

IV.02.201.Val.Let.1
Date: 10th March 2021

FAO: George Denny
Statue Homes Ltd
C/O, Old House Farm
Sutton Lane Cadeby
Nuneaton
Warwickshire
CV13 0AR

Dear George,

**RE: Validation of Made Ground within the Menage area in association with planning permission
Ref: 20/00899/FUL.**

Introduction

Ivy House Environmental was instructed to attend site on 15th February 2021 to validate the Made Ground in the menage area of the site as previous samples from the area had indicated levels of asbestos requiring the Made Ground in the area to be removed from site (Ivy House Environmental Phase I and Contamination assessment; January 2021 ("**Ivy House Report**").

Report summary

The Ivy House report showed asbestos found in both trial pits within the menage area. The quantification of these illustrated findings of <0.001% at TP1 and 0.002% at TP2. The area outside of the menage did not detect any asbestos and it was further found that the menage area was made up from original ground level, with materials placed directly onto the existing topsoil.

Without further analysis the report concluded that the Made Ground found within this area should be removed from site.

Fieldwork

The identification of asbestos was not expected and validation of the area around TP2 was suggested to assess if this was a hotspot and to disassociate the asbestos found in this location with the remainder of the Made Ground.

An area of 2m x 2m was excavated within the vicinity of TP2 to remove the impacted material down to natural strata (topsoil). Samples were taken of the side and base material (TP2.1-TP2.5).

Chemical Analysis & Risk Assessment

The analysis results of these samples show no asbestos found in all but one sample, which is also quantified at <0.001% along with the material found at TP1 in the previous fieldwork.

The above findings illustrate that the asbestos found at TP2 was a hotspot and which has now been removed from site.

The remainder of the Made Ground can be reused on site as a base layer to roads or any new construction and does not have to be removed from site.

Conceptual model

In order to break the pollutant-pathway linkage for end users, the Made Ground material should be capped with hardstanding and, therefore, use under the proposed parking, roadway or new construction would reduce the risk to end users to negligible.

The risk posed to construction workers can be reduced to low by the use of PPE to include dusk mask at all times of handling the material, general careful handling and wetting of the material prior to removal from its current location to limit dust.

Conclusions

The Phase I and Contamination assessment and the follow up validation of the menage area have illustrated that, if the recommendations above are followed, the proposed development of the site for residential use does not pose a risk to end users of the site or the environment.

Yours Sincerely,



Joshua Hagger BSc (Hons)
Geo-Environmental Engineer

Encl.
Figures
Laboratory Analysis Certificates



KEY:



Approximate Site Location



IVY HOUSE
environmental

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

TITLE:

Site Location Plan

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 1

DO NOT SCALE



KEY:



Approximate Site Location

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:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

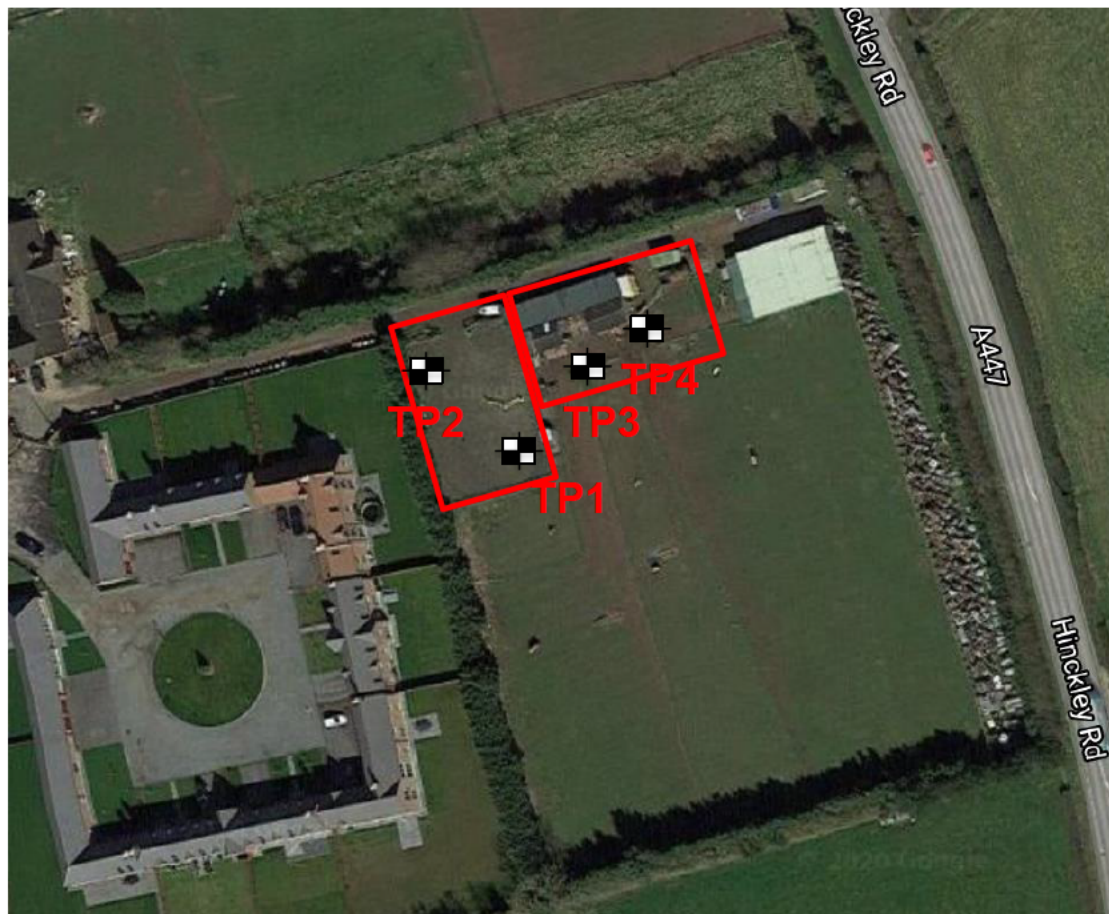
NTS

DRAWN:

JH

DWG No:

Figure 2



KEY:



DO NOT SCALE



Scotland Farm, Ockbrook, Derby, DE72 3RX
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TITLE:

Borehole Location Plan

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 3



KEY:

DO NOT SCALE



TITLE:

Current site layout

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE :

NTS

DRAWN :

JH

DWG No:

Figure 4



KEY:



DO NOT SCALE



Scotland Farm, Ockbrook, Derby, DE72 3RX
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TITLE:

Borehole Location Plan

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 5



KEY:

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Scotland Farm, Ockbrook, Derby, DE72 3RX
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TITLE:

Validation of TP2

PROJECT:

Sutton Lane, Cadeby

PROJECT No:

IV.02.21

DATE:

01/2021

SCALE:

NTS

DRAWN:

JH

DWG No:

Figure 6



Josh Hagger
Ivy House Environmental Ltd
Scotland Farm
Ockbrook
Derby
DE72 3RX

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 21-01851

Site Reference: Sutton Lane, Cadeby

Project / Job Ref: IV.02.21

Order No: None Supplied

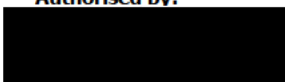
Sample Receipt Date: 17/02/2021

Sample Scheduled Date: 17/02/2021

Report Issue Number: 1

Reporting Date: 23/02/2021

Authorised by:



Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 21-01851	Date Sampled	15/02/21	15/02/21	15/02/21	15/02/21	15/02/21
Ivy House Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Sutton Lane, Cadeby	TP / BH No	TP2.1	TP2.2	TP2.3	TP2.4	TP2.5
Project / Job Ref: IV.02.21	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: None Supplied	Depth (m)	0.20	0.20	0.20	0.20	0.40
Reporting Date: 23/02/2021	DETS Sample No	526220	526221	526222	526223	526224

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Detected	Not Detected	Not Detected	Not Detected	Not Detected
Sample Matrix ^(S)	Material Type	N/a	NONE	Small bundle of Chrysotile				
Asbestos Type ^(S)	PLM Result	N/a	ISO17025	Chrysotile				
Asbestos Quantification ^(S)	%	< 0.001	ISO17025	< 0.001				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 21-01851

Ivy House Environmental Ltd

Site Reference: Sutton Lane, Cadeby

Project / Job Ref: IV.02.21

Order No: None Supplied

Reporting Date: 23/02/2021

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received