11-2016		Level:		Co-ords:			
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	J+D		0.30			Very soft brown gravelly CLAY. Gravel is fine to coarse brick, concrete and flint. Frequent decomposed wood material and organic odour. Occasional fine to coarse rootlets. MADE GROUND
	0.50	J+B					Light orangish brown slightly gravelly SILT. Gravel is rare fine to coarse flint fragments. Occasional fine to coarse rootlets becoming fine at 1m bgl.
	1.10	D		1.40			Firm light orangish brown silty CLAY. Rare rootlets observed.
	1.70	D		1.70		End of Pit at 1.70m	
General Remarks:							Sample Type D: Disturbed B: Bulk J: Jar W: Water
Groundwater Remarks:							

Soakaway Calculations

Soakaway Test No.	TP1 Test1
Contract:	Mayflower Way
Contract No.	15306

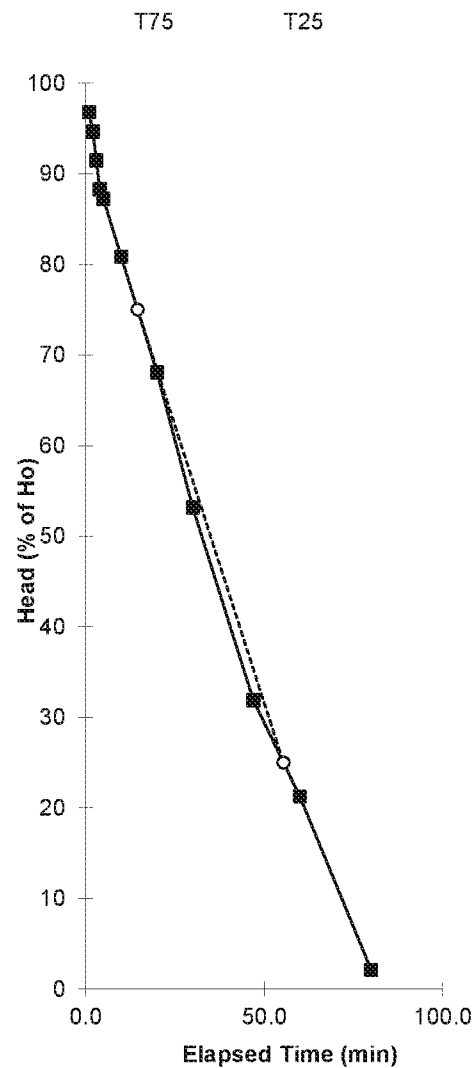
Field Test

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

Depth of Pit	2.90 m
Width of Pit	0.60 m
Length of Pit	1.90 m
Depth of Pit Soaked	0.94 m
ap50	3.49 m ²
Vp75-25	0.5358 m ³
t75-25	40.9 min
water used	1.0716 m ³
f	6.261E-05 m/sec.

Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
1.96	0	100	0.94
1.99	1.0	97	0.91
2.01	2.0	95	0.89
2.04	3.0	91	0.86
2.07	4.0	88	0.83
2.08	5.0	87	0.82
2.14	10.0	81	0.76
2.26	20.0	68	0.64
2.40	30.0	53	0.50
2.60	47.0	32	0.30
2.70	60.0	21	0.20
2.88	80.0	2	0.02
T75	14.583	75	
T25	55.450	25	
T75-25	40.867	Derived from Best Fit	



Comments

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Surrey, KT20 5SR

Soakaway Calculations

Soakaway Test No.	TP1 Test1
Contract:	Mayflower Way
Contract No.	15306

Field Test

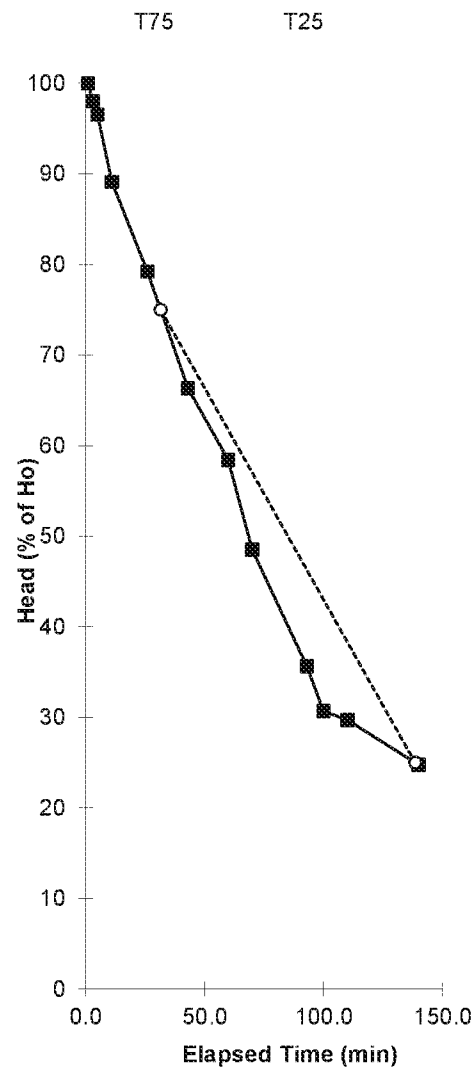
Trial Pit Log (include details of groundwater):
See trial Pit record

Depth of Pit	2.90 m
Width of Pit	0.60 m
Length of Pit	1.90 m
Depth of Pit Soaked	1.01 m
ap_{50}	3.665 m ²
V_{p75-25}	0.5757 m ³
t_{75-25}	106.9 min
water used	1.1514 m ³
f	2.448E-05 m/sec.

Field Data

Depth to Water (m)	Elapsed Time (min)	Head of Water (% of Ho)	Head of Water (m)
1.89	0	100	1.01
1.89	1.0	100	1.01
1.91	3.0	98	0.99
1.93	5.0	97	0.98
2.00	11.0	89	0.90
2.10	26.0	79	0.80
2.23	43.0	66	0.67
2.31	60.0	58	0.59
2.41	70.0	49	0.49
2.54	93.0	36	0.36
2.59	100.0	31	0.31
2.60	110.0	30	0.30
2.65	140.0	25	0.25

T75	31.558	75
T25	138.500	25
T75-25	106.942	Derived from Best Fit



Comments

Extrapolated past 110 mins

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

Soakaway Calculations

Soakaway Test No.	TP2 Test 1
Contract:	Mayflower Way
Contract No.	15306

Field Test

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

Depth of Pit	2.20 m
Width of Pit	0.60 m
Length of Pit	2.10 m
Depth of Pit Soaked	1.14 m
ap50	4.3245 m ²
Yp75-25	0.71505 m ³
c75-25	4468.9 min
water used	1.4301 m ³
f	6.167E-07 m/sec.

Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
1.07	0	100	1.135
1.07	1.0	100	1.13
1.08	2.0	99	1.12
1.08	3.0	99	1.12
1.08	5.0	99	1.12
1.09	15.0	98	1.12
1.10	45.0	97	1.10
1.14	65.0	93	1.06
1.16	120.0	92	1.04
1.20	165.0	88	1.00
1.21	190.0	87	0.99
1.30	220.0	79	0.90
1.40	280.0	70	0.80
1.50	400.0	62	0.70
1.60	800.0	53	0.60
1.70	1400.0	44	0.50
1.76	2000.0	39	0.44
1.82	2800.0	33	0.38
1.87	3600.0	30	0.34
1.92	4800.0	25	0.28

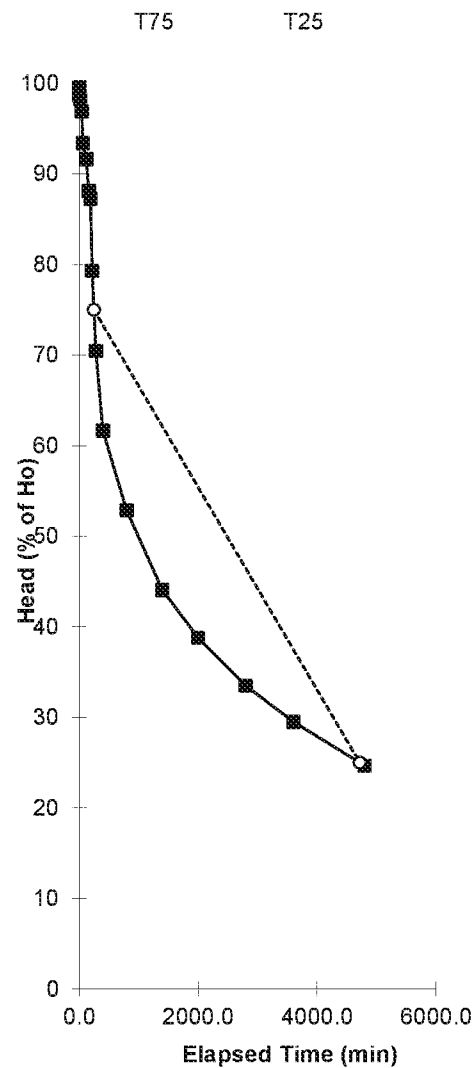
T75	249.250	75
T25	4718.182	25
T75-25	4468.932	Derived from Best Fit

Comments

Extrapolated after 190 mins

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Surrey, KT20 5SR



Soakaway Calculations

Soakaway Test No.	TP3 Test 1
Contract:	Mayflower Way
Contract No.	15306

Field Test

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

Depth of Pit	2.63 m
Width of Pit	0.60 m
Length of Pit	2.50 m
Depth of Pit Soaked	1.02 m
ap50	4.662 m ²
Vp75-25	0.765 m ³
t75-25	1036.5 min
water used	1.5300 m ³
f	2.638E-06 m/sec.

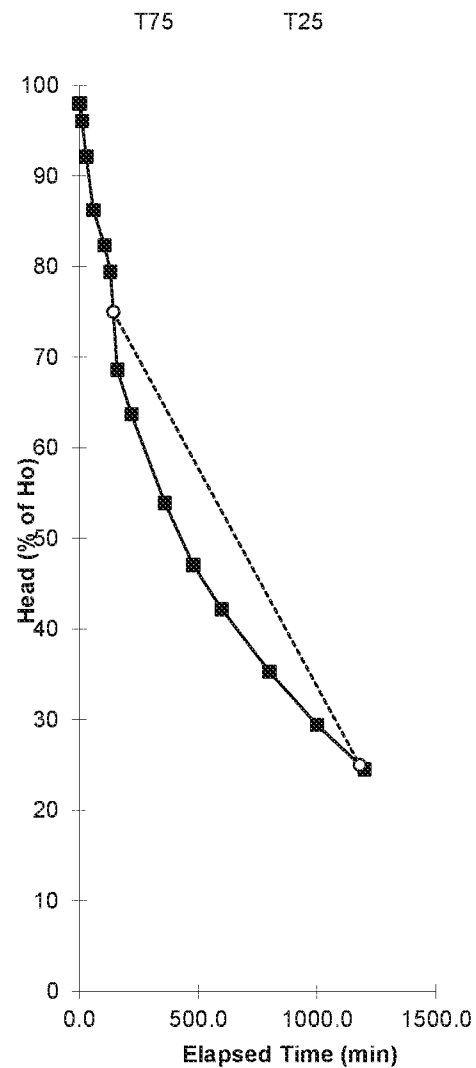
Field Data

Depth to Water	Elapsed Time	Head of Water	Head of Water
(m)	(min)	(% of Ho)	(m)
1.61	0	100	1.02
1.63	1.0	98	1.00
1.63	2.0	98	1.00
1.63	3.0	98	1.00
1.63	4.0	98	1.00
1.63	5.0	98	1.00
1.65	13.0	96	0.98
1.69	30.0	92	0.94
1.75	60.0	86	0.88
1.79	107.0	82	0.84
1.82	132.0	79	0.81
1.93	160.0	69	0.70
1.98	220.0	64	0.65
2.08	360.0	54	0.55
2.15	480.0	47	0.48
2.20	600.0	42	0.43
2.27	800.0	35	0.36
2.33	1000.0	29	0.30
2.38	1200.0	25	0.25

T75	143.455	75
T25	1180.000	25
T75-25	1036.545	Derived from Best Fit

Comments

Extrapolated after 160 mins



SOILS LIMITED

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

kazys

From: Kevin And Micky [REDACTED]
Sent: 13 March 2018 17:00
To: kazys
Subject: FW: Winter Monitoring at Mayflower Way

From: Tim Rudkin [REDACTED]
Sent: 13 February 2018 12:58

[REDACTED]

Afternoon all.

Two monitoring visits undertaken to date, results summarised below. Next visit anticipated 2nd week of March.

BH ID	Water level (m bgl)		Base of hole (m bgl)
	11-01-18	07-02-18	
WS1	DRY	DRY	4.17
WS2	DRY	DRY	5.24
WS3	DRY	DRY	4.04

Best regards

Tim Rudkin MSc., FGS
Graduate Geo-Environmental Engineer

Soils Limited

[REDACTED]

From: Craig Morrison
Sent: Tuesday, 13 February, 2018 12:14 PM

[REDACTED]

Subject: RE: Winter Monitoring at Mayflower Way

Hi Kevin,

Let me chase Tim to provide you with an update but I understand that we have now completed monitoring visits for January and February so there should be two sets of readings available.

Tim, can you send an update to Kevin please and also advise on the anticipated date of the next visit?