

Project name	Whyndyke Garden Village		
Client	Cassidy and Ashton		
Design note title	Soakaway Findings & Summary of Geotechnical Testing		
Document reference	18299		
Author	Dan Sanchez		
Reviewer	Leon Warrington		
Approver	Danny Hope		
Revision	P01		
Date	27 April 2021	Approved	✓

## 1. INTRODUCTION

### 1.1 Terms of reference and objectives

In March 2021, Hydrock Consultants Limited (Hydrock) was commissioned by Cassidy and Ashton (the Client) to undertake a Phase 2 ground investigation at Whyndyke Farm, Preston New Road, FY4 4XQ.

The site investigation comprised the following:

- 5 days trial pitting and soakaway to assess the suitability of the ground for soakaway drainage; and
- Geotechnical testing to characterise the soils in the areas where soakaway testing was undertaken.

### 1.2 Site Works

Hydrock undertook site works between 15/03/21 and 19/03/21 using a tracked excavator. At the time of the works the ground was saturated and trafficking the site was difficult, hence certain areas of the site were not accessible.

The following drawings are enclosed at Appendix A:

- Site Location plan; and
- Ground Investigation plan including access constraints;

Exploratory hole logs are included at Appendix B, with selected photographs at Appendix C.

### 1.3 Geotechnical Testing

The geotechnical tests undertaken by Hydrock are summarised in Table 1.1 and the test certificates are enclosed at Appendix D. Wherever possible, UKAS accredited procedures have been used

Table 1.1: Summary of geotechnical testing undertaken

Test	Till
Natural moisture content	10
Atterberg limits	5
Particle size distribution (sieve)	5



## 2. SUMMARY OF GROUND CONDITIONS

### 2.1 Physical ground conditions

#### 2.1.1 Summary of strata encountered

The following presents a summary of the properties of the ground and groundwater conditions encountered, based on field observations, interpretation of the field data and laboratory test results, taking into account drilling, excavation and sampling methods, transport, handling and specimen preparation.

Details are provided in the logs in Appendix B, and the individual strata are described in the sections below.

Table 2.1: Strata encountered

Stratum	Depth to top (m bgl)	Depth to base (m bgl)	Thickness (m) (range)	Thickness (m) (average)
Topsoil	0.0	0.2-0.5	-	0.3
Till	0.2-0.5	0.5-3.0	0.3-2.6	1.8
Peat	0.5-0.9	1.6-2.3	0.7-0.8	1.2

#### 2.1.2 Topsoil

Topsoil was encountered up to depths of 0.5m bgl, with an average thickness of 0.3m. The topsoil comprised very soft brown sandy clay.

For the purposes of this report, topsoil is defined as the upper layer of an *in situ* soil profile, usually darker in colour and more fertile than the layer below (subsoil), which is a product of natural chemical, physical, biological and environmental processes, but does not imply compliance with BS 3882:2015. Reuse of topsoil as a growing medium at the site should be determined by the landscape architect or the landscape Contractors.

#### 2.1.3 Till

Till was encountered underlying the topsoil across the site. Till is between 0.3m and 2.6m thick, with an average thickness of 1.8m.

This generally consisted of soft orangish brown sandy slightly gravelly clay with bands of sand. Gravel is fine to coarse subangular of mudstone, limestone; orangish brown fine to coarse sand in the south of the site.

These deposits are considered to represent the Till Formation.

#### 2.1.4 Peat

Peat was encountered underlying the Till in the centre and south of the site and is between 0.7m and 0.8m thick, with an average thickness of 1.2m.

This generally consisted of very soft black sandy organic clay with organic odour.

These deposits are considered to represent the Peat Formation.

## 2.2 Site-work Constraints

During the ground investigation a number of proposed site locations needed to be relocated due to the soft and waterlogged conditions of the ground. Access to the north west field of the site was not possible due to the location of the main gate, situated to the other side of the centre field, which comprised very soft and thick peat.

Inaccessible areas are shown on the Ground Investigation plan at Appendix A.

## 2.3 Groundwater

### 2.3.1 Groundwater observations and levels

Groundwater encountered during the investigation is listed in Table 2.2. A groundwater observation represents the depth at which groundwater was first observed and is likely to be deeper than the actual water table level at that location.

Table 2.2: Groundwater occurrence

Stratum	Date	Location	Fieldwork	Comments
			Groundwater observation (m bgl)	
Till	2021-03-19	TP02	Slight seepage at 0.30m bgl	Collapse of trial pit in the medium to long-term.
	2021-03-18	TP03	Slight seepage at 0.50m bgl	Collapse of trial pit in the medium to long-term.
	2021-03-17	TP04	Slight seepage at 0.60m bgl	-
	2021-03-19	TP08	Slight seepage at 0.60m bgl	Collapse of trial pit in the medium to long-term.
	2021-03-17	TP09	Slight seepage in the land drain at 0.60m bgl	-
	2021-03-18	TP12	Slight seepage at 0.50m bgl	Collapse of trial pit in the medium to long-term.

## 3. SOAKAWAY TESTING

Testing was carried out in accordance with Hydrock's 1-day assessment methodology. This is in general accordance with BRE Digest 365 (BRE DG 2016) where infiltration rates allow three test runs during a working day (or where there is no infiltration), but where low infiltration rates were encountered the available time may not have been sufficient to fully comply with the BRE test method (i.e. three runs of the test).

The result sheets included at Appendix E.

### 3.1 Results & interpretation

The main findings of the soakaway testing are:

- Various locations in the centre of the site were not accessible due to very soft and saturated ground conditions, predominantly where peat deposits were previously encountered.
- The trial pits recorded either Till (in the form of clays with variable amounts of sand bands), or a very organic clay interpreted as being peat.
- The majority of locations either recorded no soakage, or water ingress from sand bands causing water levels to rise which eventually caused collapse of the sides of trial pits.
- A single location (TP10) recorded a small amount of soakage over the duration of the test; however, the soakage percentage was too small to permit calculation of soakage rates. Given that all other locations recorded either no soakage, or shallow groundwater levels causing collapse of the trial pits, Hydrock does not consider it likely that this location would be suitable for soakaway drainage.

Given the above, the site is not considered suitable for soakaway drainage due to either low permeability strata being present and/or a relatively shallow groundwater table within any sand bands present in the Till or Peat.

## 4. GEOTECHNICAL TESTING

The volume change potentials in terms of with respect to building near trees have been determined from the results of plasticity index tests on samples of soil. These are summarised in Table 4.1 below.

Table 4.1: Plasticity designations.

Stratum	No. of tests	Plasticity Index			Modified Plasticity Index			Plasticity designation	Volume Change Potential
		Min.	Max.	Av.	Min.	Max.	Av.		
Till	5	10	19	13.4	8.6	16.7	11.5	Low	Low

Particle Size Distribution test (PSDs) results are summarised in Table 4.2 below.

Table 4.2: Summary of PSD tests

Stratum	No. of tests	Silt/Clay %	Sand %	Gravel %	General description
Till	5	44-61	34-46	5-11	Sandy slightly gravelly to gravelly clay

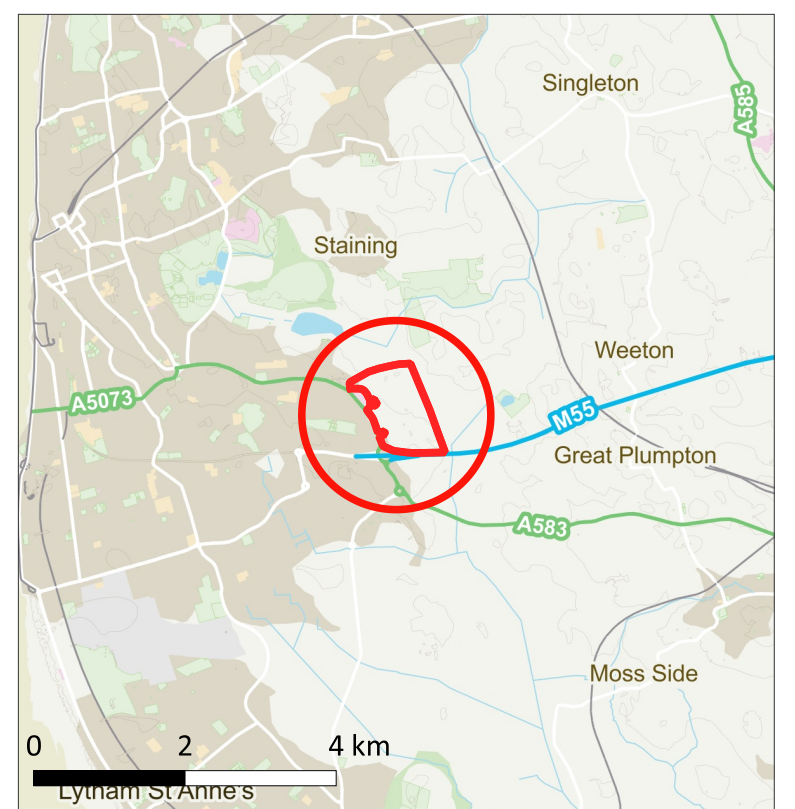
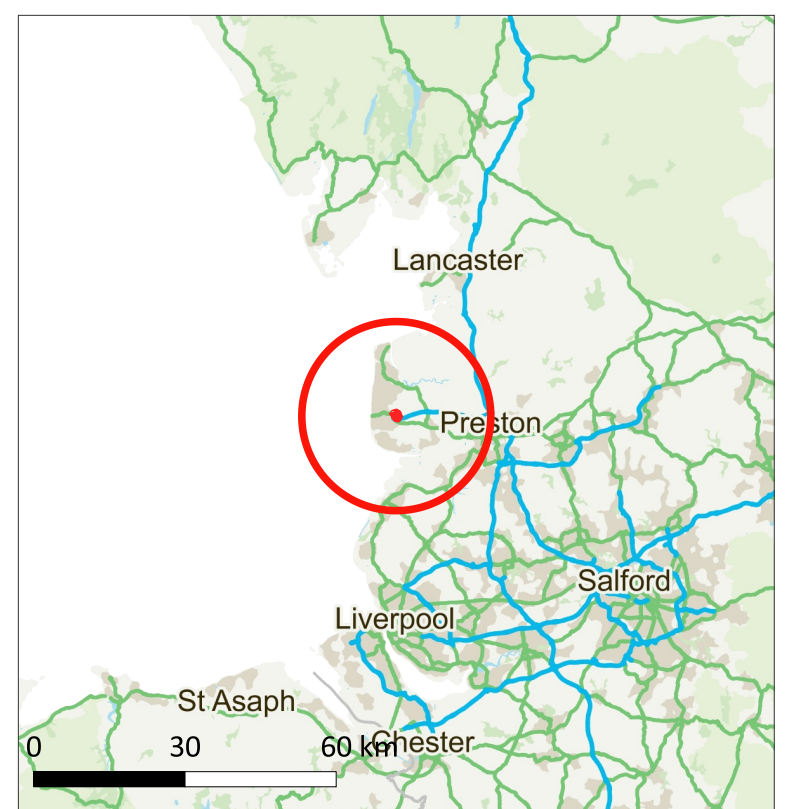
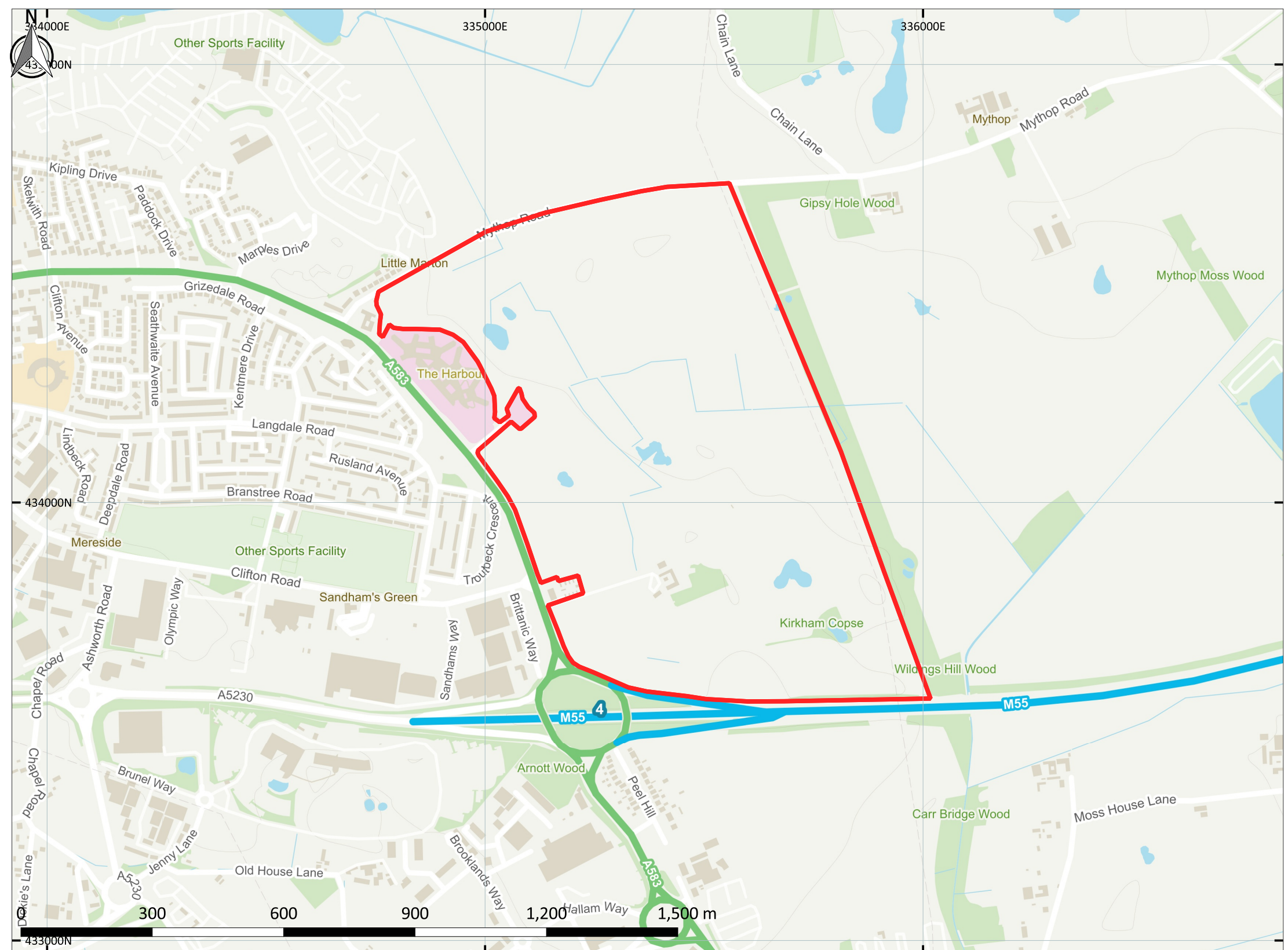
Moisture contents are summarised in Table 4.3 below.

Table 4.3: Summary of moisture contents

Stratum	No. tests	Natural moisture content (%) (range)
Till	10	16 - 33

## Appendix A Drawings





Contains Ordnance Survey data © Crown copyright and database right (2020)

<b>KEY PLAN</b>	
	Site Boundary

<b>NOTES</b>
1. Contains OS data © Crown copyright and database right (2021)

<b>REVISIONS</b>										
<table border="1"> <thead> <tr> <th>REV.</th> <th>DRAWN BY INITIALS</th> <th>CHECKED BY INITIALS</th> <th>DATE</th> <th>REVISION NOTES/COMMENTS</th> </tr> </thead> <tbody> <tr> <td>P01</td> <td>DS</td> <td>LW</td> <td>07/04/21</td> <td>First issue</td> </tr> </tbody> </table>	REV.	DRAWN BY INITIALS	CHECKED BY INITIALS	DATE	REVISION NOTES/COMMENTS	P01	DS	LW	07/04/21	First issue
REV.	DRAWN BY INITIALS	CHECKED BY INITIALS	DATE	REVISION NOTES/COMMENTS						
P01	DS	LW	07/04/21	First issue						

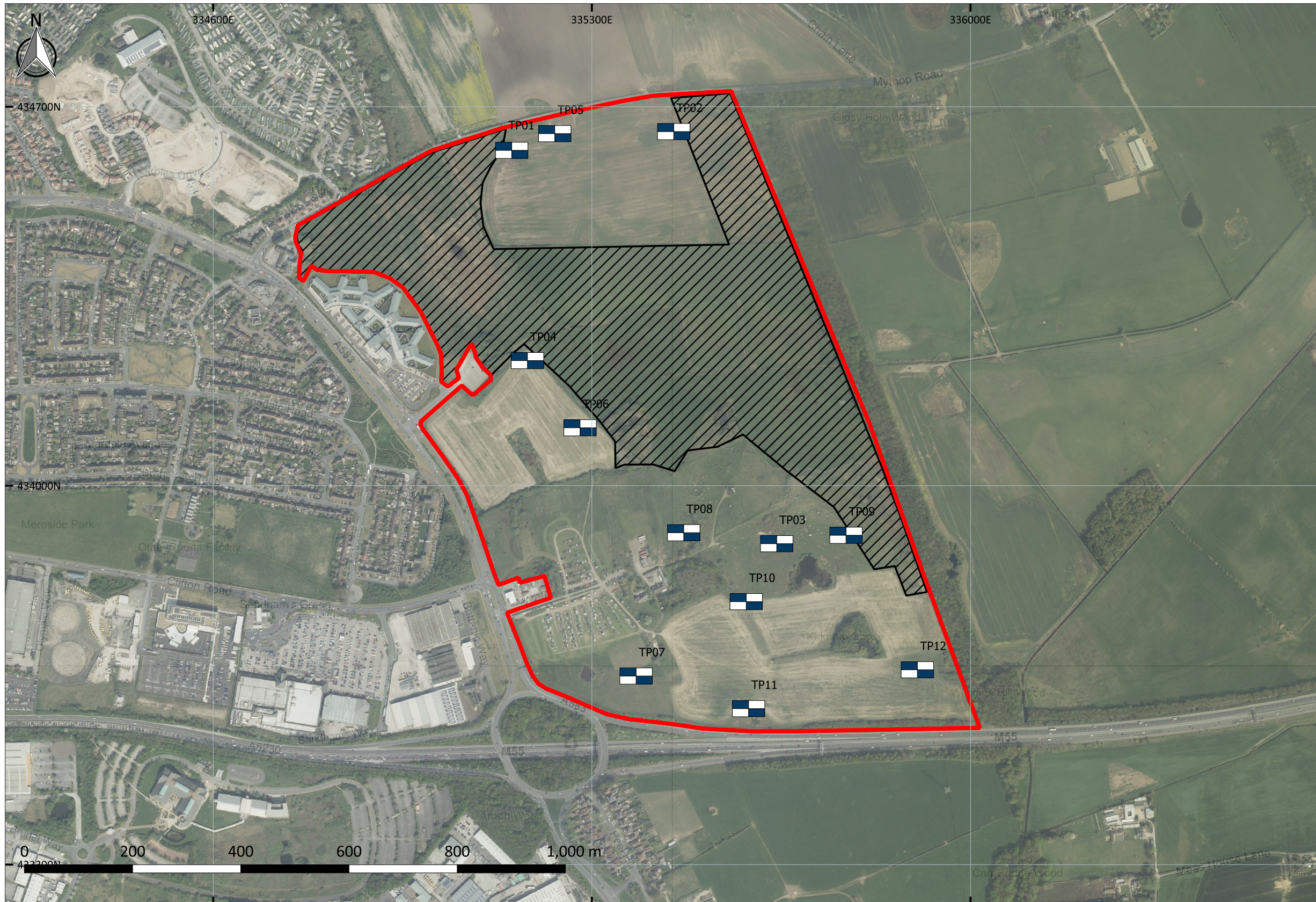
**Hydrock**

CLIENT  
Cassidy and Ashton

PROJECT  
Whyndyke Farm

<b>TITLE</b> SITE LOCATION PLAN		
HYDROCK PROJECT NO. C-18299	SCALE @ A3 1:10,000	
PURPOSE OF ISSUE SUITABLE FOR INFORMATION	STATUS S2	
DRAWING NO. 18299-HYD-XX-XX-DR-GE-0001	REVISION P01	





ID	Type	X (Easting)	Y (Northing)	Soakaway
TP02	TP	335451.32	434654.14	y
TP05	TP	335231.39	434650.35	y
TP04	TP	335180.87	434230.99	y
TP03	TP	335641.72	433892.67	y
TP06	TP	335278.11	434106.85	y
TP07	TP	335381.71	433648.24	y
TP10	TP	335585.34	433785.59	y
TP08	TP	335469.79	433913.01	y
TP09	TP	335769.82	433908.25	y
TP12	TP	335901.74	433659.78	y
TP11	TP	335589.66	433587.97	y
TP01	TP	335151.77	434619.47	y

KEY PLAN

- Locations [12]
- Constraints
- Trial Pit [12]

NOTES

1. Contains OS data © Crown copyright and database right (2021)

REVISIONS

REV.	DRAWN BY INITIALS	CHECKED BY INITIALS	DATE	REVISION NOTES/COMMENTS
P01	DS	AC	22/03/21	First issue



TITLE

GROUND INVESTIGATION PLAN

HYDROCK PROJECT NO.  
C-18299

SCALE @ A3  
1:7,500

CLIENT  
Cassidy and Ashton

PURPOSE OF ISSUE  
SUITABLE FOR INFORMATION

STATUS  
S2

PROJECT  
Whyndyke Farm

DRAWING NO.  
18299-HYD-XX-XX-DR-GE-0004

REVISION  
P01



## Appendix B Exploratory Hole Logs



Method: Trial Pit	Date(s): 19/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 33151.77, 434619.47	Stability: Unstable below 0.30m bgl	Dimensions: 3.70m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m/bgl	Thickness (m)	Level m/OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.20	(0.20)		
				Soft orangish brown sandy slightly gravelly CLAY with bands of sand. Gravel is fine to coarse subangular of mudstone, limestone. (TILL) ... Collapsing below 0.30m bgl		(2.40)		
----- Base of Excavation at 2.60m -----					2.60			
					3			
					4			
					5			

General Remarks:  
1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken. 3. Collapsing walls occurred after digging whilst performing the onsite testing.



Method: Trial Pit	Date(s): 19/03/2021	Logged By:	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335451.32, 434654.14	Stability: Unstable below 0.40m bgl	Dimensions: 3.00m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.30	(0.30)		
1.00 - 1.50	B			Soft orangish brown sandy slightly gravelly CLAY with bands of sand. Gravel is fine to coarse subangular of mudstone, limestone. (TILL) ... Collapsing from ground level.	1	(2.30)		
1.50	D							
Base of Excavation at 2.60m					2.60			
					3			
					4			
					5			

General Remarks:  
 1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken. 3. Collapsing walls occurred after digging whilst performing the onsite testing.



Method: Trial Pit	Date(s): 18/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335641.72, 433892.67	Stability: Unstable below 0.50m bgl	Dimensions: 3.20m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.40	(0.40)		
				Soft orangish brown sandy CLAY. (TILL) <i>... Collapsing below 0.50m bgl</i>	0.55	(0.15)		
				Orangish brown sandy gravelly CLAY with low boulder content and running sands. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	1.00			
				<i>... Below 2.50m bgl with running sands were it becomes sandy to very sandy</i>	2.50			
				Base of Excavation at 3.00m	3.00			
					4.00			
					5.00			

**General Remarks:**  
 1. Backfilled with arisings on completion. 2. Moved location due to unsuitable ground condition in the proposed location. 3. BRE Digest 365 Soakaway test undertaken

Groundwater: Slight seepage at 0.50m bgl



Method: Trial Pit	Date(s): 17/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335180.87, 434230.99	Stability: Stable	Dimensions: 2.80m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.30	(0.30)		
				Soft orangish brown sandy CLAY. (TILL)	0.60	(0.30)		
				Orangish brown sandy gravelly CLAY with low boulder content. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	1	(2.00)		
					2			
					2.60			
					3			
					4			
					5			

General Remarks:  
1. Backfilled with arisings on completion. 2. Moved location due to unsuitable ground condition in the proposed location. 3. BRE Digest 365 Soakaway test undertaken

Groundwater: Slight seepage at 0.60m bgl

Method: Trial Pit	Date(s): 19/03/2021	Logged By:	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335231.39, 434650.35	Stability: Stable	Dimensions: 3.60m Scale: 1:25
Hydrock Project No: C-18299		Plant: 14tn	0.60m

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.20	(0.20)		
1.00 - 1.50	B			Soft orangish brown sandy slightly gravelly CLAY with bands of sand. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)				
				... At 1.20m bgl with running sands		(2.40)		
1.50	D							
					2.60			
					Base of Excavation at 2.60m			
					3			
					4			
					5			

General Remarks:  
1. Backfilled with arisings on completion. 2. Moved location due to unsuitable ground condition in the proposed location. 3. BRE Digest 365 Soakaway test undertaken





Method: Trial Pit	Date(s): 17/03/2021	Logged By:	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335278.11, 434103.85	Stability: Stable	Dimensions: 3.30m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m/bgl	Thickness (m)	Level m/OD	Legend
Depth (m)	Type	Results						
1.50 1.50 - 2.00	D B			Very soft dark brown sandy CLAY. (TOPSOIL)	0.20	(0.20)		
				Soft orangish brown sandy CLAY. (TILL)	0.60	(0.40)		
				Orangish brown sandy gravelly CLAY with low boulder content. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	1.90	(1.90)		
				Base of Excavation at 2.50m				
					2.50			
					3			
					4			
					5			

General Remarks:  
 1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken



Method: Trial Pit	Date(s): 18/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 33581.71, 433648.24	Stability: Stable	Dimensions: 2.90m Scale: 1:25
Hydrock Project No: C-18299		Plant: 14tn	0.60m

Samples / Tests			Water-Strikes	Stratum Description	Depth m	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.30	(0.30)		
				Soft orangish brown sandy CLAY. (TILL)	0.70	(0.40)		
1.50 1.50 - 2.00	D B			Orangish brown sandy gravelly CLAY with low boulder content. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	1.00 2.00	(1.90)		
				Base of Excavation at 2.60m	2.60			
					3.00			
					4.00			
					5.00			

General Remarks:  
 1. Backfilled with arisings on completion. 2. Moved location due to unsuitable ground condition in the proposed location. 3. BRE Digest 365 Soakaway test undertaken


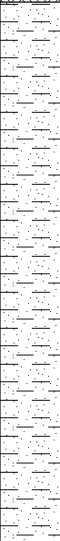
Groundwater: Dry

Method: Trial Pit	Date(s): 16/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335469.79, 433913.01	Stability: Unstable below 0.50m bgl	Dimensions: 3.00m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend	
Depth (m)	Type	Results							
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.20	(0.20)			
				Soft orangish brown sandy CLAY. (TILL)	0.50	(0.30)			
				Very soft to soft black sandy slightly organic CLAY with strong organic odour. (PEAT) ... Collapsing below 0.50m bgl	1.00	(1.80)			
				Base of Excavation at 2.30m					
					2.00				
					3.00				
					4.00				
					5.00				

General Remarks:  
1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken

Method: Trial Pit	Date(s): 16/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335769.82, 433908.25	Stability: Stable	Dimensions: 2.90m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.20	(0.20)		
				Soft orangish brown sandy CLAY. (TILL) ... Between 0.20 - 0.60m bgl becomes sandy.		(1.80)		
						2.00		
				Base of Excavation at 2.00m				
						3		
						4		
						5		

## General Remarks:

1. Backfilled with arisings on completion. 2. Moved location due to unsuitable ground condition in the proposed location. 3. BRE Digest 365 Soakaway test undertaken



Method: Trial Pit	Date(s): 16/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335585.34, 433785.59	Stability: Stable	Dimensions: 3.20m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.40	(0.40)		
1.00 - 1.50	B			Soft orangish brown sandy gravelly CLAY with bands of sand. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	1	(1.90)		
1.50	D				2			
Base of Excavation at 2.30m					2.30			
					3			
					4			
					5			

General Remarks:  
 1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken. 3. Collapsing walls occurred after digging whilst performing the onsite testing.

Groundwater: Dry



Method: Trial Pit	Date(s): 15/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335589.66, 433587.97	Stability: Stable	Dimensions: 2.80m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m/bgl	Thickness (m)	Level m/OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.50	(0.50)		
				Orangish brown sandy gravelly CLAY with low boulder content. Gravel is fine to coarse subangular of mudstone, limestone. (TILL)	0.90	(0.40)		
				Very soft to soft black sandy organic CLAY. (PEAT)	1.60	(0.70)		
				----- Base of Excavation at 1.60m	2			
					3			
					4			
					5			

General Remarks:  
1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken. 3. Collapsing walls occurred after digging whilst performing the onsite testing.



Method: Trial Pit	Date(s): 15/03/2021	Logged By: DS	Checked By: LW
Client: Cassidy and Ashton	Co-ords: 335901.74, 433659.78	Stability: Unstable below 0.40m bgl	Dimensions: 2.80m
Hydrock Project No: C-18299		Plant: 14tn	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth m bgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Very soft dark brown sandy CLAY. (TOPSOIL)	0.40	(0.40)		
				Pale brown clayey SAND. (TILL) ... Collapsing below 0.40m bgl	0.70	(0.30)		
				Orangish brown fine to coarse SAND. (TILL)	1.60	(0.90)		
----- Base of Excavation at 1.60m -----								
					2			
					3			
					4			
					5			

General Remarks:  
1. Backfilled with arisings on completion. 2. BRE Digest 365 Soakaway test undertaken. 3. Collapsing walls occurred after digging whilst performing the onsite testing.



## Appendix C Photographs

Site Investigation Photograph 1	
Date: 19/04/21	
Direction Photograph Taken: n/a.	
Description: TP02 showing water in pit and progressive collapse of sides.	

Site Investigation Photograph 2	
Date: 18/04/21	
Direction Photograph Taken: n/a.	
Description: TP03 showing full depth of pit prior to addition of water.	



Site Investigation Photograph 3	
Date: 16/04/21	
Direction Photograph Taken: n/a.	
Description: Soft ground accessing TP09	

Site Investigation Photograph 4	
Date: 16/04/21	
Direction Photograph Taken: n/a.	
Description: TP09 prior to addition of water.	

## Appendix D Geotechnical Laboratory Certificates

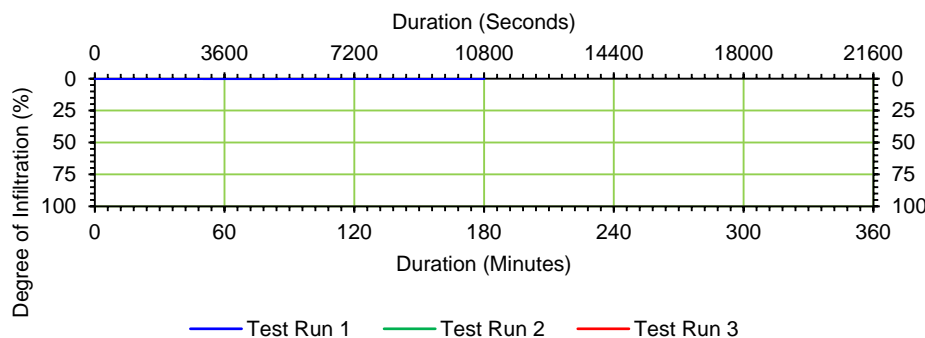


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP01      Date of start: 19/03/2021      Date at end: 19/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.700m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		9.23		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		9.25		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.600m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.000m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		2.220m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		2.220m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	9.250	1.600	0								
1	9.255	1.600	30								
1	9.260	1.600	60								
1	9.270	1.600	120								
1	9.280	1.600	180								
1	9.290	1.600	240								
1	9.300	1.600	300								
1	9.350	1.600	600								
1	9.400	1.600	900								
1	9.450	1.590	1200								
1	9.500	1.580	1500								
1	9.550	1.570	1800								
1	10.500	1.560	5100								
1	10.150	1.550	3000								
1	10.250	1.550	3600								
1	10.550	1.550	5400								
1	11.250	1.200	7200								
1	12.250	1.100	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.850m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.100m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.350m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		1.110m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		6.520m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	19/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

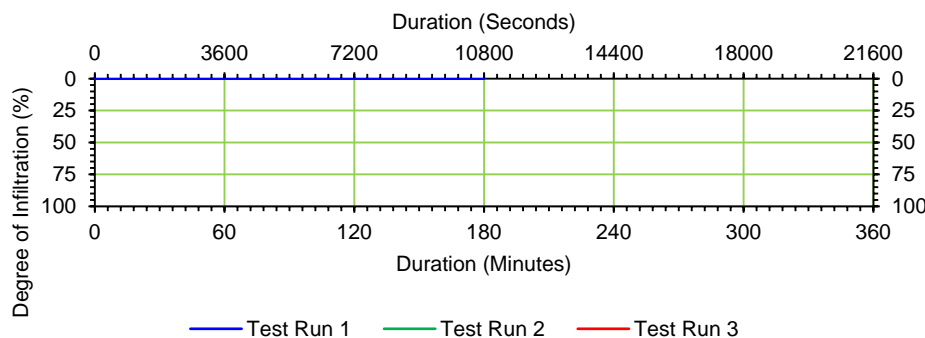


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP02      Date of start: 19/03/2021      Date at end: 19/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.000m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		10.00		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		10.03		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.580m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.020m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.836m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.836m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	10.030	1.580	0								
1	10.035	1.580	30								
1	10.040	1.580	60								
1	10.050	1.580	120								
1	10.060	1.580	180								
1	10.070	1.580	240								
1	10.080	1.580	300								
1	10.130	1.570	600								
1	10.180	1.450	900								
1	10.230	1.430	1200								
1	10.280	1.400	1500								
1	10.330	1.050	1800								
1	10.430	1.040	2400								
1	10.530	1.030	3000								
1	11.030	1.020	3600								
1	11.330	0.920	5400								
1	12.030	0.860	7200								
1	13.030	0.860	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.835m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.090m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.345m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.918m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.472m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	19/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021



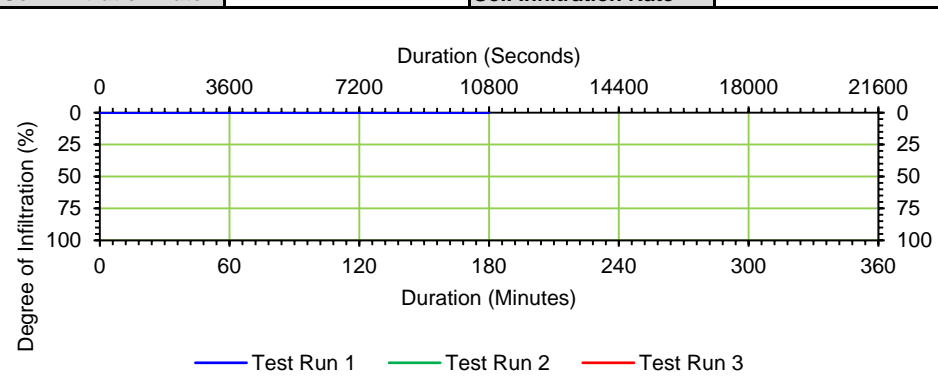


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP03      Date of start: 18/03/2021      Date at end: 18/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.200m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		3.000m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		9.17		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		9.19		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		2.000m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.000m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.920m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.920m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	9.190	2.000	0								
1	9.195	2.000	30								
1	9.200	2.000	60								
1	9.210	1.990	120								
1	9.220	1.990	180								
1	9.230	1.980	240								
1	9.240	1.980	300								
1	9.290	1.960	600								
1	9.340	1.950	900								
1	9.390	1.940	1200								
1	9.440	1.920	1500								
1	9.490	1.580	1800								
1	9.590	1.500	2400								
1	10.090	1.490	3000								
1	10.190	1.280	3600								
1	10.490	1.170	5400								
1	11.190	0.950	7200								
1	12.190	0.920	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		2.250m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.500m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.750m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.960m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.720m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	18/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021



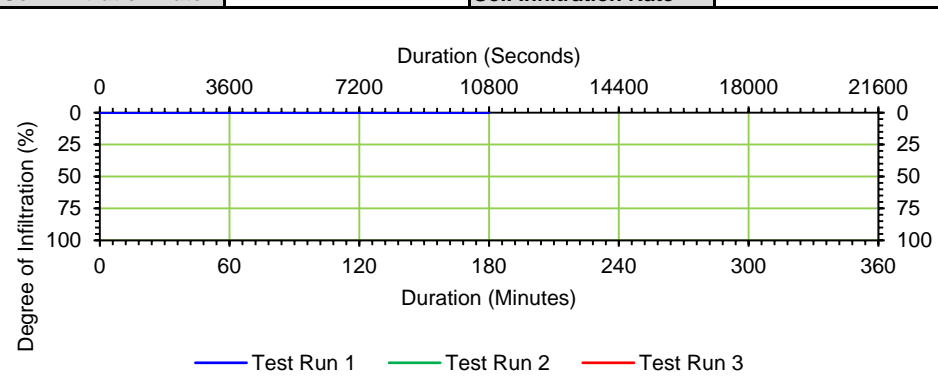


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location TP04 Date of start 17/03/2021 Date at end 17/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		2.800m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		10.08		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		10.10		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.600m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.000m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.680m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.680m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	10.100	1.600	0								
1	10.105	1.590	30								
1	10.110	1.590	60								
1	10.120	1.590	120								
1	10.130	1.590	180								
1	10.140	1.590	240								
1	10.150	1.590	300								
1	10.200	1.590	600								
1	10.250	1.570	900								
1	10.300	1.570	1200								
1	10.350	1.570	1500								
1	10.400	1.570	1800								
1	10.500	1.570	2400								
1	11.000	1.570	3000								
1	11.100	1.570	3600								
1	11.100	1.570	3600								
1	11.400	1.560	5400								
1	12.100	1.560	7200								
1	13.100	1.550	10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.850m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.100m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.350m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.840m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.080m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	17/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

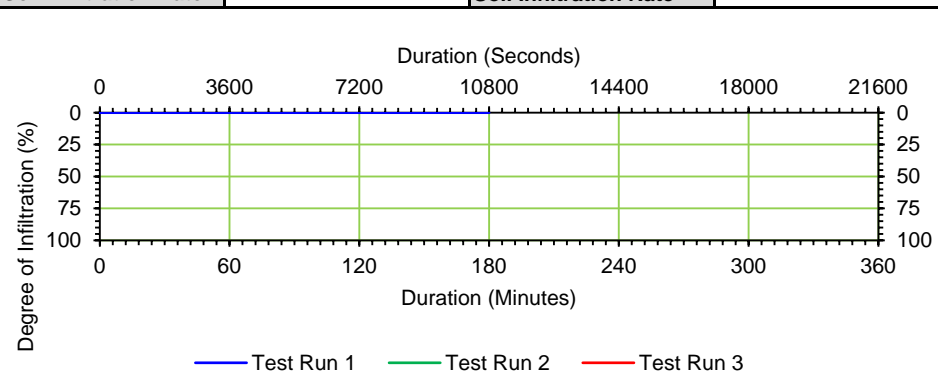


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP05      Date of start: 19/03/2021      Date at end: 19/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.600m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		9.03		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		9.05		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.670m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		0.930m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		2.009m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		2.009m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	9.050	1.670	0								
1	9.055	1.670	30								
1	9.060	1.670	60								
1	9.070	1.670	120								
1	9.080	1.670	180								
1	9.090	1.670	240								
1	9.100	1.670	300								
1	9.150	1.670	600								
1	9.200	1.670	900								
1	9.250	1.670	1200								
1	9.300	1.670	1500								
1	9.350	1.670	1800								
1	9.450	1.670	2400								
1	9.550	1.670	3000								
1	10.050	1.670	3600								
1	10.350	1.660	5400								
1	11.050	1.660	7200								
1	12.050	1.660	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.903m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.135m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.368m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		1.004m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		6.066m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	19/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

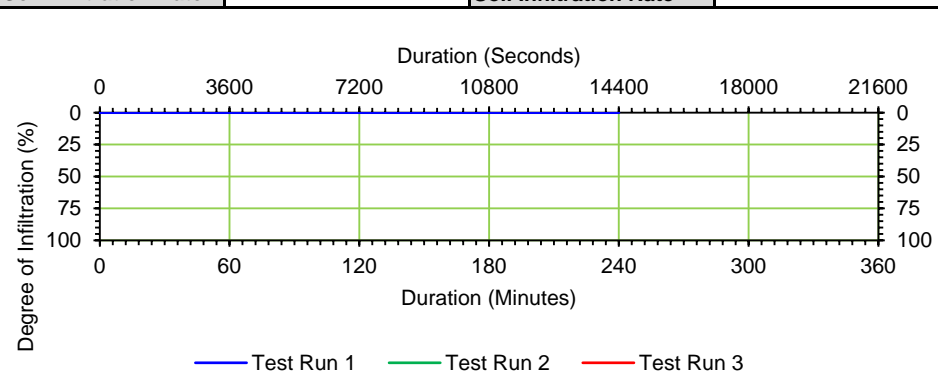


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP06      Date of start: 17/03/2021      Date at end: 17/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.300m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.500m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		8.42		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		8.44		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.500m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.000m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.980m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.980m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	8.440	1.500	0								
1	8.445	1.500	30								
1	8.450	1.500	60								
1	8.460	1.500	120								
1	8.470	1.500	180								
1	8.480	1.500	240								
1	8.490	1.490	300								
1	8.540	1.490	600								
1	8.590	1.490	900								
1	9.040	1.490	1200								
1	9.090	1.490	1500								
1	9.140	1.490	1800								
1	9.240	1.490	2400								
1	9.340	1.490	3000								
1	9.440	1.490	3600								
1	10.140	1.490	5400								
1	11.440	1.490	10800								
1	12.440	1.490	14400								
			14400								
			14400								
			14400								
			14400								
			14400								
25% water loss (75% full)		1.750m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.000m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.250m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.990m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.880m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	17/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

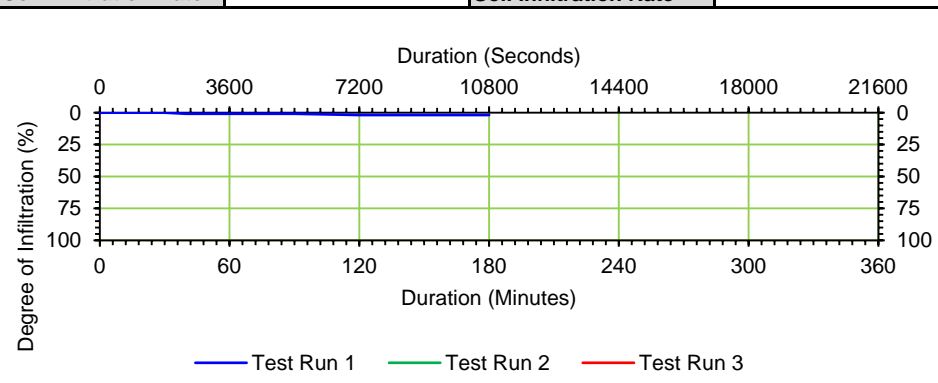


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP07      Date of start: 18/03/2021      Date at end: 18/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		2.900m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		8.19		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		8.21		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.520m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.080m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.879m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.879m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	8.210	1.520	0								
1	8.215	1.520	30								
1	8.220	1.520	60								
1	8.230	1.520	120								
1	8.240	1.520	180								
1	8.250	1.520	240								
1	8.260	1.520	300								
1	8.310	1.520	600								
1	8.360	1.520	900								
1	8.410	1.520	1200								
1	8.460	1.520	1500								
1	8.510	1.520	1800								
1	9.010	1.530	2400								
1	9.110	1.530	3000								
1	9.210	1.530	3600								
1	9.510	1.530	5400								
1	10.210	1.540	7200								
1	11.210	1.540	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.790m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.060m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.330m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.940m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.520m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	18/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

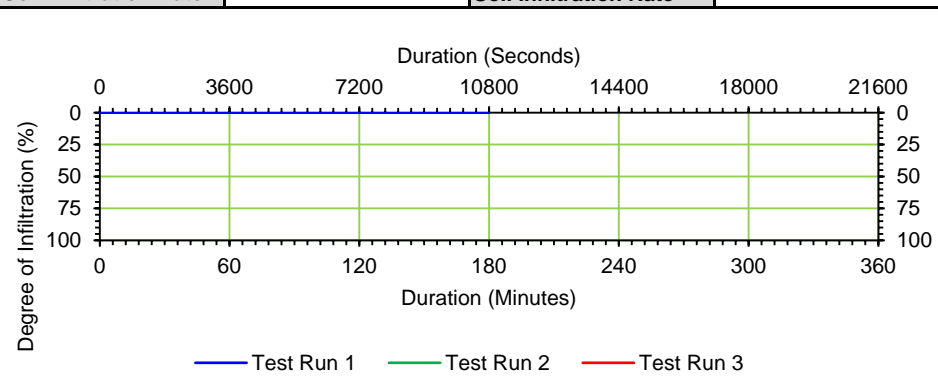


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP08      Date of start: 16/03/2021      Date at end: 16/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.000m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.300m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		9.38		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		9.40		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.250m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.050m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.890m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.890m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	9.400	1.250	0								
1	9.405	1.250	30								
1	9.410	1.240	60								
1	9.420	1.240	120								
1	9.430	1.230	180								
1	9.440	1.230	240								
1	9.450	1.220	300								
1	9.500	1.120	600								
1	9.550	1.080	900								
1	10.000	1.050	1200								
1	10.050	1.030	1500								
1	10.100	0.990	1800								
1	10.200	0.950	2400								
1	10.300	0.890	3000								
1	10.400	0.860	3600								
1	11.100	0.740	5400								
1	11.400	0.650	7200								
1	12.400	0.580	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.513m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		1.775m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.038m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.945m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.580m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	16/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021



### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

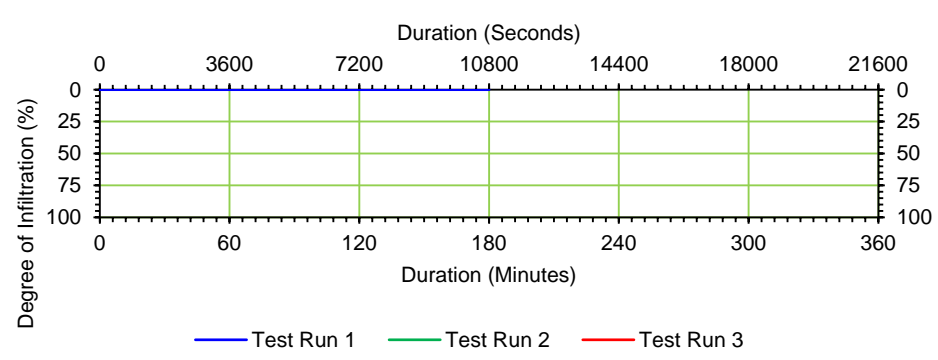
Test Location: TP09      Date of start: 16/03/2021      Date at end: 16/03/2021

Test Run 1			Test Run 2			Test Run 3		
Pit Dimensions (m)			Pit Dimensions (m)			Pit Dimensions (m)		
Trial Pit Length (L)	2.900m		Trial Pit Length (L)			Trial Pit Length (L)		
Trial Pit Breadth / Width (B)	0.600m		Trial Pit Breadth / Width (B)			Trial Pit Breadth / Width (B)		
Effective Depth (D)	2.000m		Effective Depth (D)			Effective Depth (D)		
Time at Start of Filling	12.55		Time at Start of Filling			Time at Start of Filling		
Time at End of Filling	12.57		Time at End of Filling			Time at End of Filling		
Depth from Surface to Water (D <sub>TW</sub> )	1.000m		Depth below Surface to Water (D <sub>TW</sub> )			Depth below Surface to Water (D <sub>TW</sub> )		
Water Depth (W <sub>D</sub> )	1.000m		Water Depth (W <sub>D</sub> )	-		Water Depth (W <sub>D</sub> )	-	
Maximum Fill Volume (V <sub>w</sub> )	1.740m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )	-		Maximum Fill Volume (V <sub>w</sub> )	-	
Gravel used to backfill Test Pit	No		Gravel used to backfill Test Pit			Gravel used to backfill Test Pit		
Porosity of Gravel Backfill (P <sub>t</sub> )			Porosity of Gravel Backfill (P <sub>t</sub> )			Porosity of Gravel Backfill (P <sub>t</sub> )		
Corrected Water Volume (V <sub>wc</sub> )	1.740m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )	-		Corrected Water Volume (V <sub>wc</sub> )	-	

Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	12.570	1.000	0								
1	12.575	1.000	30								
1	12.580	1.000	60								
1	12.590	1.000	120								
1	13.000	1.000	180								
1	13.010	1.000	240								
1	13.020	1.000	300								
1	13.070	0.980	600								
1	13.120	0.980	900								
1	13.170	0.980	1200								
1	13.220	0.970	1500								
1	13.270	0.970	1800								
1	13.370	0.960	2400								
1	13.470	0.950	3000								
1	13.570	0.940	3600								
1	14.270	0.920	5400								
1	14.570	0.900	7200								
1	15.570	0.880	10800								
			10800								
			10800								
			10800								
			10800								
			10800								

25% water loss (75% full)	1.250m	25% water loss (75% full)	-	25% water loss (75% full)	-
50% water loss (50% full)	1.500m	50% water loss (50% full)	-	50% water loss (50% full)	-
75% water loss (25% full)	1.750m	75% water loss (25% full)	-	75% water loss (25% full)	-
25% time (seconds)	-	25% time (seconds)	-	25% time (seconds)	-
75% time (seconds)	-	75% time (seconds)	-	75% time (seconds)	-
Vp 75-25	0.870m <sup>3</sup>	Vp 75-25	-	Vp 75-25	-
ap 50 (Actual area from test)	5.240m <sup>3</sup>	ap 50 (Actual area from test)	-	ap 50 (Actual area from test)	-
tp 75 - 25		tp 75 - 25		tp 75 - 25	

Soil Infiltration Rate	-	Soil Infiltration Rate	-	Soil Infiltration Rate	-
------------------------	---	------------------------	---	------------------------	---



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	16/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

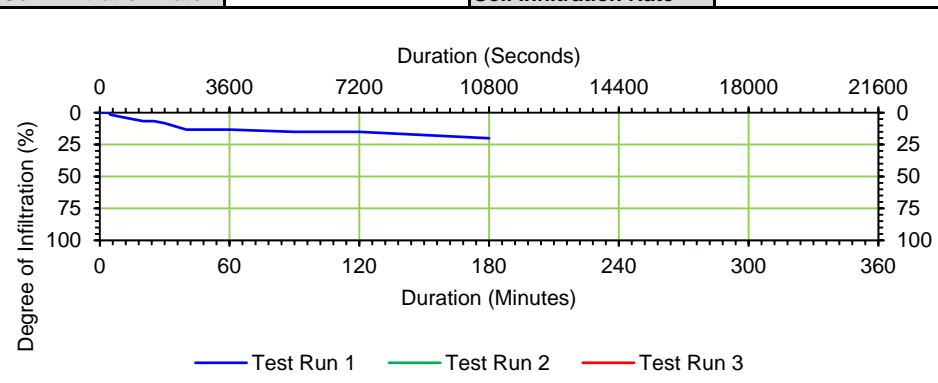


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location: TP10      Date of start: 16/03/2021      Date at end: 16/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		3.200m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		2.300m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		8.43		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		8.45		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		1.700m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		0.600m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.152m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.152m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	8.450	1.700	0								
1	8.455	1.700	30								
1	8.460	1.700	60								
1	8.470	1.700	120								
1	8.480	1.700	180								
1	8.490	1.700	240								
1	8.500	1.710	300								
1	8.550	1.720	600								
1	9.000	1.730	900								
1	9.050	1.740	1200								
1	9.100	1.740	1500								
1	9.150	1.750	1800								
1	9.250	1.780	2400								
1	9.350	1.780	3000								
1	9.450	1.780	3600								
1	10.150	1.790	5400								
1	10.450	1.790	7200								
1	11.450	1.820	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		1.850m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		2.000m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		2.150m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.576m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		4.200m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	16/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021



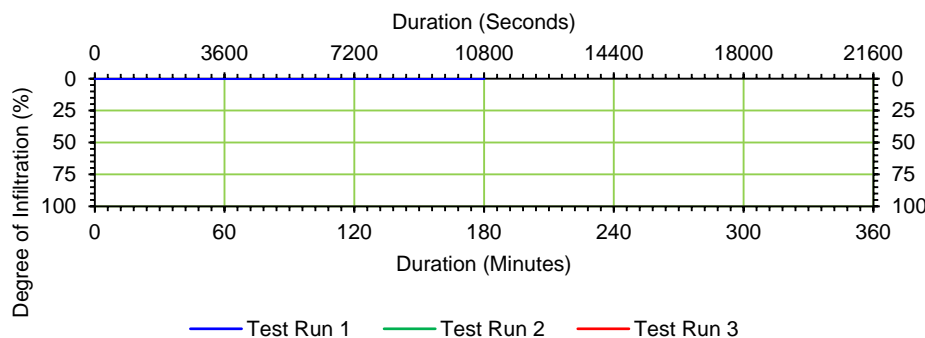


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location TP11 Date of start 15/03/2021 Date at end 15/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		2.800m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		1.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		10.15		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		10.17		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water (D <sub>TW</sub> )		0.600m		Depth below Surface to Water (D <sub>TW</sub> )				Depth below Surface to Water (D <sub>TW</sub> )			
Water Depth (W <sub>D</sub> )		1.000m		Water Depth (W <sub>D</sub> )		-		Water Depth (W <sub>D</sub> )		-	
Maximum Fill Volume (V <sub>w</sub> )		1.680m <sup>3</sup>		Maximum Fill Volume (V <sub>w</sub> )		-		Maximum Fill Volume (V <sub>w</sub> )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )				Porosity of Gravel Backfill (P <sub>t</sub> )			
Corrected Water Volume (V <sub>wc</sub> )		1.680m <sup>3</sup>		Corrected Water Volume (V <sub>wc</sub> )		-		Corrected Water Volume (V <sub>wc</sub> )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	10.170	0.600	0								
1	10.175	0.600	30								
1	10.180	0.600	60								
1	10.190	0.600	120								
1	10.200	0.600	180								
1	10.210	0.600	240								
1	10.220	0.600	300								
1	10.270	0.600	600								
1	10.320	0.600	900								
1	10.370	0.600	1200								
1	10.420	0.600	1500								
1	10.470	0.600	1800								
1	10.570	0.600	2400								
1	11.070	0.600	3000								
1	11.170	0.600	3600								
1	11.470	0.580	5400								
1	12.170	0.570	7200								
1	13.170	0.550	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		0.850m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		1.100m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		1.350m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.840m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		5.080m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	15/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

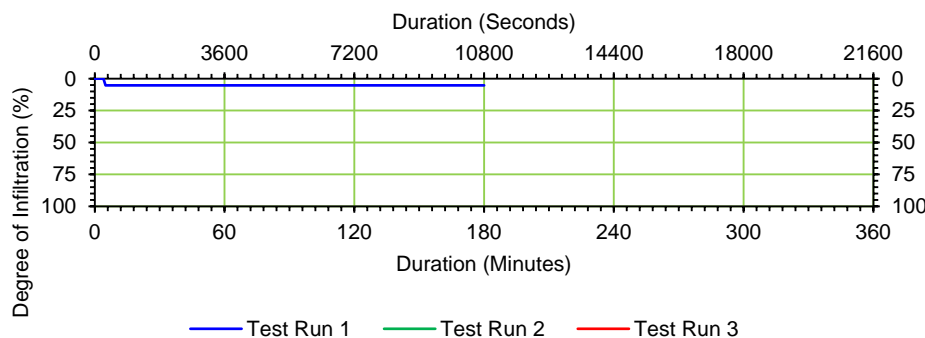


### 1 DAY INFILTRATION ASSESSMENT - WORKSHEET

Site: Whyndyke Farm  
 Client: Cassidy and Ashton

Test Location TP12 Date of start 15/03/2021 Date at end 15/03/2021

Test Run 1				Test Run 2				Test Run 3			
Pit Dimensions (m)				Pit Dimensions (m)				Pit Dimensions (m)			
Trial Pit Length (L)		2.800m		Trial Pit Length (L)				Trial Pit Length (L)			
Trial Pit Breadth / Width (B)		0.600m		Trial Pit Breadth / Width (B)				Trial Pit Breadth / Width (B)			
Effective Depth (D)		1.600m		Effective Depth (D)				Effective Depth (D)			
Time at Start of Filling		11.10		Time at Start of Filling				Time at Start of Filling			
Time at End of Filling		11.12		Time at End of Filling				Time at End of Filling			
Depth from Surface to Water ( $D_{TW}$ )		0.650m		Depth below Surface to Water ( $D_{TW}$ )				Depth below Surface to Water ( $D_{TW}$ )			
Water Depth ( $W_D$ )		0.950m		Water Depth ( $W_D$ )		-		Water Depth ( $W_D$ )		-	
Maximum Fill Volume ( $V_W$ )		1.596m <sup>3</sup>		Maximum Fill Volume ( $V_W$ )		-		Maximum Fill Volume ( $V_W$ )		-	
Gravel used to backfill Test Pit		No		Gravel used to backfill Test Pit				Gravel used to backfill Test Pit			
Porosity of Gravel Backfill ( $P_t$ )				Porosity of Gravel Backfill ( $P_t$ )				Porosity of Gravel Backfill ( $P_t$ )			
Corrected Water Volume ( $V_{WC}$ )		1.596m <sup>3</sup>		Corrected Water Volume ( $V_{WC}$ )		-		Corrected Water Volume ( $V_{WC}$ )		-	
Time to soakaway				Time to soakaway				Time to soakaway			
Time		Depth to water	Duration	Time		Depth to water	Duration	Time		Depth to water	Duration
Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds	Day	Time	(m bgl)	Seconds
1	11.120	0.650	0								
1	11.125	0.650	30								
1	11.130	0.650	60								
1	11.140	0.650	120								
1	11.150	0.650	180								
1	11.160	0.650	240								
1	11.170	0.700	300								
1	11.220	0.640	600								
1	11.270	0.640	900								
1	11.320	0.630	1200								
1	11.370	0.630	1500								
1	11.420	0.630	1800								
1	11.520	0.620	2400								
1	12.020	0.610	3000								
1	12.120	0.600	3600								
1	12.420	0.570	5400								
1	13.120	0.540	7200								
1	14.120	0.510	10800								
			10800								
			10800								
			10800								
			10800								
			10800								
25% water loss (75% full)		0.888m		25% water loss (75% full)		-		25% water loss (75% full)		-	
50% water loss (50% full)		1.125m		50% water loss (50% full)		-		50% water loss (50% full)		-	
75% water loss (25% full)		1.363m		75% water loss (25% full)		-		75% water loss (25% full)		-	
25% time (seconds)		-		25% time (seconds)		-		25% time (seconds)		-	
75% time (seconds)		-		75% time (seconds)		-		75% time (seconds)		-	
Vp 75-25		0.798m <sup>3</sup>		Vp 75-25		-		Vp 75-25		-	
ap 50 (Actual area from test)		4.910m <sup>3</sup>		ap 50 (Actual area from test)		-		ap 50 (Actual area from test)		-	
tp 75 - 25				tp 75 - 25				tp 75 - 25			
Soil Infiltration Rate		-		Soil Infiltration Rate		-		Soil Infiltration Rate		-	



Form completed by		
Tested By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	15/03/2021
Calculated By	PRINT	Daniel Sanchez
	SIGN	DS
	DATE	22/03/2021
Checked by	PRINT	Leon Warrington
	SIGN	LW
	DATE	07/04/2021

## Appendix E Soakaway Assessment Sheets



# TEST CERTIFICATE

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

## Liquid and Plastic Limits

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

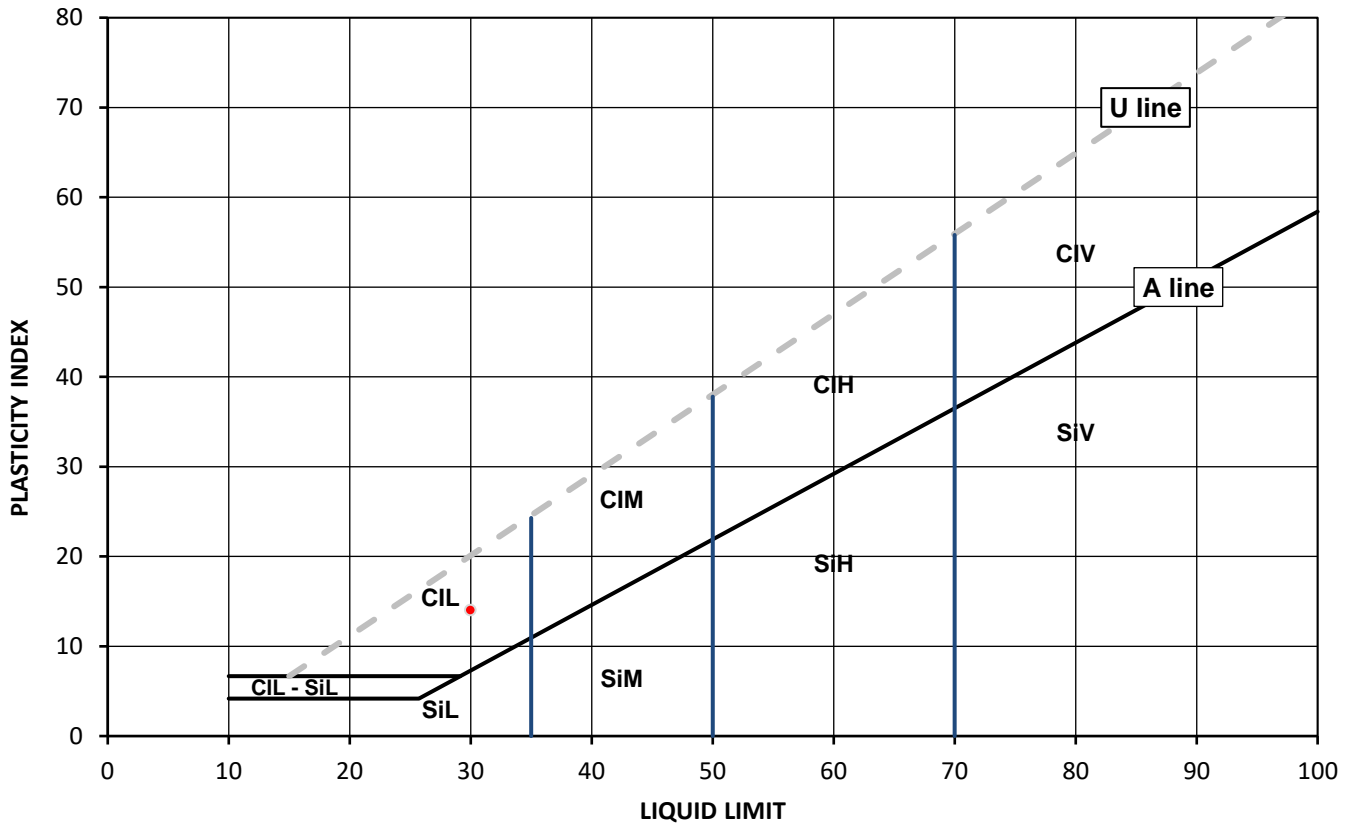
### Test Results:

Laboratory Reference: 1833307  
Hole No.: TP02  
Sample Reference: Not Given  
Soil Description: Brown slightly gravelly very sandy CLAY

Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [ W ] %	Liquid Limit [ WL ] %	Plastic Limit [ Wp ] %	Plasticity Index [ Ip ] %	% Passing 425µm BS Test Sieve
19	30	16	14	86



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	Low
		M	Medium
		H	High
		V	Very high
		O	Organic
			append to classification for organic material ( eg CIHO )
			below 35
			35 to 50
			50 to 70
			exceeding 70

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Szczepan Białatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

## Liquid and Plastic Limits

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

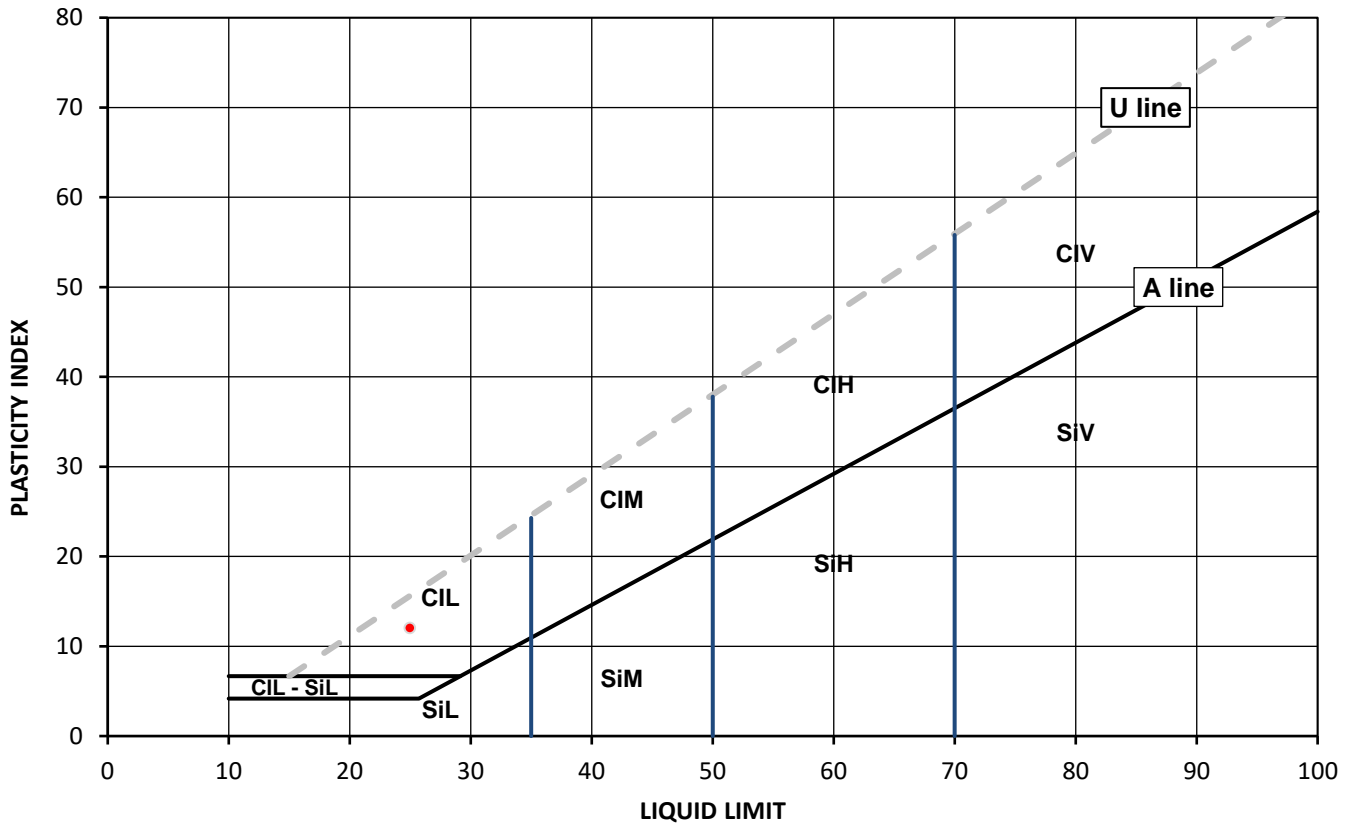
### Test Results:

Laboratory Reference: 1833309  
Hole No.: TP05  
Sample Reference: Not Given  
Soil Description: Brown slightly gravelly SAND and CLAY

Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [ W ] %	Liquid Limit [ WL ] %	Plastic Limit [ Wp ] %	Plasticity Index [ Ip ] %	% Passing 425µm BS Test Sieve
16	25	13	12	82



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	Low
		M	Medium
		H	High
		V	Very high
		O	Organic
			append to classification for organic material ( eg CIHO )

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

## Liquid and Plastic Limits

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

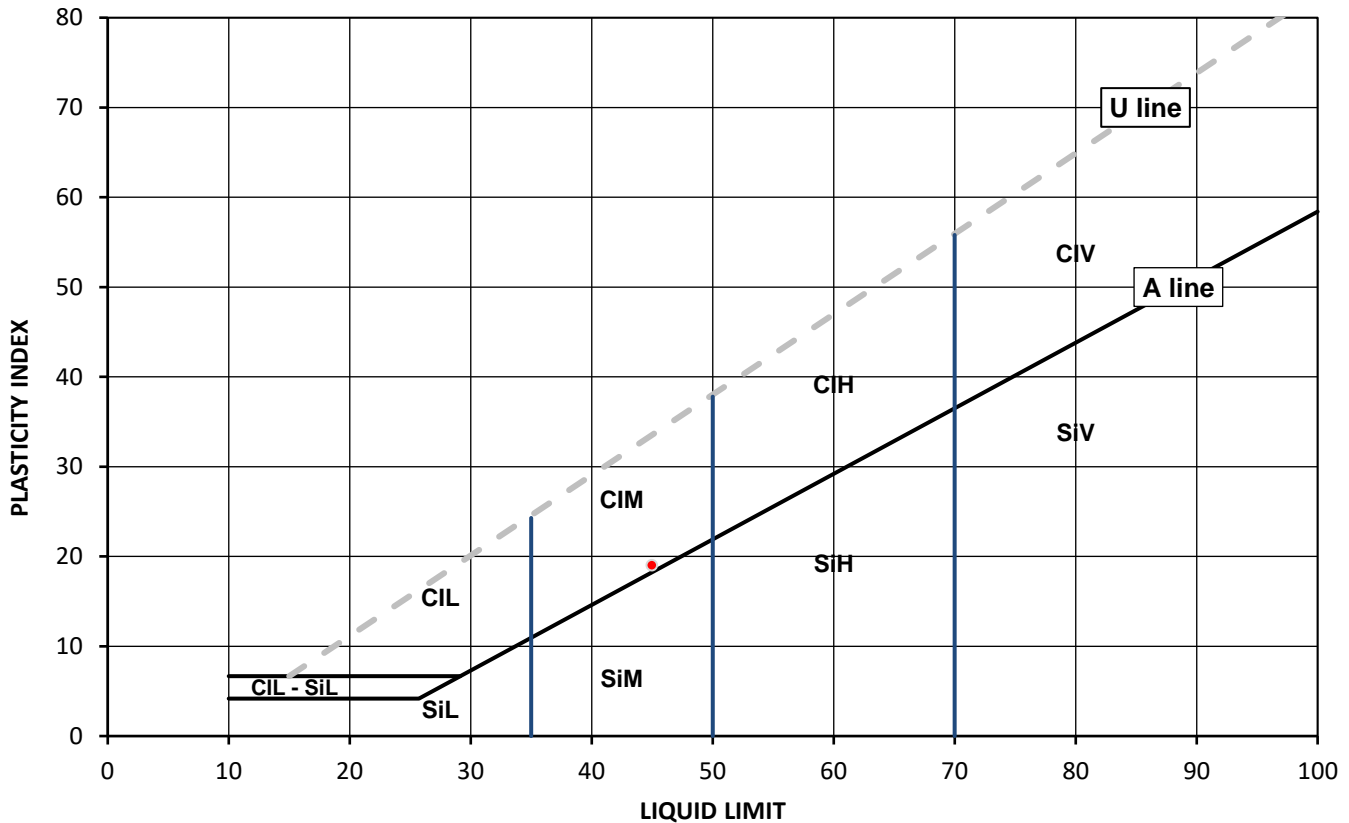
### Test Results:

Laboratory Reference: 1833311  
Hole No.: TP07  
Sample Reference: Not Given  
Soil Description: Dark brown slightly gravelly very sandy CLAY

Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [ W ] %	Liquid Limit [ WL ] %	Plastic Limit [ Wp ] %	Plasticity Index [ Ip ] %	% Passing 425µm BS Test Sieve
33	45	26	19	88



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	L	Low	Liquid Limit	below 35
Si	Silt		M	Medium		35 to 50
			H	High		50 to 70
			V	Very high		exceeding 70
			O	Organic		append to classification for organic material ( eg CIHO )

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Szczepan Białatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.





# TEST CERTIFICATE

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



## Liquid and Plastic Limits

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

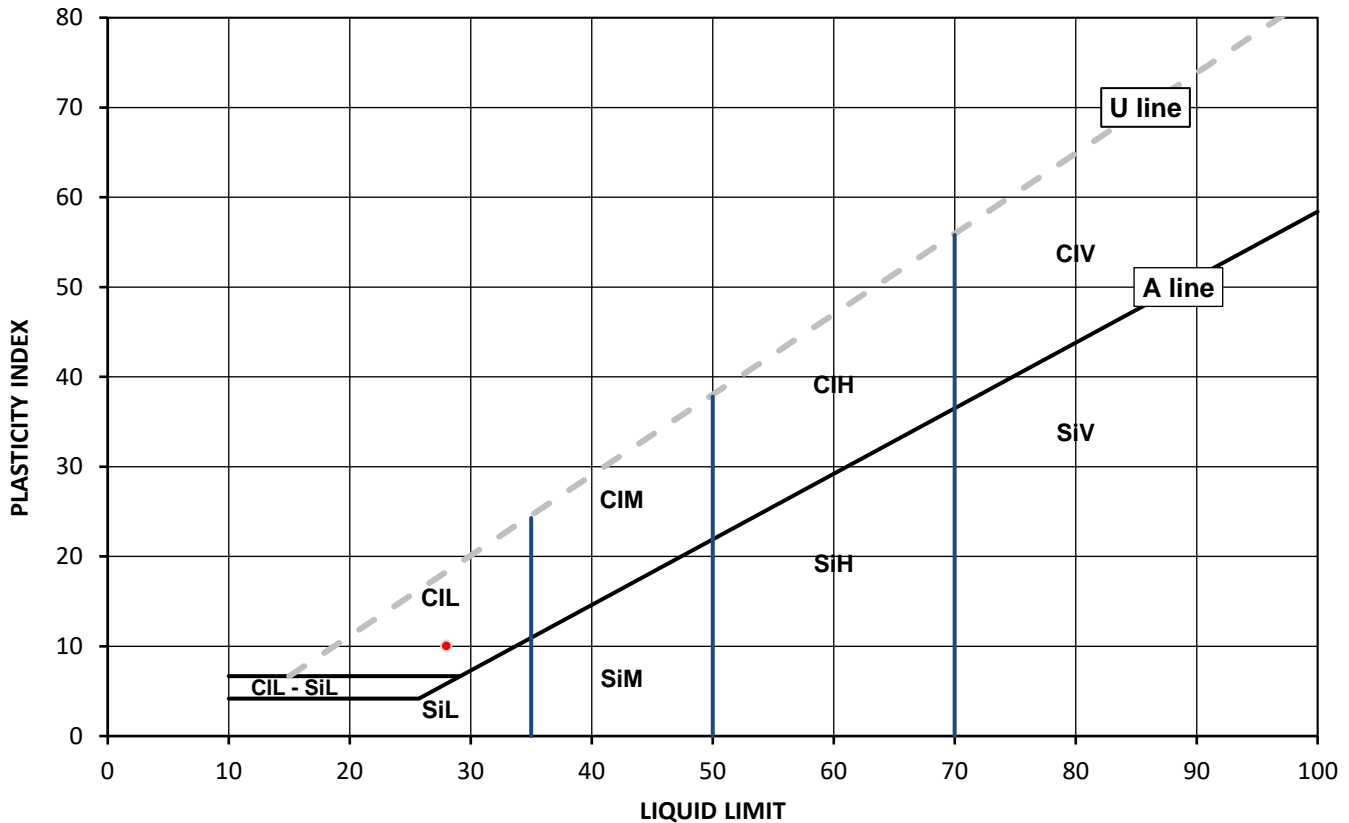
### Test Results:

Laboratory Reference: 1833313  
Hole No.: TP10  
Sample Reference: Not Given  
Soil Description: Brown gravelly CLAY and SAND

Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [ W ] %	Liquid Limit [ WL ] %	Plastic Limit [ Wp ] %	Plasticity Index [ Ip ] %	% Passing 425µm BS Test Sieve
21	28	18	10	86



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	L	Low	Liquid Limit	below 35
Si	Silt		M	Medium		35 to 50
			H	High		50 to 70
			V	Very high		exceeding 70
			O	Organic		append to classification for organic material ( eg CIHO )

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Szczepan Białatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



## Liquid and Plastic Limits

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

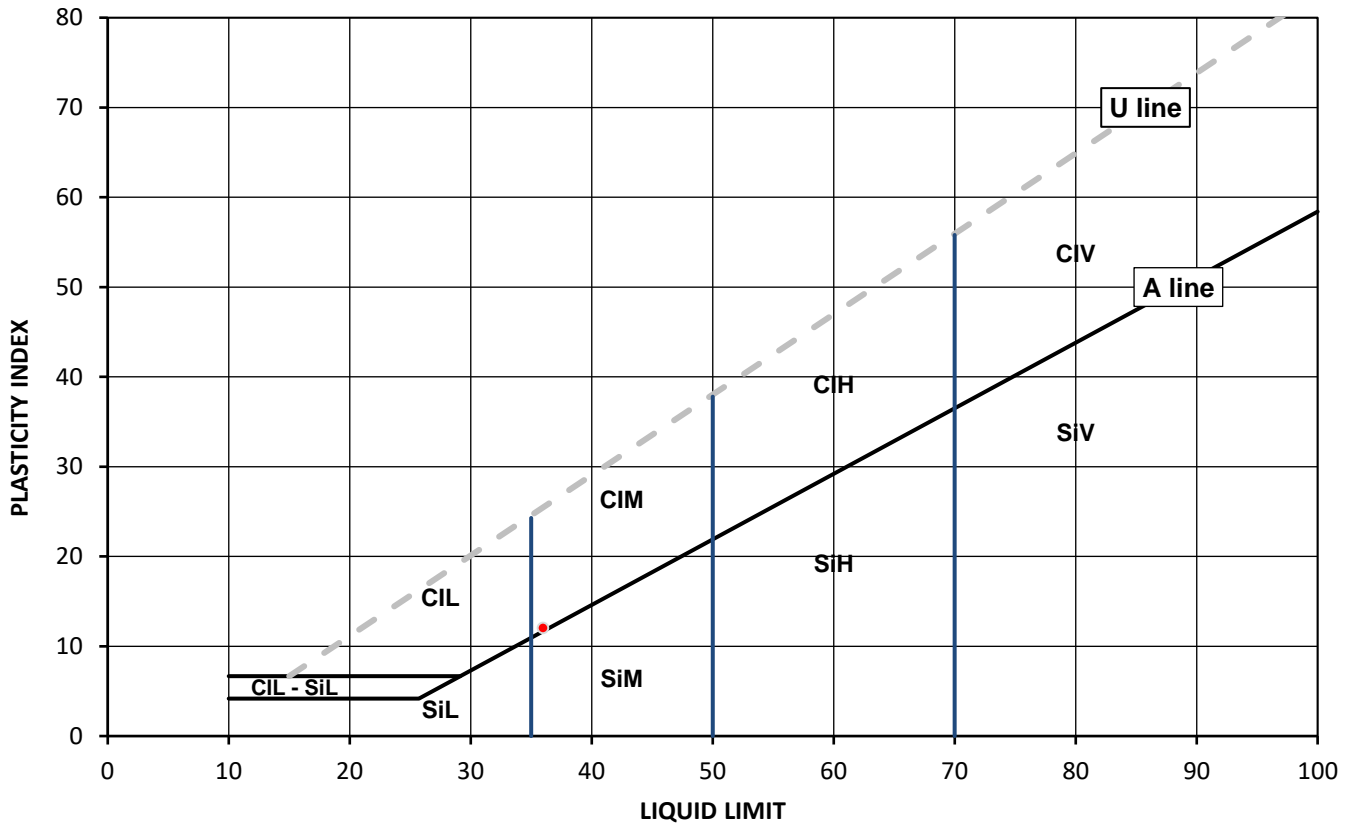
### Test Results:

Laboratory Reference: 1833608  
Hole No.: TP06  
Sample Reference: Not Given  
Soil Description: Dark brown slightly gravelly very sandy CLAY

Depth Top [m]: 1.50  
Depth Base [m]: 2.00  
Sample Type: B

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [ W ] %	Liquid Limit [ WL ] %	Plastic Limit [ Wp ] %	Plasticity Index [ Ip ] %	% Passing 425µm BS Test Sieve
22	36	24	12	86



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

Cl	Clay	Plasticity	Liquid Limit
Si	Silt	L	Low
		M	Medium
		H	High
		V	Very high
		O	Organic
			append to classification for organic material ( eg CIHO )
			below 35
			35 to 50
			50 to 70
			exceeding 70

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



4041

Client: Hydrock Consultants Ltd  
 Client Address: 4 Lakeside, Festival Park,  
 Stoke on Trent, ST1 5RY

Contact: Daniel Sanchez  
 Site Address: Whyndyke Farm Garden Village

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

# SUMMARY REPORT

## Summary of Classification Test Results

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

i2 Analytical Ltd  
 Unit 8 Harrowden Road  
 Brackmills Industrial Estate  
 Northampton NN4 7EB



Environmental Science

Client Reference: C-18299-C  
 Job Number: 21-68002  
 Date Sampled: 01/04/2021  
 Date Received: 06/04/2021  
 Date Tested: 15/04/2021  
 Sampled By: Client - DS

### Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [ W ]	Water Content [ W ]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m			%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%			
1833307	TP02	Not Given	1.00	1.50	B	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	19		86	30	16	14						
1833308	TP02	Not Given	1.50	Not Given	D	Brown slightly gravelly sandy CLAY		16											
1833309	TP05	Not Given	1.00	1.50	B	Brown slightly gravelly SAND and CLAY	Atterberg 1 Point	16		82	25	13	12						
1833310	TP05	Not Given	1.50	Not Given	D	Brown slightly gravelly sandy CLAY		16											
1833608	TP06	Not Given	1.50	2.00	B	Dark brown slightly gravelly very sandy CLAY	Atterberg 1 Point	22		86	36	24	12						
1833611	TP06	Not Given	1.50	Not Given	D	Brown slightly gravelly slightly sandy CLAY		16											
1833311	TP07	Not Given	1.00	1.50	B	Dark brown slightly gravelly very sandy CLAY	Atterberg 1 Point	33		88	45	26	19						
1833312	TP07	Not Given	1.50	Not Given	D	Dark brown slightly gravelly sandy CLAY		25											
1833313	TP10	Not Given	1.00	1.50	B	Brown gravelly CLAY and SAND	Atterberg 1 Point	21		86	28	18	10						
1833314	TP10	Not Given	1.50	Not Given	D	Brown sandy CLAY		25											

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Szczepan Bielatowicz  
 PL Deputy Head of Geotechnical Section  
 for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

## Particle Size Distribution

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

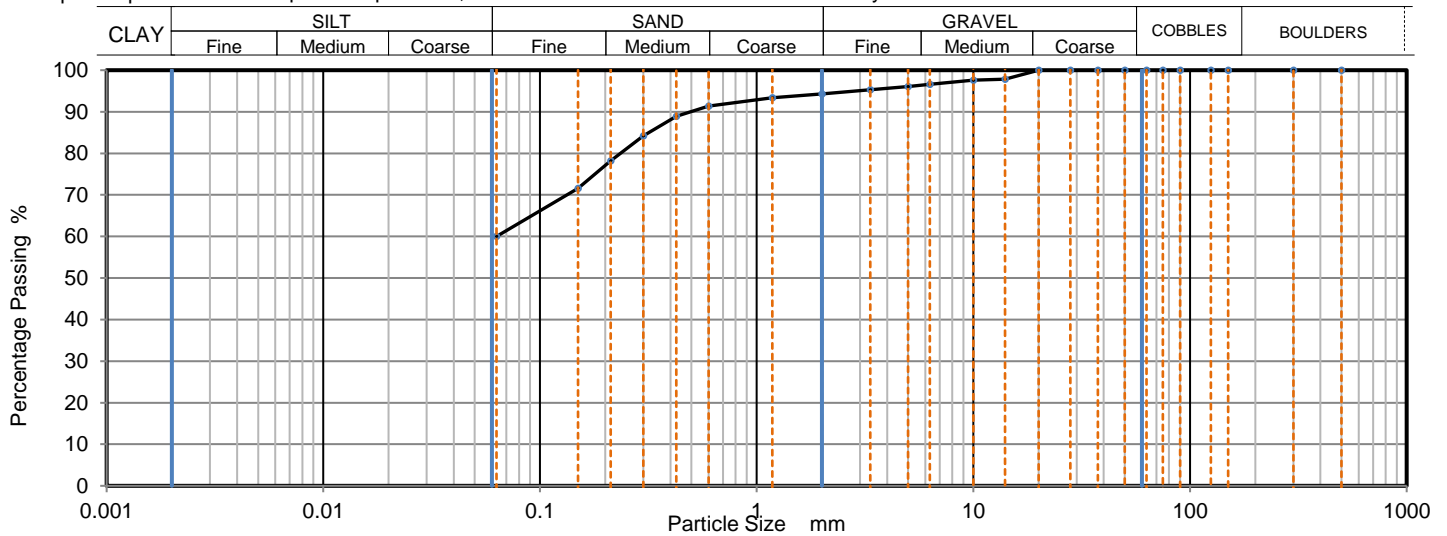
Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

### Test Results:

Laboratory Reference: 1833307  
Hole No.: TP02  
Sample Reference: Not Given  
Sample Description: Brown slightly gravelly very sandy CLAY  
Sample Preparation: Sample was quartered, oven dried at 108.5 °C and broken down by hand.  
Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	98		
10	98		
6.3	97		
5	96		
3.35	95		
2	94		
1.18	93		
0.6	91		
0.425	89		
0.3	84		
0.212	78		
0.15	72		
0.063	61		

Sample Proportions	% dry mass
Very coarse	0
Gravel	6
Sand	34
Fines <0.063mm	61

Grading Analysis		
D100	mm	20
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		N/A
Curvature Coefficient		

Uniformity Coefficient and Coefficient of Curvature calculated in accordance with BS EN ISO 14688-2: 2004 + A1: 2013

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

### Remarks:

### Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

## Particle Size Distribution

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

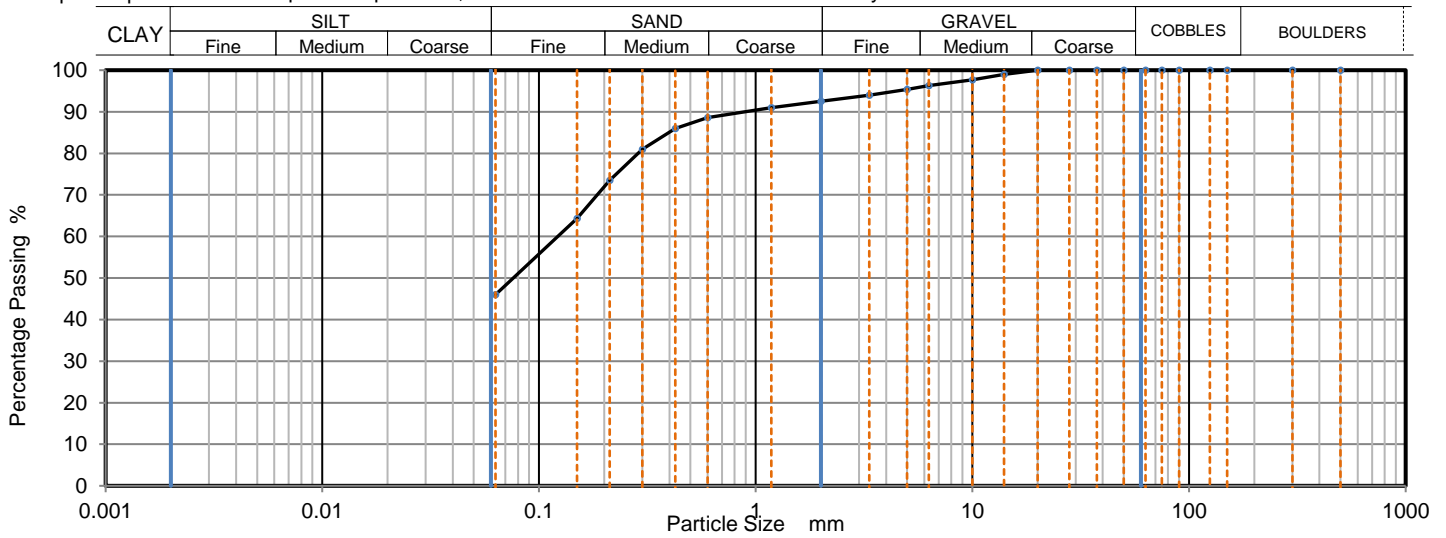
Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

### Test Results:

Laboratory Reference: 1833309  
Hole No.: TP05  
Sample Reference: Not Given  
Sample Description: Brown slightly gravelly SAND and CLAY  
Sample Preparation: Sample was quartered, oven dried at 106.8 °C and broken down by hand.  
Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	98		
6.3	96		
5	95		
3.35	94		
2	93		
1.18	91		
0.6	89		
0.425	86		
0.3	81		
0.212	74		
0.15	64		
0.063	47		

Sample Proportions	% dry mass
Very coarse	0
Gravel	8
Sand	46
Fines <0.063mm	46

Grading Analysis		
D100	mm	20
D60	mm	0.122
D30	mm	
D10	mm	
Uniformity Coefficient		> 1.9
Curvature Coefficient		

Uniformity Coefficient and Coefficient of Curvature calculated in accordance with BS EN ISO 14688-2: 2004 + A1: 2013

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

### Remarks:

### Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.





# TEST CERTIFICATE

## Particle Size Distribution

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

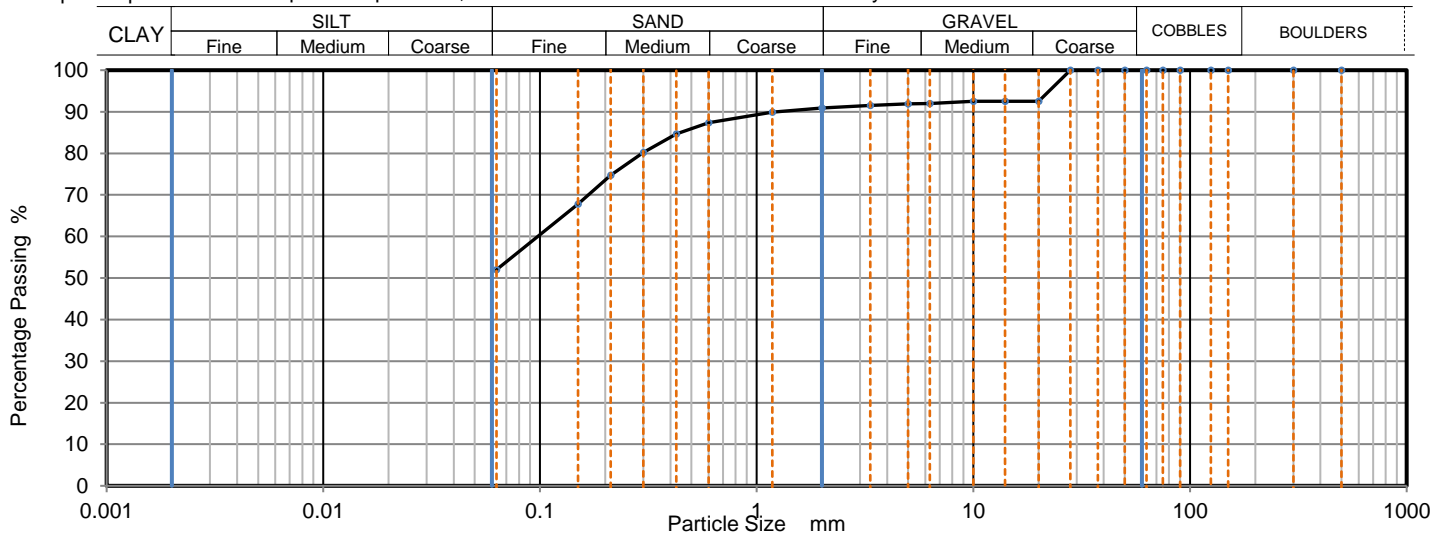
Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

### Test Results:

Laboratory Reference: 1833311  
Hole No.: TP07  
Sample Reference: Not Given  
Sample Description: Dark brown slightly gravelly very sandy CLAY  
Sample Preparation: Sample was quartered, oven dried at 106.8 °C and broken down by hand.  
Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	93		
14	93		
10	93		
6.3	92		
5	92		
3.35	92		
2	91		
1.18	90		
0.6	87		
0.425	85		
0.3	80		
0.212	75		
0.15	68		
0.063	53		

Sample Proportions	% dry mass
Very coarse	0
Gravel	9
Sand	38
Fines <0.063mm	53

Grading Analysis		
D100	mm	28
D60	mm	0.0958
D30	mm	
D10	mm	
Uniformity Coefficient		> 1.5
Curvature Coefficient		

Uniformity Coefficient and Coefficient of Curvature calculated in accordance with BS EN ISO 14688-2: 2004 + A1: 2013

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

### Remarks:

### Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

## Particle Size Distribution

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

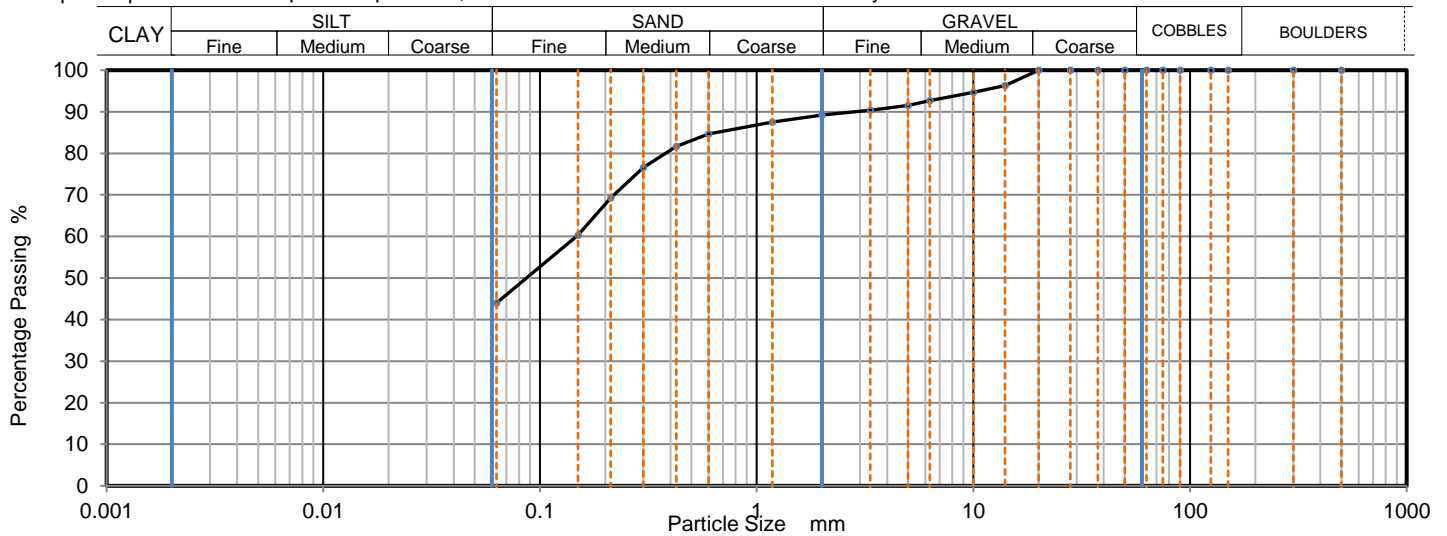
Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

### Test Results:

Laboratory Reference: 1833313  
Hole No.: TP10  
Sample Reference: Not Given  
Sample Description: Brown gravelly CLAY and SAND  
Sample Preparation: Sample was quartered, oven dried at 106.8 °C and broken down by hand.  
Depth Top [m]: 1.00  
Depth Base [m]: 1.50  
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	96		
10	95		
6.3	93		
5	92		
3.35	90		
2	89		
1.18	88		
0.6	85		
0.425	82		
0.3	77		
0.212	69		
0.15	60		
0.063	45		

Sample Proportions	% dry mass
Very coarse	0
Gravel	11
Sand	45
Fines <0.063mm	44

Grading Analysis		
D100	mm	20
D60	mm	0.148
D30	mm	
D10	mm	
Uniformity Coefficient		> 2.3
Curvature Coefficient		

Uniformity Coefficient and Coefficient of Curvature calculated in accordance with BS EN ISO 14688-2: 2004 + A1: 2013

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

### Remarks:

### Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



# TEST CERTIFICATE

## Particle Size Distribution

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Tested in Accordance with: BS 1377-2: 1990

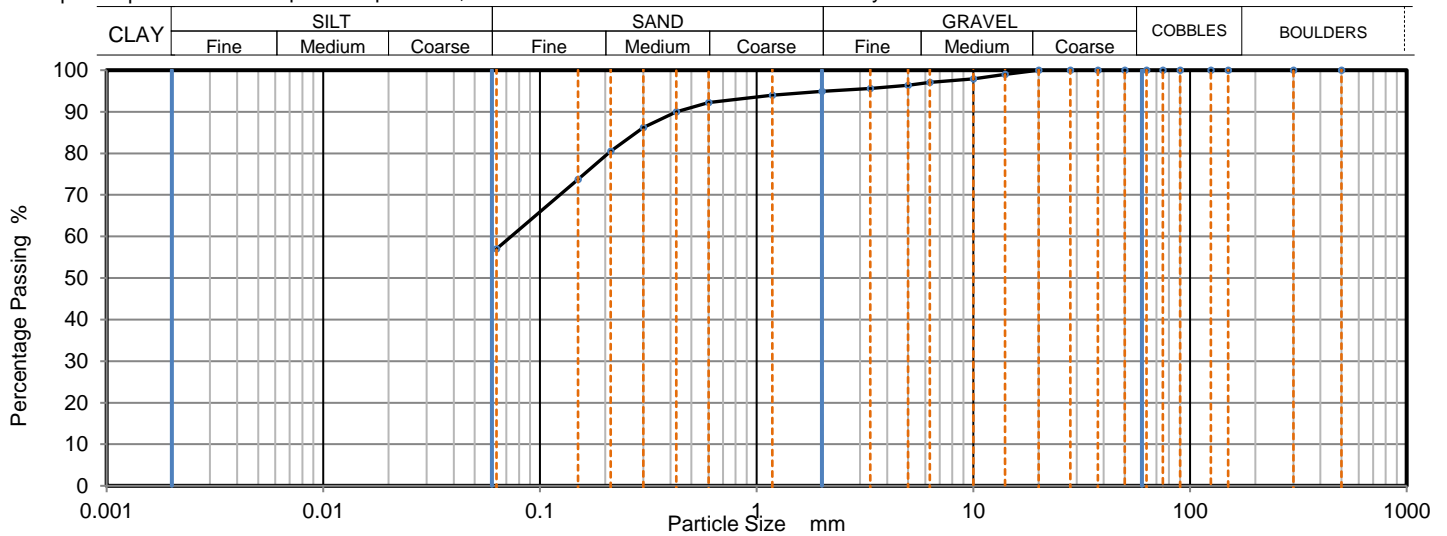
Client: Hydrock Consultants Ltd  
Client Address: 4 Lakeside, Festival Park,  
Stoke on Trent, ST1 5RY

Client Reference: C-18299-C  
Job Number: 21-68002  
Date Sampled: 01/04/2021  
Date Received: 06/04/2021  
Date Tested: 15/04/2021  
Sampled By: Client - DS

Contact: Daniel Sanchez  
Site Address: Whyndyke Farm Garden Village  
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

### Test Results:

Laboratory Reference: 1833608  
Hole No.: TP06  
Sample Reference: Not Given  
Sample Description: Dark brown slightly gravelly very sandy CLAY  
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.  
Depth Top [m]: 1.50  
Depth Base [m]: 2.00  
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	98		
6.3	97		
5	96		
3.35	96		
2	95		
1.18	94		
0.6	92		
0.425	90		
0.3	86		
0.212	81		
0.15	74		
0.063	58		

Sample Proportions	% dry mass
Very coarse	0
Gravel	5
Sand	37
Fines <0.063mm	58

Grading Analysis		
D100	mm	20
D60	mm	0.0712
D30	mm	
D10	mm	
Uniformity Coefficient		> 1.1
Curvature Coefficient		

Uniformity Coefficient and Coefficient of Curvature calculated in accordance with BS EN ISO 14688-2: 2004 + A1: 2013

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

### Remarks:

### Signed:

Szczepan Bielatowicz  
PL Deputy Head of Geotechnical Section  
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.