

IV.124.23
Date: 6th February 2024

Spinney Homes Ltd
5 Harcourt Spinney
Market Bosworth
Nuneaton
Leicestershire
CV13 0LH

Dear Sirs,

RE: Land off Lindridge Lane, Desford, Leicestershire

Introduction

As per your instruction, Ivy House Environmental (IHE) attended the site known as land of Lindridge Lane, Desford, Leicestershire on the 24th October 2023 in order to undertake geotechnical investigation at the site. Soakaway testing was also undertaken to determine a soil infiltration rate at the site.

At the time of the investigation, the site generally comprised a large field with numerous mature trees along the western site boundary and a residential property and garage to the north. A concrete slab, formerly housing cattery units, lies along the eastern site boundary. The site was generally flat lying. The area surrounding the site generally comprises agricultural fields, residential properties and a 'Tropical Bird Park' to the West.

The development proposal for the site is for the development of four residential properties with associated access road and private gardens.

The site location, layout and development proposal are included within Appendix A.

The scope of the investigation has been compiled to assist with designing the new structure, which includes;

- Advancing several trial pits for ground investigation purposes;
- Geotechnical testing to assist with foundation options and design parameters;
- Determine a concrete classification;
- Soakaway testing to determine an infiltration rate at the site.

The solid geology at the site is recorded to comprise the Edwalton Member across the central and western sections of the site while the eastern section of the site is anticipated to comprise the Cotgrave Sandstone Member. Superficial deposits are not anticipated to be present beneath the site.

No historic or authorised landfills are recorded within 500m of the site according to the Groundsure.io website. Historical maps of the site indicate the site previously comprised a field. The historical maps are included within Appendix A.

Site works

In total four trial pits (SA1, SA2 and TP1 to TP4) were advanced across the site to a maximum depth of 3.20mbgl. Two of the trial pits (SA1 and SA2) were utilised for soakaway testing.

The location of the trial pits is included in Appendix A while the trial pit logs are included within Appendix B.

The trial pits generally revealed topsoil, overlying firm gravelly clay grading to stiff and very stiff grey brown clay, at depths of circa 1.00mbgl, to total depths of between 2.00m and 3.00mbgl. Underlying the clay, very weak brown mudstone has been recorded to a maximum depth of 3.20mbgl.

Groundwater entries were not recorded within any of the exploratory holes.

The trial pit logs are included in Appendix B.

Soakaway tests were undertaken within boreholes SA1 and SA2 as part of the investigation.

Laboratory Data

Samples were taken from the window sample boreholes and analysed at an accredited laboratory for geotechnical properties such as plasticity indices, moisture content, pH and water-soluble sulphate content.

A summary table of laboratory findings is detailed below:

Determinand	Edwalton Member
Moisture Content %	20 - 23
Liquid Limit %	42 - 45
Plastic Limit %	19 - 22
Plasticity Index %	23
% > 0.425mm %	100
Modified Plasticity Index* %	23
pH	6.5 – 8.4
Water Soluble Sulphate content mg/l	4.9 – 10.7

Notes: * Modified Plasticity Index Calculated in Accordance with NHBC Guidance, Chapter 4.2

The Modified Plasticity Index results indicate that the Edwalton Member of medium volume change potential. On this basis, a minimum foundation depth of 0.90mbgl should be adopted across the site.

Based on the recorded water-soluble sulphate concentrations and pH values it is considered appropriate to adopt a basic 'brownfield' Design Sulphate Class of DS-1, together with an Aggressive Chemical Environment of Concrete (ACEC) of AC-1 across the site.

Soil geotechnical laboratory analysis certificates are presented in Appendix C.

Foundation Assessment

The trial pits generally revealed topsoil overlying firm gravelly clay grading to stiff clay at depths of circa 1.00mbgl. Underlying the clay, very weak mudstone was recorded to a maximum depth of 3.20mbgl.

It is considered that traditional strip foundations, approximately 0.60m wide, bearing on the upper horizons of the Edwalton Member, generally comprising clays of at least firm consistency, should prove to be a suitable foundation option for the proposed foundations of and the new building at the site. A net allowable bearing pressure of 120kN/m² is considered to be achievable at 0.90mbgl on soils of at least firm consistency.

Trees and shrubs of varying type and maturity are present across the central and western section of the site and along all of the site boundaries. Shallow foundations within close proximity of trees or shrubs are likely to require deepening in accordance to the recorded distances as per NHBC Standards (Building Near Trees Chapter 4.2). Where information regarding past or future tree removal/planting is available, then the guidance provided in NHBC Standards (Chapter 4.2: Building Near Trees) should be followed together with advice from a qualified structural engineer. It is recommended to undertake an arboricultural survey to assess tree types and assist with foundation design.

The removal of trees during development of the site may also cause heave of cohesive soils, and heave protection measures should be adopted in foundation design where appropriate.

A suspended floor slab should be used at the site due to the close proximity of trees.

The above assessment should be confirmed by the appointed structural engineer.

Buried Concrete

Water soluble sulphate and pH analysis of the Birstall Sand and Gravel Member has revealed results of between 4.9 – 10.7mg/l and 6.4 – 8.4.

Based on the above it is considered appropriate to adopt a 'brownfield' Design Sulphate Class of DS-1, together with an Aggressive Chemical Environment of Concrete (ACEC) of AC-1 across the site.

Excavations & Groundwater Conditions

Excavations across the site should be within the capability of normal earthmoving plant although trial pits proved to be difficult to dig within the very stiff clay materials across the site.

Excavations for foundations and services/utilities should remain stable when unsupported in the short term, however all excavations should be inspected on completion. Any loose, very wet or soft soils should be removed and replaced with compacted granular fill or lean mix concrete.

If soft clays or loose sands are encountered, temporary shoring may be required if excavations are to remain open for extended periods of time.

On no account should personnel be permitted to enter unsupported excavations.

Groundwater entries were not recorded within any of the exploratory holes.

Soakaway Testing

Soakaway testing was undertaken in trial pits SA1 and SA2 to give an indication of soil infiltration rates at the site due to limited access. The locations of the soakaway tests are shown in Appendix A.

Water levels within both of the soakaway tests (SA1 and SA2) did not fully dissipate during the test period as shown in the test results included within Appendix D.

On this basis, it is considered that soakaways will not provide a suitable drainage option at the site.

Conclusions

The salient points from the geotechnical testing and infiltration testing are bullet pointed below:

- Due to medium plasticity soils recorded at the site, a minimum foundation depth of 0.90mbgl is recommended where clay soils are encountered however localised deepening will be required within close proximity to trees. A net allowable bearing pressure of 120kN/m² is considered to be achievable at 0.90mbgl on soils of at least firm consistency at varying depths across the site.
- Soakaway testing at the site did not fully dissipate during the test period. It is therefore considered that soakaways will not be a suitable drainage option.
- A Design Sulphate Class of DS-1, together with an Aggressive Chemical Environment of Concrete (ACEC) AC-1 is considered appropriate at the site.

Yours Sincerely



Victoria Sutton
Engineering Manager

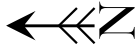
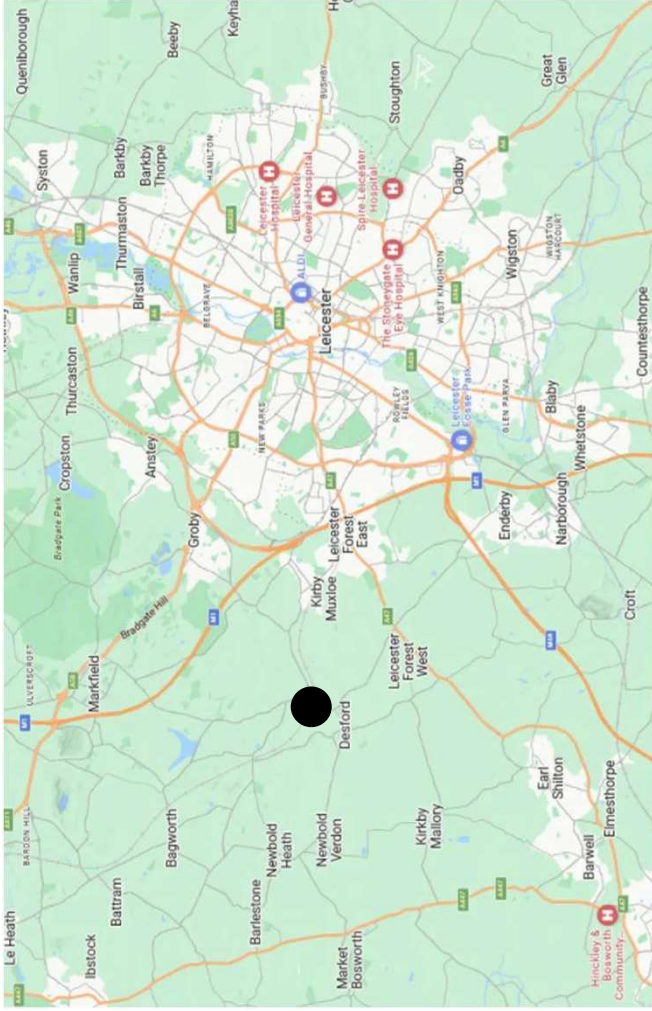


David Johnson
Technical Director

Encl.
Appendix A – Figures
Appendix B – Window sample logs
Appendix C – Geotechnical Laboratory Results
Appendix D – Soakaway Test Results

APPENDIX A





KEY:

● Approximate Site Location

DO NOT SCALE

TITLE:

Site Location Plan

PROJECT:

Land off Lindridge Lane, Desford

PROJECT No:

IV.124.23

DATE:

10/2023

SCALE:

NTS

DRAWN:

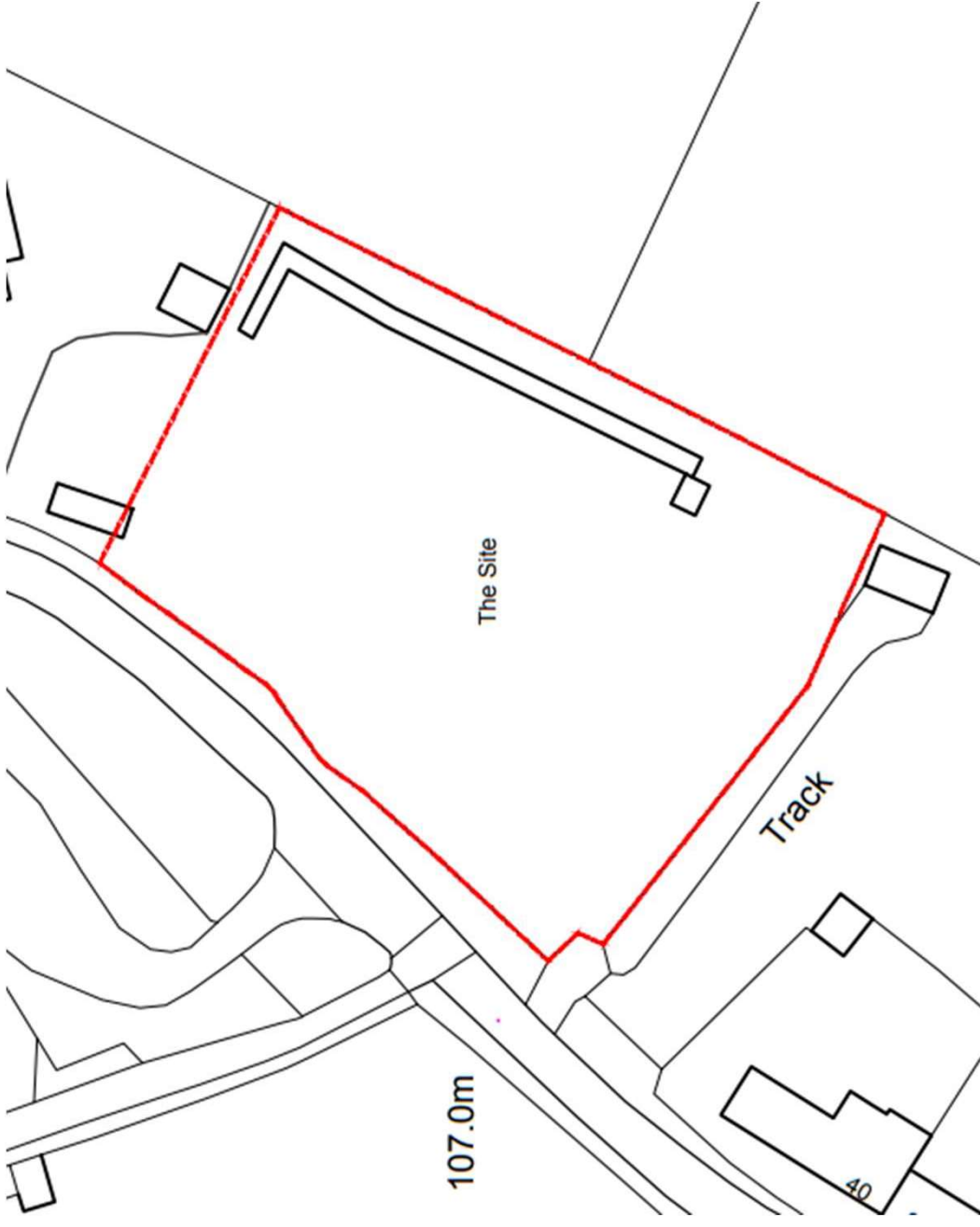
VS

DWG No:

Figure 1



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rps@ivyhousesv.co.uk • www.ivyhousesv.co.uk • 01332 661 987



KEY:

 Site Boundary

DO NOT SCALE

IVY HOUSE

environmental



Scotland Farm, Ockbrook, Derby, DE72 3RX
rps@ivyhousenv.co.uk • www.ivyhousenv.co.uk • 01332 661 987

TITLE: Site Layout

PROJECT: Land off Lindridge Lane, Desford

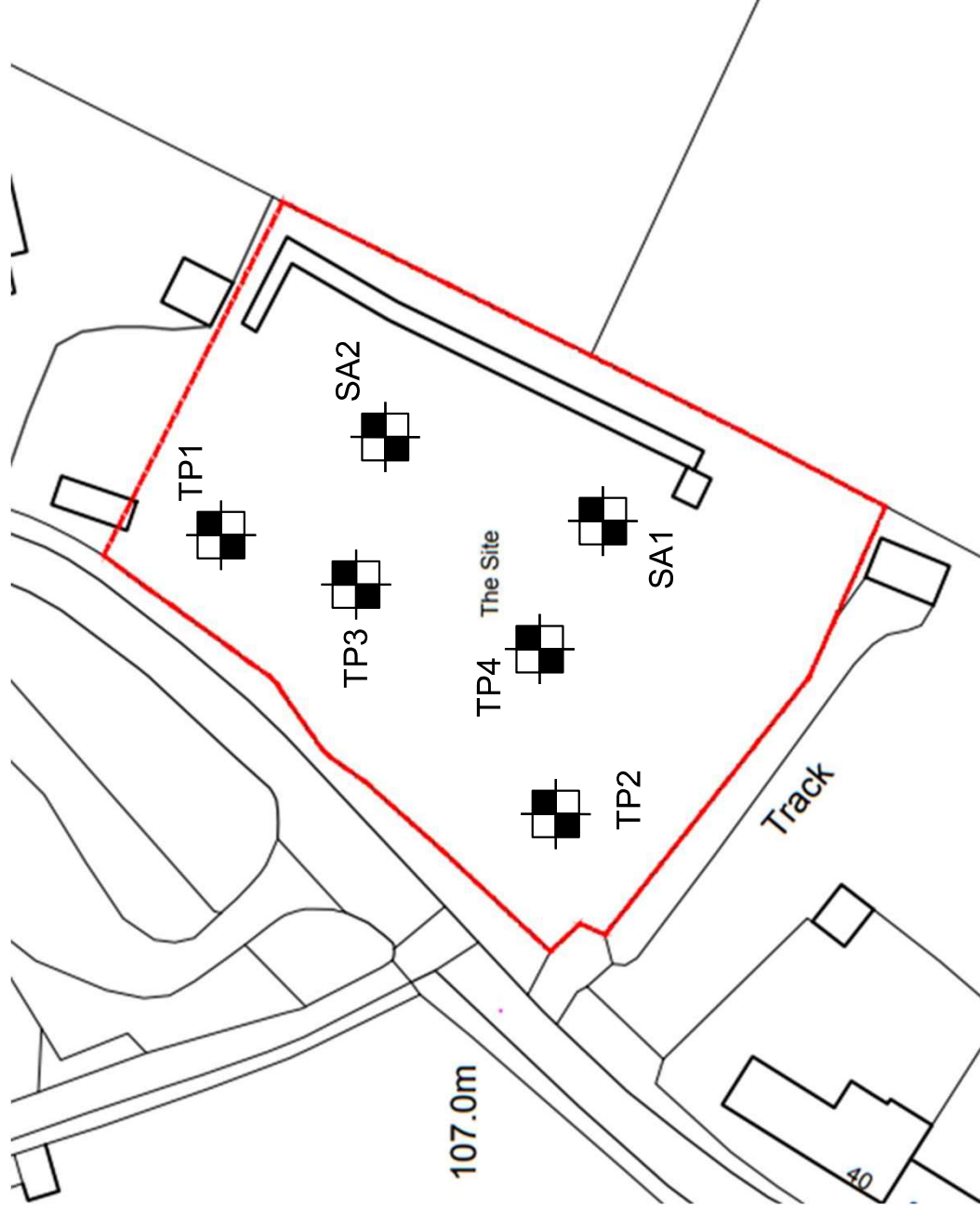
PROJECT No: IV.124.23

DATE: 10/2023

SCALE: NTS

DRAWN: VS

DWG No: Figure 2



KEY:



Trial Pit Location

DO NOT SCALE

TITLE:

Trial Pit Location Plan

PROJECT:

Land off Lindridge Lane, Desford

PROJECT No:

IV.124.23

DATE:

10/2023

SCALE:

NTS

DRAWN:

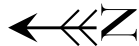
VS

DWG No:

Figure 3



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rps@ivyhouseenv.co.uk • www.ivyhouseenv.co.uk • 01332 661 987



KEY:

TITLE: Development Proposal			
PROJECT: Land off Lindridge Lane, Desford			
PROJECT No: IV.124.23		DATE: 10/2023	
SCALE: NTS		DRAWN: VS	
		DWG No: Figure 4	



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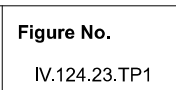
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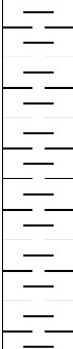
APPENDIX B

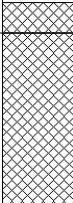
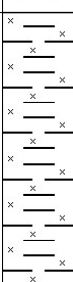


				Chartered Environmental Surveyors & Environmental Consultants Scotland Farm, Ockbrook, Derby DE72 3RX Telephone. 01332 661987				Site Lindridge Lane, Desford				Trial Pit Number SA1					
Excavation Method Trial Pit				Dimensions				Ground Level (mOD)		Client Spinney Homes Ltd				Job Number IV.124.23			
				Location				Dates 24/10/2023		Engineer Ellis Robinson				Sheet 1/1			
Depth (m)		Sample / Tests		Water Depth (m)		Field Records		Level (mOD)		Depth (m) (Thickness)		Description		Legend		Water	
										0.30 (0.30)		TOPSOIL with roots.					
										0.30 (0.30)		Firm brown CLAY.					
										0.60 (0.80)		Stiff greyish brown CLAY.					
										1.40		Complete at 1.40m					
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
																	
Plan										Remarks							
.										Trial pit completed at 1.40mbgl. No groundwater encountered. Trial pit utilised for soakaway testing.							
.																	
.																	
.																	
.																	
.																	
Scale (approx)						Logged By				Figure No.							
1:25						ER				IV.124.23.SA1							

				Chartered Environmental Surveyors & Environmental Consultants Scotland Farm, Ockbrook, Derby DE72 3RX Telephone. 01332 661987				Site Lindridge Lane, Desford				Trial Pit Number SA2					
Excavation Method Trial Pit				Dimensions				Ground Level (mOD)		Client Spinney Homes Ltd				Job Number IV.124.23			
				Location				Dates 24/10/2023		Engineer Ellis Robinson				Sheet 1/1			
Depth (m)		Sample / Tests		Water Depth (m)		Field Records		Level (mOD)		Depth (m) (Thickness)		Description		Legend		Water	
										(0.30) 0.30 (0.30) 0.60 (0.90) 1.50		TOPSOIL with sand and roots. Firm brown CLAY. Stiff greyish brown CLAY. Complete at 1.50m		       			
Plan 										Remarks Trial pit completed at 1.50mbgl. No groundwater encountered. Trial pit utilised for soakaway testing.							
										Scale (approx) 1:25		Logged By ER		Figure No. IV.124.23.SA2			



		Chartered Environmental Surveyors & Environmental Consultants Scotland Farm, Ockbrook, Derby DE72 3RX Telephone. 01332 661987				Site Lindridge Lane, Desford		Trial Pit Number TP2		
Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Spinney Homes Ltd		Job Number IV.124.23		
		Location		Dates 24/10/2023		Engineer Ellis Robinson		Sheet 1/1		
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water		
					(0.20) 0.20 (0.90) 1.10 (0.70) 1.80 (1.20) 3.00 (0.20) 3.20	TOPSOIL with roots. Firm brown CLAY with pockets of soil. Stiff grey CLAY. Stiff red brown friable CLAY. Hard grey MUDSTONE. Complete at 3.20m	   	V1		
Plan 					Remarks Trial pit completed at 3.20mbgl. Trial pit backfilled with arisings on completion. Slight groundwater ingress recorded at 3.20m.					
					Scale (approx) 1:25		Logged By ER		Figure No. IV.124.23.TP2	

		Chartered Environmental Surveyors & Environmental Consultants Scotland Farm, Ockbrook, Derby DE72 3RX Telephone. 01332 661987				Site Lindridge Lane, Desford		Trial Pit Number TP3	
Excavation Method Trial Pit		Dimensions		Ground Level (mOD)		Client Spinney Homes Ltd		Job Number IV.124.23	
		Location		Dates 24/10/2023		Engineer Ellis Robinson		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
					0.10 0.10 (0.60) 0.70 (0.30) 1.00 (1.00) 2.00 (0.90) 2.90	MADE GROUND: Grass over topsoil. MADE GROUND: Firm brown clay. Buried TOPSOIL. Greyish brown firm CLAY. Stiff brown silty CLAY. Complete at 2.90m	   		
Plan						Remarks Trial pit completed at 2.90mbgl. No groundwater encountered. Trial pit backfilled with arisings on completion. Trial pit set on a built up mound of soil.			
						Scale (approx) 1:25	Logged By ER	Figure No. IV.124.23.TP3	



Chartered Environmental Surveyors &
Environmental Consultants
Scotland Farm, Ockbrook, Derby DE72 3RX
Telephone. 01332 661987

Site
Lindridge Lane, Desford

Trial Pit
Number
TP4

Excavation Method Trial Pit	Dimensions		Ground Level (mOD)		Client Spinney Homes Ltd	Job Number IV.124.23
	Location		Dates 24/10/2023		Engineer Ellis Robinson	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.10) 0.10	Grass over TOPSOIL with roots		
						Slightly silty slightly firm brown CLAY.		
					(0.90)			
					1.00	Very stiff greyish brown CLAY.		
					(1.00)			
					2.00	Sandy reddish brown MUDSTONE.		
					(1.10)			∇1
			Water strike(1) at 2.70m.		3.10	Complete at 3.10m		

Plan	Remarks Trial pit completed at 3.10mbgl. Trial pit backfilled with arisings on completion. Slight groundwater encountered at 2.70mbgl.				
	Scale (approx) 1:25		Logged By ER		Figure No. IV.124.23.TP4

APPENDIX C





TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

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

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



Environmental Science

4041

Client: Ivy House Environmental Ltd
Client Address: Scotland Farm, Ockbrook,
Derby, DE72 3RX

Contact: Victoria Sutton
Site Address: Lindridge Lane, Desford

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

Client Reference: IV.124.23
Job Number: 23-66341-1
Date Sampled: 24/10/2023
Date Received: 27/10/2023
Date Tested: 10/11/2023
Sampled By: Not Given

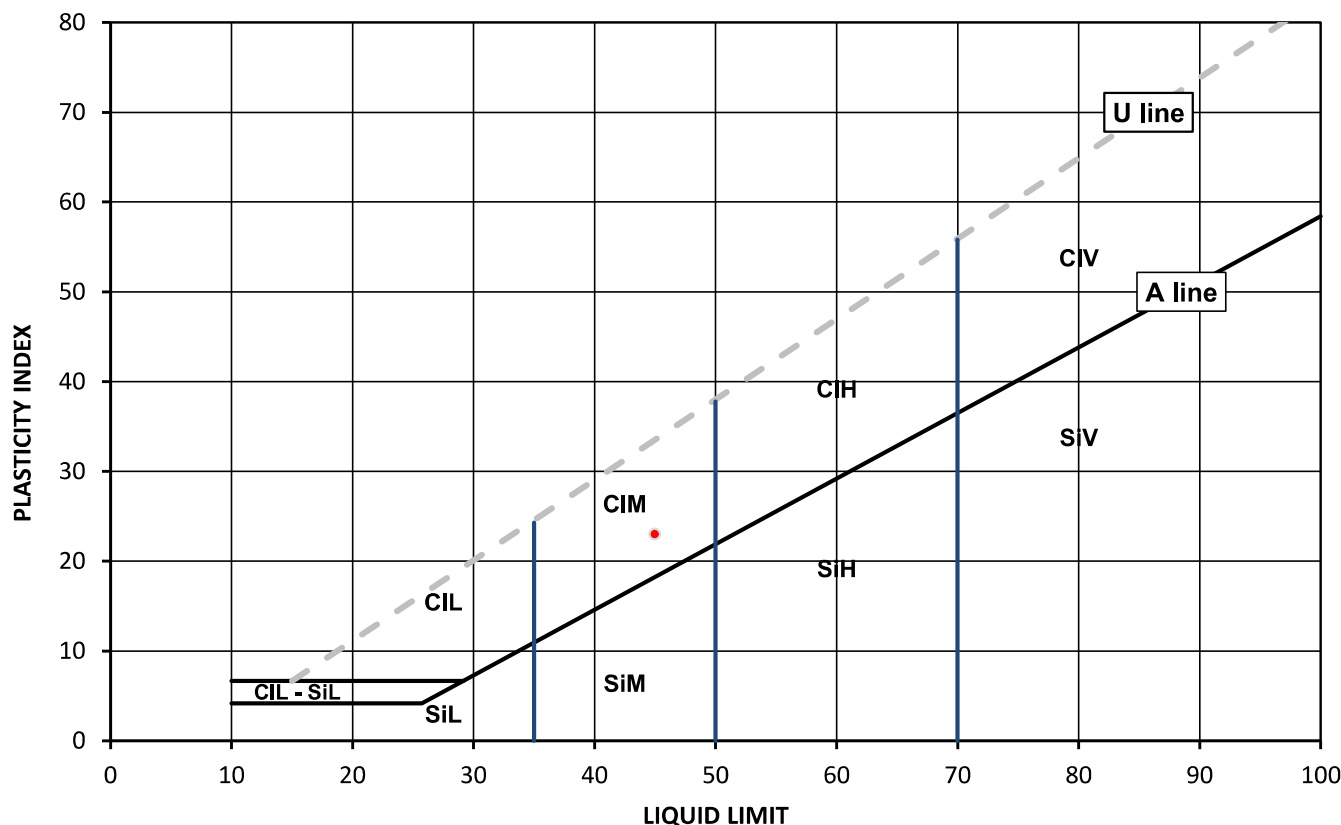
Test Results:

Laboratory Reference: 2865623
Hole No.: TP2
Sample Reference: Not Given
Sample Description: Orangish brown slightly sandy CLAY

Depth Top [m]: 1.00
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
23	45	22	23	100



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

	Plasticity	Liquid Limit
Cl Clay	L Low	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: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Janoszek
PL Environmental & Geotechnical Lab Production Specialist
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

DETERMINATION OF LIQUID AND PLASTIC LIMITS

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

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



Environmental Science

4041

Client: Ivy House Environmental Ltd
Client Address: Scotland Farm, Ockbrook,
Derby, DE72 3RX

Contact: Victoria Sutton
Site Address: Lindridge Lane, Desford

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

Client Reference: IV.124.23
Job Number: 23-66341-1
Date Sampled: 24/10/2023
Date Received: 27/10/2023
Date Tested: 10/11/2023
Sampled By: Not Given

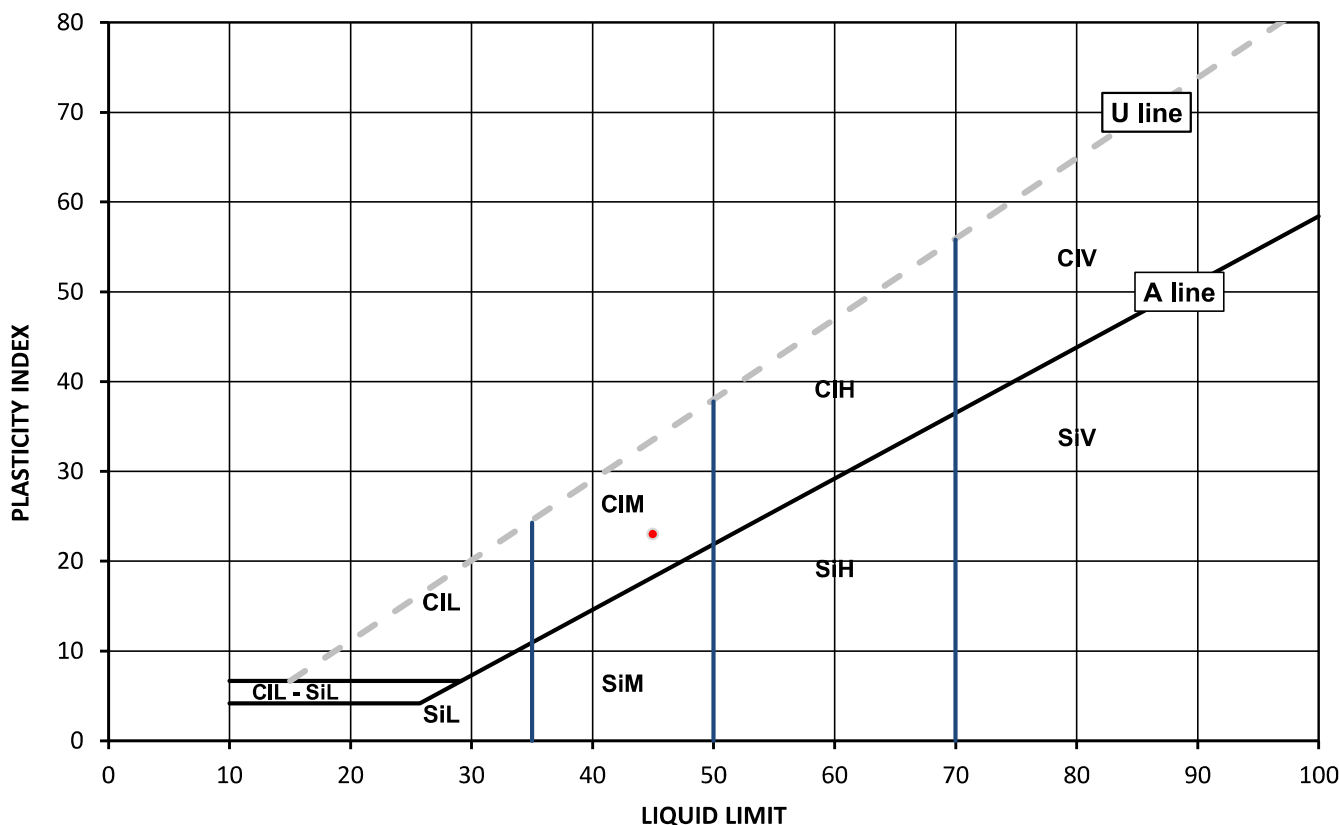
Test Results:

Laboratory Reference: 2865624
Hole No.: TP3
Sample Reference: Not Given
Sample Description: Orangish brown slightly sandy CLAY

Depth Top [m]: 1.50
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
21	45	22	23	100



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

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

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

Remarks:

Signed:

Monika Janoszek

Monika Janoszek
PL Environmental & Geotechnical Lab Production Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

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

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



Environmental Science

4041

Client: Ivy House Environmental Ltd
Client Address: Scotland Farm, Ockbrook,
Derby, DE72 3RX

Contact: Victoria Sutton
Site Address: Lindridge Lane, Desford

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

Client Reference: IV.124.23
Job Number: 23-66341-1
Date Sampled: 24/10/2023
Date Received: 27/10/2023
Date Tested: 10/11/2023
Sampled By: Not Given

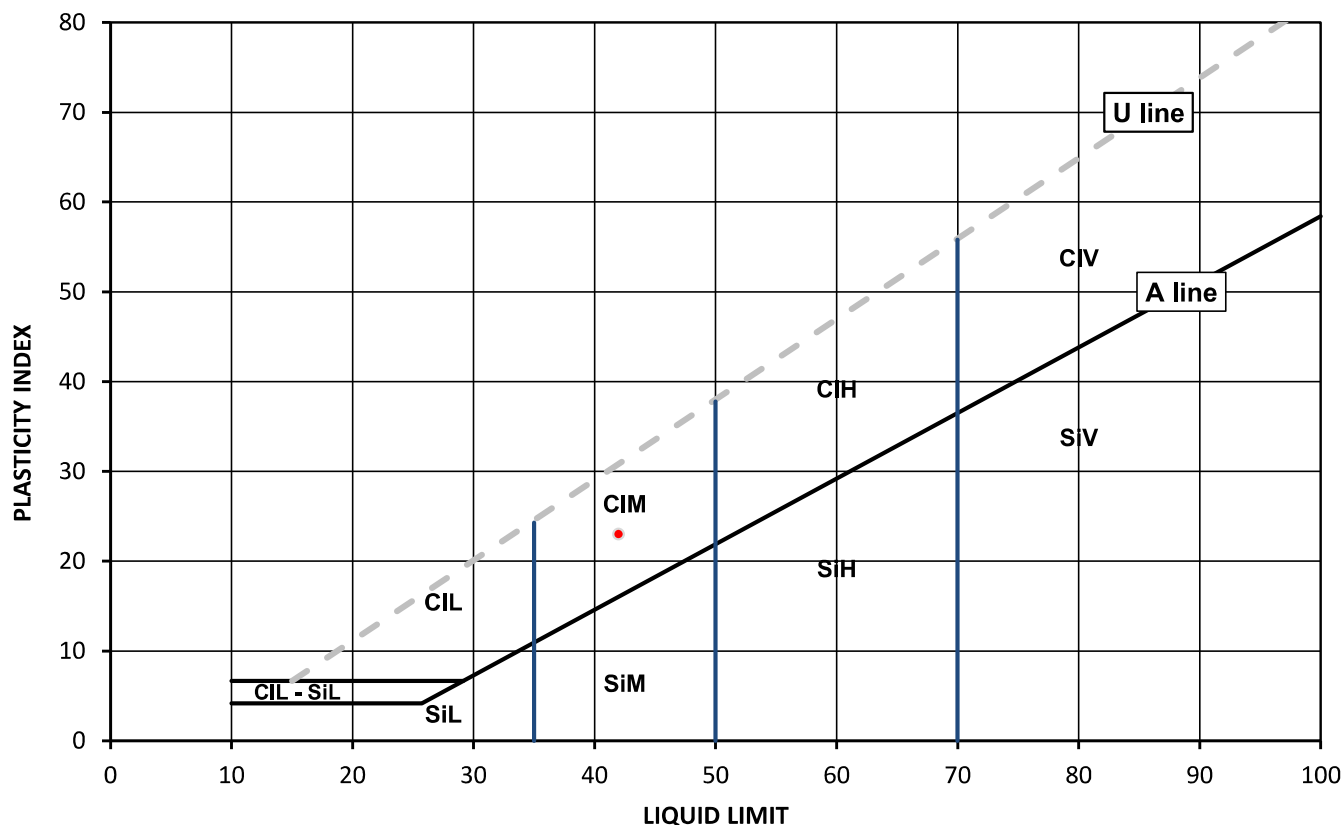
Test Results:

Laboratory Reference: 2865625
Hole No.: SA1
Sample Reference: Not Given
Sample Description: Brown sandy CLAY

Depth Top [m]: 1.00
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	42	19	23	100



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

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

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

Remarks:

Signed:

Monika Janoszek
PL Environmental & Geotechnical Lab Production Specialist
for and on behalf of i2 Analytical Ltd

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Tested in Accordance with: BS 1377-2: 1990: Clause 3.2



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

Environmental Science

Ivw House Environmental Ltd

Client:

Client:

Client Address:

Scotland Farm, Ockbrook,
Derby, DE72 3RX

Contact: Victoria Sutton

Site Address: Lindridge Lane, Desford

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

Test results

[illegible]

Comments:

Signed:

Monika Janoszek

PL Environmental & Geotechnical Lab Production Specialist
for and on behalf of i2 Analytical Ltd

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Page 1 of 1

Date Reported: 23/11/2023

GF 099.17

**Victoria Sutton**

Ivy House Environmental Ltd
Scotland Farm
Ockbrook
Derby
DE72 3RX

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

e: vs@ivyhousenv.co.uk

Analytical Report Number : 23-66342

Project / Site name:	Lindridge Lane, Desford	Samples received on:	27/10/2023
Your job number:	IV.124.23	Samples instructed on/ Analysis started on:	02/11/2023
Your order number:		Analysis completed by:	13/11/2023
Report Issue Number:	1	Report issued on:	13/11/2023
Samples Analysed:	3 soil samples		

Signed:

Izabela Wójcik

Izabela Wójcik
Senior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 23-66342
Project / Site name: Lindridge Lane, Desford

Lab Sample Number				2865626	2865627	2865628
Sample Reference				TP1	TP4	TP2
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	1.50
Date Sampled				24/10/2023	24/10/2023	24/10/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	16	15
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.5	8.4	7.3
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.005	0.0049	0.0107

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 23-66342

Project / Site name: Lindridge Lane, Desford

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2865626	TP1	None Supplied	1	Brown clay and sand.
2865627	TP4	None Supplied	1	Brown clay and sand with gravel.
2865628	TP2	None Supplied	1.5	Brown clay and sand.

Analytical Report Number : 23-66342

Project / Site name: Lindridge Lane, Desford

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed, Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements,	L019-UK/PL	D	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

APPENDIX D



IN-SITU SOAKAWAY TEST RESULTS

Page 1 of 1

Trial pit No.: SA1

Soil Profile

Depth (m)		Description
From	To	
0.00	0.30	TOPSOIL.
0.30	0.60	Firm brown CLAY.
0.60	1.40	Stiff greyish brown CLAY.

Sketch plan of test zone

All dimensions in metres

D = Depth of test pit

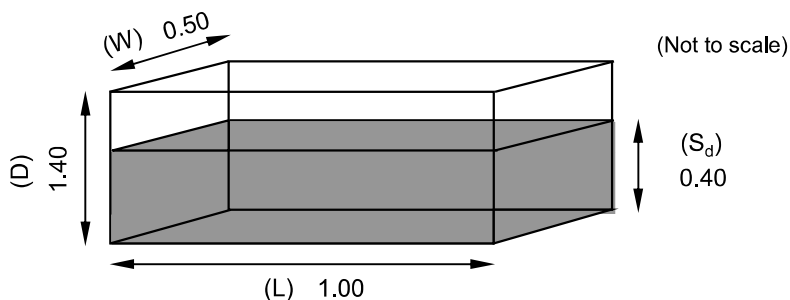
W = Width of test pit

L = Length of test pit

S_d = Storage depth (of water)

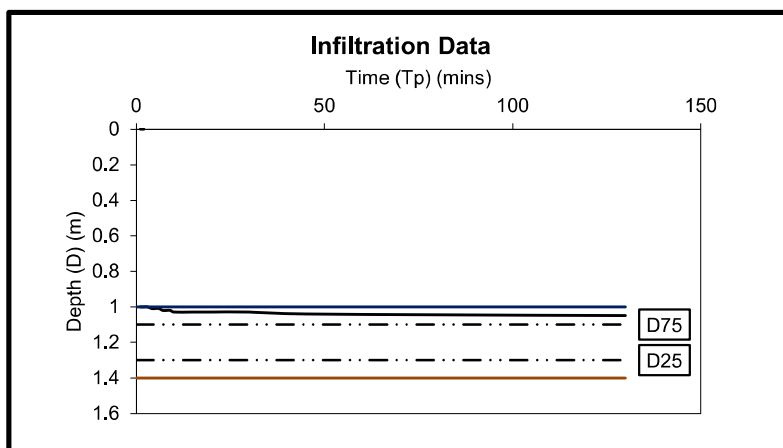
Gravel infill? No

Porosity (n) = 1



Soakaway Test Run 1

Test Date: 24/10/2023



Time (minutes)	Depth (m)
1	1
2	1
3	1
4	1.01
5	1.01
6	1.01
7	1.02
8	1.02
9	1.02
10	1.03
15	1.03
20	1.03
30	1.03
45	1.04
130	1.05

Notes:

Water did not sufficiently dissipate during test period.

The soils at this location are therefore considered to be impermeable.

Test and analysis carried out in general accordance with BRE Digest 365 : 2007

Job No.: IV.124.23

Site: Land off Lindridge Lane, Desford

Client: Spinney Homes Ltd



IN-SITU SOAKAWAY TEST RESULTS

Page 1 of 1

Trial pit No.: SA2

Soil Profile

Depth (m)		Description
From	To	
0.00	0.30	TOPSOIL.
0.30	0.60	Firm brown CLAY.
0.60	1.40	Stiff greyish brown CLAY.

Sketch plan of test zone

All dimensions in metres

D = Depth of test pit

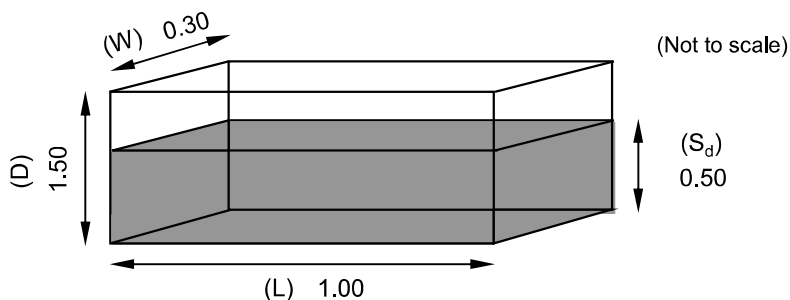
W = Width of test pit

L = Length of test pit

S_d = Storage depth (of water)

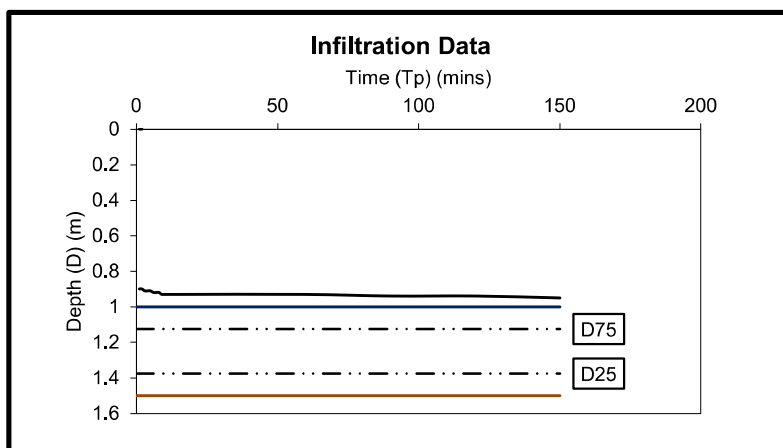
Gravel infill? No

Porosity (n) = 1



Soakaway Test Run 1

Test Date: 24/10/2023



Time (minutes)	Depth (m)
1	0.9
2	0.9
3	0.91
4	0.91
5	0.91
6	0.92
7	0.92
8	0.92
9	0.93
10	0.93
15	0.93
60	0.93
90	0.94
120	0.94
150	0.95

Notes:

**Water did not sufficiently dissipate during test period.
The soils at this location are therefore considered to be impermeable.**

Test and analysis carried out in general accordance with BRE Digest 365 : 2007

Job No.: IV.124.23
Site: Land off Lindridge Lane, Desford
Client: Spinney Homes Ltd

