Our ref: ML/GML19177/Com1

Date: 5th Dec 2024

EMAIL (SCANNED)
Seagate Home (UK) Ltd
33 Boston Road South
Holbeach
Spalding
Lincs
PE12 7LR

For the attention of D Cheung

Dear Douglas,

GML19177: Remedial Validation for Malting Lane, Donington

Geo-Matters Ltd were instructed by Seagate Homes (UK) Ltd (hereafter referred to as 'the Client') to pull together a Remedial Report around an Asbestos / PAH hotspot area within the central part of the subject site and final soil placement within the POS area in line with our Remedial Method Statement.

Report Status

This letter report provides a summary of validation works undertaken to date at the subject site. This letter report has been prepared for the sole use and reliance of the Client and their appointed agents (e.g. Geo-Matters Ltd). No other third party may rely upon or reproduce the content of this report without the written approval of Geo-Matters Ltd. If any unauthorised third party comes into possession of this report, they rely upon it entirely at their own risk and the authors do not owe them any warranty, duty of care or skill.

The conclusions and recommendations presented herein are considered reasonable based on the assessments of the site undertaken by Geo-Matters Ltd. However, these cannot be guaranteed to gain regulatory approval and therefore copies of this report should be sent to the appropriate regulatory authorities and / or other organisations (as appropriate) by the Client for their comments and approval prior to undertaking any irrecoverable works associated with the site.

- Hydrock: Desk Study and Ground Investigation Malting Lane, Donington Ref MLD-HYD-XX-GI-RP-GE-1001 dated May 2017;
- Geo-Matters Ltd: GML19177 Report for Recent Delineation Works at the Site off Malting Lane, Donington (ref: AT/GML19177/DL1/1) dated August 2019);
- Geo-Matters Ltd: Remedial Method Statement Ref GM19177/4/0 dated July 2022;
- Geo-Matters Ltd: Validation Hotspot Letter Ref ML/GML19177/Val1 Rev0 dated June 2024;
- Geo-Matters Ltd: Validation Hotspot Letter2 Ref ML/GML19177/Val2 Rev0 dated Sept 2024;
- Geo-Matters Ltd: Remedial Report Ref ML/GML19177/Rem1 dated Oct 2024.

The above referenced reports shall not be reproduced herein although relevant extracts shall be used and discussed where relevant. Information from the above referenced reports has been used to extend and refine the investigations presented herein.

The above referenced reports must be read in conjunction with this report. This letter report does not supersede the recommendations and conclusions presented within the above referenced reports unless otherwise stated.

Site Work

Geo-Matters Ltd were asked to attend the subject site during excavation works to complete the following:

- Record the works being undertaken;
- Hand pick asbestos fragments from the excavation works within the area of concern and place separately for testing / removal off site;
- Obtain samples of the resultant excavations to prove suitability for the continued development for a residential end-use; and
- Obtain samples of the soil being moved to the POS area for laboratory analysis to prove fit for purpose.

The soil samples were placed in appropriate laboratory supplied sampling vessels and were stored in coolboxes pending dispatch to the laboratory. The environmental analysis was scheduled by Geo-Matters Ltd and carried out by a UKAS / MCERTS accredited laboratory.

Handpicking & Watch Brief

A representative from Geo-Matters were called out to attended site at various stages during the remedial works to undertake the above as areas became available during each attended visit.

The first visit was undertaken whilst the highway route was being cleared through and was undertaken in Dec 2023 during damp conditions. Only 5no. pieces of asbestos cement board were recovered so it was agreed to send these to the lab for identification and disposal. All made ground soils were stockpiled on the remaining area of concern to be dealt with at a later date.

A second visit was undertaken in Jan 2024; again under damp conditions and a watching brief was undertaken whilst the area available was carefully turned over to enable further hand picking to be conducted. The separated asbestos was placed on a membrane separate to the over turned soils for removal from site. This was undertaken several times until the Geo-Matters site rep was satisfied that all noted asbestos sheets fragments have been successfully hand-picked from this part of the mound.

A final remedial watching brief visit was undertaken in May 2024 whilst the remaining area of the mound was carefully turned over again to enable hand picking to be conducted. The separated asbestos pieces were again placed onto a separate membrane until the operation was completed. This was undertaken several times until the Geo-Matters site rep was satisfied that all noted asbestos sheets fragments have been successfully hand-picked from this part of the mound.

Sampling Regime
Sampling of the resultant remedial excavations taken during the intrusive investigation were analysed for a range of general contaminants in accordance with NHBC Standards Chapter 4.1 'Land Quality – managing ground conditions' and CLR 8 'Potential Contaminants for the Assessment of Land' (withdrawn but used for reference purposes where applicable). The soil samples will be analysed for the following parameters: arsenic, cadmium, chromium, copper, nickel, zinc, lead, mercury, selenium, chromium, sulphate, PAHs, phenols, TPH (semi-speciated) and asbestos screen.

Laboratory Analysis
Representative soil samples from the exploratory locations were analysed for the range of contaminants outlined above. The full details of the test results are attached and are summarised in the tables below and were also presented within the above referenced documents.

The laboratory results have been reviewed against a combined set of Tier 1 Screening Values (T1SVs).

Laboratory analysis - Asbestos

Determinand	No. of samples analysed	Maximum Concentration (mg/kg)	Acceptance Criteria (mg/kg)*	No. exceeding threshold
First Visit				
Asbestos Frags (A1-A5 roadway)	5	Identified	NONE	5
Following Completion of Works Reported in Hotspot Letter1 June 2024				
Asbestos (remedial excavation)	5	NAD	NONE	0
POS Mound Sampling June 2024				
Asbestos (remedial mound)	3	NAD	NONE	0
Following Completion of Works Reported in Hotspot Letter2 Sept 2024				
Asbestos (roadway excavation)	5	NAD	NONE	0

Asbestos (Contaminant of Concern)
Only the 5no. fragments of suspected asbestos returned positive identifications for asbestos; as expected; these samples were disposed of by the lab. Of the additional sampling undertaken within the resultant excavations none reported any asbestos as was reported within the referenced documents above. Additionally none of the samples from the remedial mound analysed for asbestos fibres recorded any positive results. On this basis, no residual risks have been identified from asbestos fibres within the area of concern previously identified on the subject site, the roadway or the remedial mound.

Full chemical data sheets are attached. Seagate Homes have provided the removal ticket for the asbestos/soils which is appended for reference.

Remedial Excavations
As areas became available, representative soil samples of the base and sides from the remedial excavations were analysed for the range of contaminants outlined above. The full details of the test results are attached and are summarised in the tables overleaf and were also presented within the above referenced documents.

Laboratory Analysis - Excavation Validations

Determinand	No. of samples analysed	Maximum Concentration (mg/kg)	Acceptance Criteria (mg/kg)	No. exceeding threshold
Metals				
Arsenic	10	16	37	0
Cadmium	10	<0.2	11	0
Chromium	10	24	910	0
Copper	10	14	2400	0
Mercury	10	<1	1.2	0
Selenium	10	<2	250	0
Lead	10	22	200	0
Nickel	10	26	130	0
Zinc	10	63	3700	0
Inorganics & Organics				
Benzo(a)Pyrene	10	0.22	2.2	0
PAH	10	2.3	N/A	0
Water Sol. Sulphate(g/l)	10	0.12	N/A	-
TPH (c6-c10)	10	<1	27	0
TPH (c10-c21)	10	2	74	0
TPH (c21-c35)	10	<6	1100	0

~ = C4SL / S4UL criteria for residential end use with gardens / plant uptake
D = Detected, N/A = not applicable

Metals
No exceedances were recorded within any of the representative soil samples from the site. On this basis, no other risks have been identified from these determinands at the subject site.

Inorganics and Organics
In lieu of published DEFRA Category 4 Screening Levels for inorganics and organics, the results have been assessed by comparison to available alternative T1SVs including the LQM / CIEH Generic Assessment Criteria (2nd Edition).

Inorganics
The pH values recorded from the soil samples varied between 7.3 and 7.8, indicating that average near neutral soil conditions prevail within soils at the site.

Organics
The significance of the PAH laboratory results have been assessed using the T1SV for benzo(a)pyrene. This is considered, in terms of toxicity, to present the greatest hazard to human health. The T1SV of 2.2mg/kg (residential end use with plant uptake) was not exceeded within any of the samples tested. On this basis, no risks have been identified from PAHs at the subject site based on the proposed residential end use with private gardens.

General Contaminants – Remedial Excavations

Visual, Olfactory and Field Measurements
No other significant visual or olfactory evidence of any potential contamination (such as petroleum hydrocarbons or asbestos) was noted within any other exploratory locations advanced at the site.

Full chemical data sheets are attached.

Stockpile Sampling
Representative soil samples of the stockpiled material from the remedial areas were analysed for the range of contaminants outlined above. The full details of the test results are attached and are summarised in the table below and were also presented within the above referenced documents.

Laboratory Analysis - Excavation Validations

Determinand	No. of samples analysed	Maximum Concentration (mg/kg)	Acceptance Criteria (mg/kg)	No. exceeding threshold
Metals				
Arsenic	3	20	37	0
Cadmium	3	0.7	11	0
Chromium	3	23	910	0
Copper	3	52	2400	0
Mercury	3	<1	1.2	0
Selenium	3	<2	250	0
Lead	3	196	200	0
Nickel	3	22	130	0
Zinc	3	230	3700	0
Inorganics & Organics				
Benzo(a)Pyrene	3	15	2.2	**3**
PAH	3	119	N/A	0
Water Sol. Sulphate(g/l)	3	0.02	N/A	-
TPH (c6-c10)	3	<1	27	0
TPH (c10-c21)	3	13	74	0
TPH (c21-c35)	3	109	1100	0

~ = C4SL / S4UL criteria for residential end use with gardens / plant uptake
D = Detected, N/A = not applicable

Metals
No exceedances were recorded within any of the representative soil samples from the site. On this basis, no other risks have been identified from these determinands within the remedial stockpile.

Inorganics and Organics
In lieu of published DEFRA Category 4 Screening Levels for inorganics and organics, the results have been assessed by comparison to available alternative T1SVs including the LQM / CIEH Generic Assessment Criteria (2nd Edition).

Inorganics
The pH values recorded from the soil samples varied between 7.1 and 7.8, indicating that average near neutral soil conditions prevail within soils at the site.

Organics
The significance of the PAH laboratory results have been assessed using the T1SV for benzo(a)pyrene. This is considered, in terms of toxicity, to present the greatest hazard to human health. The T1SV of 2.2mg/kg (residential end use with plant uptake) was exceeded for all samples tested from the stockpile. On this basis, risks have been identified from PAHs in the stockpile and therefore should be dealt with in accordance with the RMS.

General Contaminants - Stockpile

Visual, Olfactory and Field Measurements
No other significant visual or olfactory evidence of any potential contamination (such as petroleum hydrocarbons or asbestos) was noted within any of the stockpile samples.

Full chemical data sheets are attached.

Conclusions and Recommendations
Samples retrieved from the resultant remedial excavations have not recorded any positive results for asbestos (contaminant of concern) also samples retrieved from the remedial stockpile have also not recorded any positive results for asbestos (contaminant of concern) and Seagate Homes have removed the identified asbestos from site. It is therefore, Geo-Matters Limited professional opinion that the asbestos contamination around the area of concern has been adequately removed and that the remedial stockpile is suitable for placement within the POS area in line with our Remedial Method Statement and that redevelopment works around the site can continue; subject to the approval of the regulatory authorities.

If any soils are imported to site then these works must be undertaken in full compliance with all regulatory licensing procedures (i.e. U1, MMP etc), and validation of the soils prior to importation will be required, subject to the approval of the Local Authority.

Copies of this letter report should be forwarded to the Local Authority / NHBC by the Client in order to obtain necessary approvals prior to any irrevocable actions on site. We would be happy to do this on your behalf, pending your instruction.

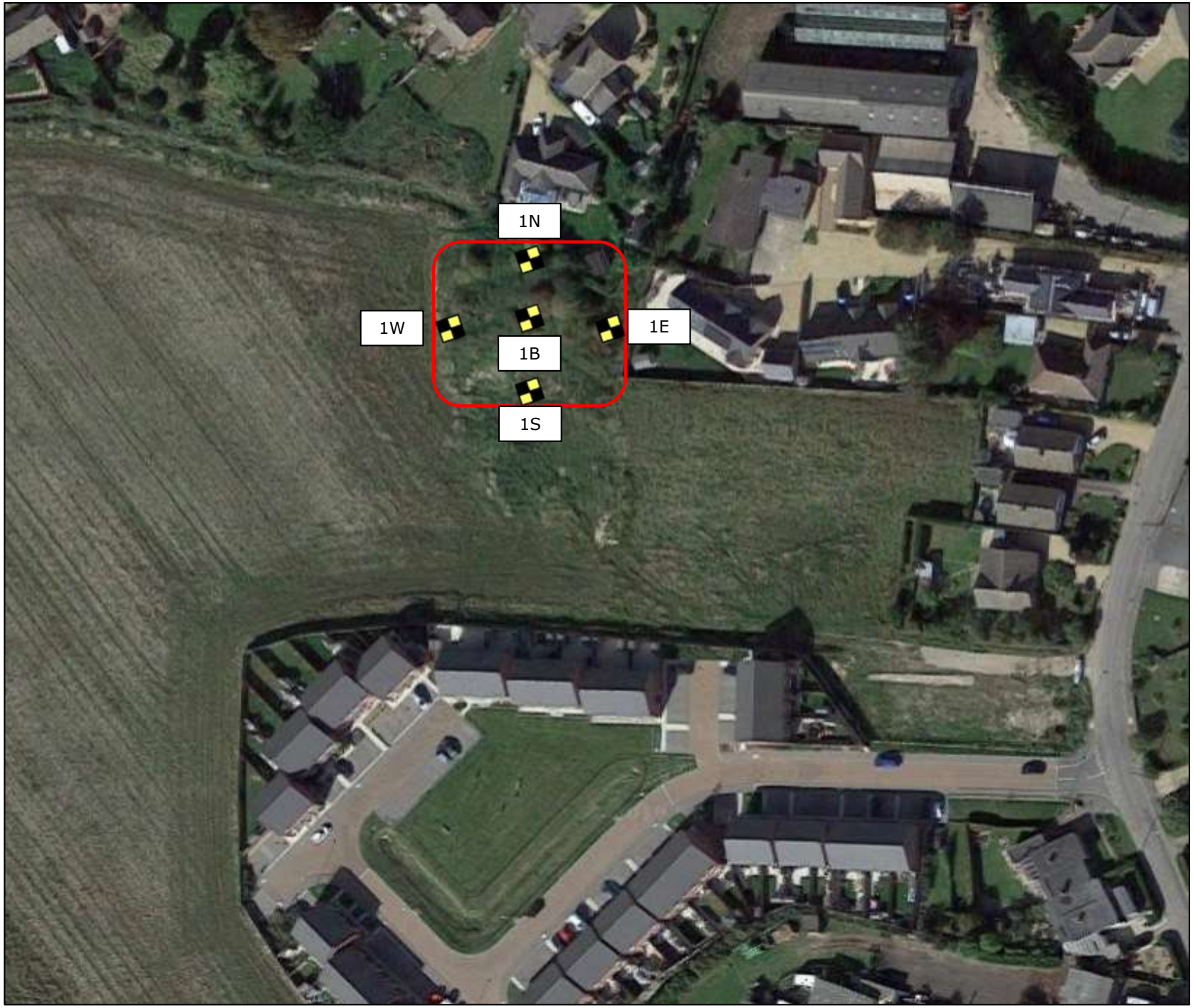
Should you have any queries or require any further information then please do not hesitate to contact us.

Yours sincerely
for Geo-Matters Ltd.



Mark Lewis BEng(Hons) CEnv MSEE FFB
Managing Director

Encs. Chemical Test Certificates
Plans



DO NOT SCALE

NOTES:

Approx. Location of Geo-Matters Ltd pits

GEOMATTERS consulting engineers

www.geo-matters.com
info@geo-matters.com

CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

Asbestos Sampling Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	June 2024
PROJECT No:	DRAWING No:
GML19177	001a

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NOTES:

GEOMATTERS
consulting engineers

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info@geo-matters.com

CLIENT:
Seagate Homes

PROJECT:
Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:
General Photographic Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	June 2024
PROJECT No:	DRAWING No:
GML19177	001b

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DE74 2NR

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

DETS Report No: 24-06136

Site Reference:	SITE OFF THE MALTINGS, DONNINGTON
Project / Job Ref:	GML19177
Order No:	ML/GML9177/009
Sample Receipt Date:	04/06/2024
Sample Scheduled Date:	04/06/2024
Report Issue Number:	1
Reporting Date:	10/06/2024

Authorised by:

Steve Knight
Customer Support 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.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
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Soil Analysis Certificate						
DETS Report No: 24-06136	**~Date Sampled**	03/06/24	03/06/24	03/06/24	03/06/24	03/06/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: SITE OFF THE MALTINGS, DONNINGTON	**~TP / BH No**	1N	1E	1S	1W	1B
~Project / Job Ref: GML19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML9177/009	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 10/06/2024	**DETS Sample No**	718943	718944	718945	718946	718947

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	8.0	7.9	7.8	7.8	8.0
Total Sulphate as SO_4	mg/kg	< 200	MCERTS	302	230	< 200	< 200	224
Total Sulphate as SO_4	%	< 0.02	MCERTS	0.03	0.02	< 0.02	< 0.02	0.02
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	33	37	28	21	24
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.03	0.04	0.03	0.02	0.02
TOC (Total Organic Carbon)	%	< 0.1	MCERTS	1.2	1.1	1	1	1.1
Arsenic (As)	mg/kg	< 2	MCERTS	16	12	12	10	12
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	24	21	22	22	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	14	10	10	10	11
Lead (Pb)	mg/kg	< 3	MCERTS	21	15	14	13	15
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	26	22	26	23	21
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	59	57	56	60	63
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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)
~Sample details provided by customer and can affect the validity of results

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Lenham Heath
Maidstone
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Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-06136	**~Date Sampled**	03/06/24	03/06/24	03/06/24	03/06/24	03/06/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: SITE OFF THE MALTINGS, DONNINGTON	**~TP / BH No**	1N	1E	1S	1W	1B
~Project / Job Ref: GML19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML9177/009	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 10/06/2024	**DETS Sample No**	718943	718944	718945	718946	718947

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.28	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.44	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.41	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.23	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.23	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.22	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.22	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.14	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.16	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	2.3	< 1.6

~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Banded (Type E)						
DETS Report No: 24-06136	**~Date Sampled**	03/06/24	03/06/24	03/06/24	03/06/24	03/06/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: SITE OFF THE MALTINGS, DONNINGTON	**~TP / BH No**	1N	1E	1S	1W	1B
~Project / Job Ref: GML19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML9177/009	**~Depth (m)**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 10/06/2024	**DETS Sample No**	718943	718944	718945	718946	718947

Determinand	Unit	RL	Accreditation					
EPH (C6 - C8)	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
EPH (>C8 - C10)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C10 - C12)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C12 - C16)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C16 - C21)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	2	< 1
EPH (>C21 - C35)	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6
EPH (C6 - C35)	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6

~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 24-06136	
Geo-Matters Limited	
~Site Reference: SITE OFF THE MALTINGS, DONNINGTON	
~Project / Job Ref: GML19177	
~Order No: ML/GML9177/009	
Reporting Date: 10/06/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
718943	1N	None Supplied	None Supplied	17.1	Light brown sandy clay
718944	1E	None Supplied	None Supplied	16.6	Light brown sandy clay
718945	1S	None Supplied	None Supplied	17.7	Light brown sandy clay
718946	1W	None Supplied	None Supplied	16.6	Light brown sandy clay
718947	1B	None Supplied	None Supplied	15.7	Light brown sandy clay

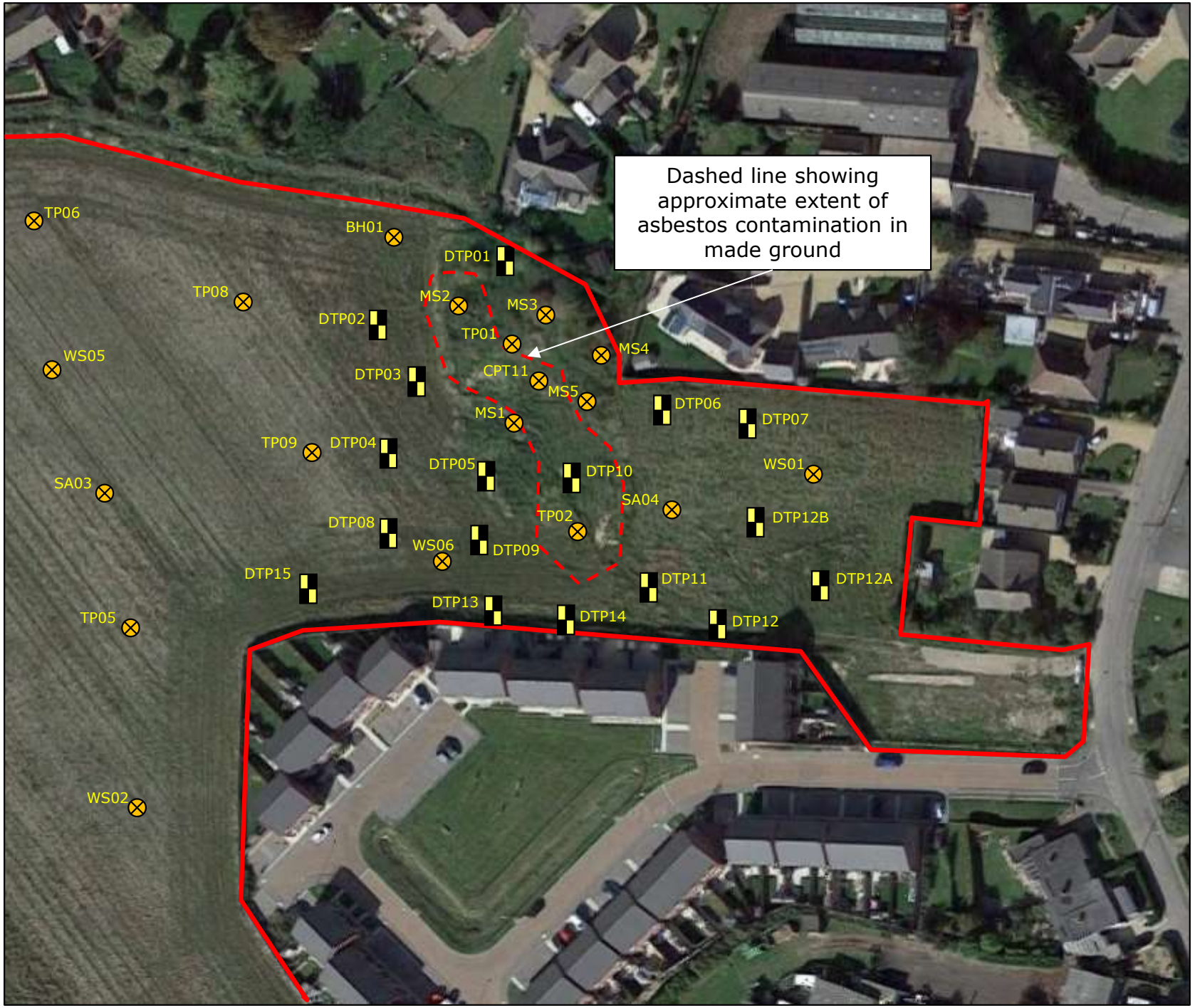
Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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: 24-06136
Geo-Matters Limited
~Site Reference: SITE OFF THE MALTINGS, DONNINGTON
~Project / Job Ref: GML19177
~Order No: ML/GML9177/009
Reporting Date: 10/06/2024

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
~Sample details provided by customer and can affect the validity of results



DO NOT SCALE

NOTES:

Approx. Boundary of area investigated

Approx. Location of Geo-Matters Ltd pits

Approx. location of 3rd party boreholes / trial pits

GEOMATTERS consulting engineers

www.geo-matters.com
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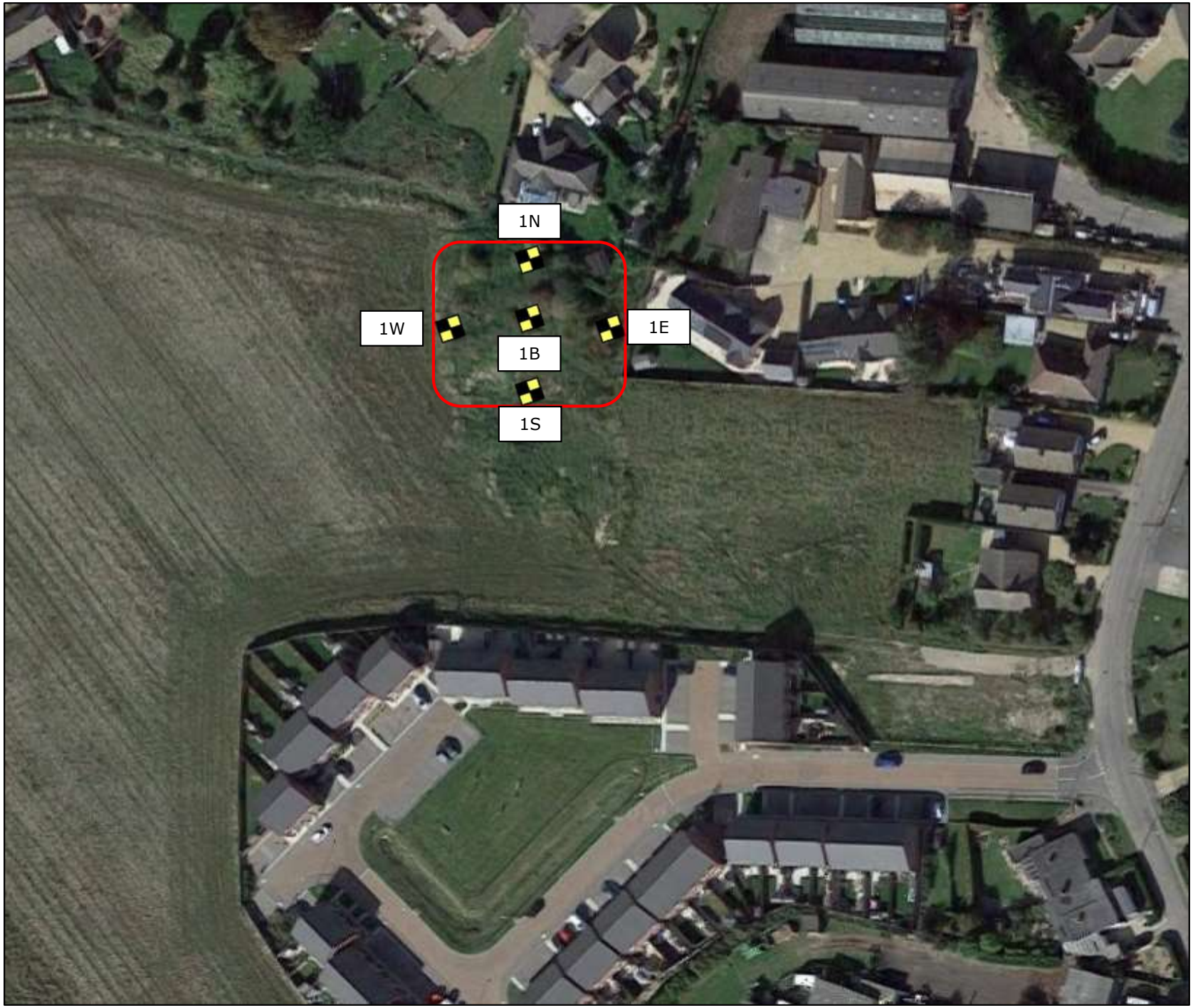
CLIENT: MINSTER PROPERTY GROUP

PROJECT: Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE: Original Asbestos Delineation Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
JR	August 2019
PROJECT No:	DRAWING No:
GML19177	001

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DO NOT SCALE

NOTES:

Approx. Location of Geo-Matters Ltd pits

GEOMATTERS consulting engineers

www.geo-matters.com
info@geo-matters.com

CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

Asbestos Sampling Plan 1

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	June 2024
PROJECT No:	DRAWING No:
GML19177	002a

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NOTES:

Approx. Location of Geo-Matters Ltd pits

GEOMATTERS consulting engineers

www.geo-matters.com
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CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

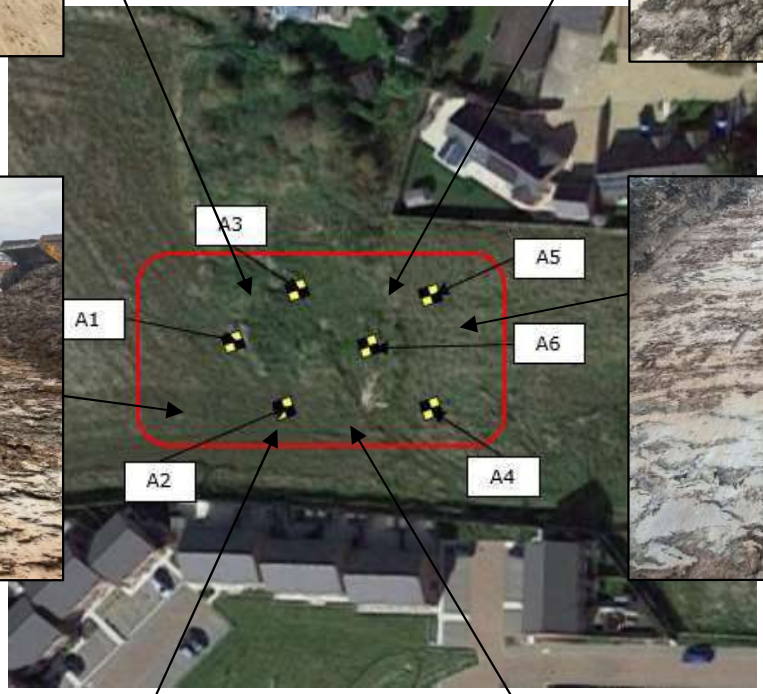
Asbestos Sampling Plan 2

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	Sept 2024
PROJECT No:	DRAWING No:
GML19177	002b

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NOTES:

GEOMATTERS consulting engineers

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CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

General Photographic Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	Sept 2024
PROJECT No:	DRAWING No:
GML19177	002c

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DE74 2NR

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

DETS Report No: 24-10784

Site Reference:	Site off the maltings, Donnington
Project / Job Ref:	GML 19177
Order No:	ML/GML19177/012
Sample Receipt Date:	13/09/2024
Sample Scheduled Date:	13/09/2024
Report Issue Number:	1
Reporting Date:	19/09/2024

Authorised by:

Steve Knight
Customer Support 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.

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
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Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate						
DETS Report No: 24-10784	**~Date Sampled**	11/09/24	11/09/24	11/09/24	11/09/24	11/09/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Site off the maltings, Donnington	**~TP / BH No**	RA1	RA2	RA3	RA4	RA5
~Project / Job Ref: GML 19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML19177/012	**~Depth (m)**	1.30	1.35	1.30	1.35	1.40
Reporting Date: 19/09/2024	**DETS Sample No**	738105	738106	738107	738108	738109

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.3	8.1	8.3	8.3	8.2
Total Sulphate as SO_4	mg/kg	< 200	MCERTS	583	380	403	384	440
Total Sulphate as SO_4	%	< 0.02	MCERTS	0.06	0.04	0.04	0.04	0.04
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	125	49	59	56	53
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.12	0.05	0.06	0.06	0.05
TOC (Total Organic Carbon)	%	< 0.1	MCERTS	1.8	1.5	1.4	1.5	1.5
Arsenic (As)	mg/kg	< 2	MCERTS	8	8	8	8	8
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	12	12	12	12	12
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	13	11	11	11	10
Lead (Pb)	mg/kg	< 3	MCERTS	22	19	19	21	18
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	10	10	11	10	10
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	46	40	43	42	42
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

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)
~Sample details provided by customer and can affect the validity of results

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Rose Lane
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Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-10784	**~Date Sampled**	11/09/24	11/09/24	11/09/24	11/09/24	11/09/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Site off the maltings, Donnington	**~TP / BH No**	RA1	RA2	RA3	RA4	RA5
~Project / Job Ref: GML 19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML19177/012	**~Depth (m)**	1.30	1.35	1.30	1.35	1.40
Reporting Date: 19/09/2024	**DETS Sample No**	738105	738106	738107	738108	738109

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - EPH Banded (Type E)						
DETS Report No: 24-10784	**~Date Sampled**	11/09/24	11/09/24	11/09/24	11/09/24	11/09/24
Geo-Matters Limited	**~Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Site off the maltings, Donnington	**~TP / BH No**	RA1	RA2	RA3	RA4	RA5
~Project / Job Ref: GML 19177	**~Additional Refs**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: ML/GML19177/012	**~Depth (m)**	1.30	1.35	1.30	1.35	1.40
Reporting Date: 19/09/2024	**DETS Sample No**	738105	738106	738107	738108	738109

Determinand	Unit	RL	Accreditation					
EPH (C6 - C8)	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
EPH (>C8 - C10)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C10 - C12)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C12 - C16)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C16 - C21)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1	< 1	< 1
EPH (>C21 - C35)	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6
EPH (C6 - C35)	mg/kg	< 6	NONE	< 6	< 6	< 6	< 6	< 6

~Sample details provided by customer and can affect the validity of results

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

Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 24-10784	
Geo-Matters Limited	
~Site Reference: Site off the maltings, Donnington	
~Project / Job Ref: GML 19177	
~Order No: ML/GML19177/012	
Reporting Date: 19/09/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
738105	RA1	None Supplied	1.30	17	Brown sandy clay
738106	RA2	None Supplied	1.35	17	Brown sandy clay
738107	RA3	None Supplied	1.30	16.3	Brown sandy clay with stones
738108	RA4	None Supplied	1.35	16.7	Brown sandy clay with stones
738109	RA5	None Supplied	1.40	16.8	Brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S
~Sample details provided by customer and can affect the validity of results

Normec DETS Limited
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: 24-10784
Geo-Matters Limited
~Site Reference: Site off the maltings, Donnington
~Project / Job Ref: GML 19177
~Order No: ML/GML19177/012
Reporting Date: 19/09/2024

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

~Sample details provided by customer and can affect the validity of results



DO NOT SCALE

NOTES:

Approx Area of Contaminated Soils (PAH & Asbestos)

Area Proposed for PAH Contaminated Soils following removal of Asbestos

GEOMATTERS consulting engineers

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CLIENT: MINSTER PROPERTY GROUP

PROJECT: Site off Maltings Lane, Donington

TITLE: Proposed Remedial Areas Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN : ML	DATE: Oct 2023
PROJECT No: GML19177	DRAWING No: RA1

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Segregated Asbestos - Visit 1



Pic of carefully rifting through the material during hand picking





Pic of carefully re-stockpiling materials during hand picking



Segregated Asbestos - Visit 2

DO NOT SCALE

NOTES:

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CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

General Photographic Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	Oct 2024
PROJECT No:	DRAWING No:
GML19177	002

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POS Remedial Area During Excavation



POS Remedial Area Following PAH Burial and Capped



Drone Shot Following POS Completion - Highlighted

DO NOT SCALE

NOTES:

GEOMATTERS consulting engineers

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CLIENT:

Seagate Homes

PROJECT:

Site off Malting Lane, Donington, Spalding, PE11 4XA

TITLE:

General Photographic Plan

SCALE@SIZE :	ISSUE:
NTS	Final
DESIGN/DRAWN :	DATE:
AT	Oct 2024
PROJECT No:	DRAWING No:
GML19177	003

© Geo-Matters Ltd

Geo-Matters Limited
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Derby
DE74 2NR

Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 24-10119

Site Reference:	Site off the maltings, Donnington
Project / Job Ref:	GML 19177
Order No:	ML/GML19177/010
Sample Receipt Date:	04/06/2024
Sample Scheduled Date:	04/06/2024
Report Issue Number:	1
Reporting Date:	11/06/2024

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.

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Soil Analysis Certificate						
DETS Report No: 24-10119	**Date Sampled**	04/06/24	04/06/24	04/06/24		
Geo-Matters Limited	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: Site off the maltings, Donnington	**TP / BH No**	POS1	POS2	POS3		
Project / Job Ref: GML 19177	**Additional Refs**	None Supplied	None Supplied	None Supplied		
Order No: ML/GML19177/010	**Depth (m)**	None Supplied	None Supplied	None Supplied		
Reporting Date: 11/06/2024	**DETS Sample No**	668538	668539	668540		

Determinand	**Unit**	**RL**	**Accreditation**					
Asbestos Screen (S)	N/a	N/a	**ISO17025**	Not Detected	Not Detected	Not Detected		
pH	pH Units	N/a	**MCERTS**	7.8	7.1	7.1		
Total Sulphate as SO_4	mg/kg	< 200	**MCERTS**	823	668	664		
Total Sulphate as SO_4	%	< 0.02	**MCERTS**	0.08	0.07	0.07		
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	**MCERTS**	21	18	19		
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	**MCERTS**	0.02	0.02	0.02		
TOC (Total Organic Carbon)	%	< 0.1	**MCERTS**	3.1	2.7	2.8		
Arsenic (As)	mg/kg	< 2	**MCERTS**	20	13	13		
Cadmium (Cd)	mg/kg	< 0.2	**MCERTS**	0.7	0.6	0.6		
Chromium (Cr)	mg/kg	< 2	**MCERTS**	23	15	16		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	**MCERTS**	52	39	37		
Lead (Pb)	mg/kg	< 3	**MCERTS**	196	124	124		
Mercury (Hg)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	**MCERTS**	22	15	16		
Selenium (Se)	mg/kg	< 2	**MCERTS**	< 2	< 2	< 2		
Zinc (Zn)	mg/kg	< 3	**MCERTS**	230	183	173		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		

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)

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-10119	**Date Sampled**	04/06/24	04/06/24	04/06/24		
Geo-Matters Limited	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: Site off the maltings, Donnington	**TP / BH No**	POS1	POS2	POS3		
Project / Job Ref: GML 19177	**Additional Refs**	None Supplied	None Supplied	None Supplied		
Order No: ML/GML19177/010	**Depth (m)**	None Supplied	None Supplied	None Supplied		
Reporting Date: 11/06/2024	**DETS Sample No**	668538	668539	668540		

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	0.92		
Acenaphthylene	mg/kg	< 0.1	**MCERTS**	< 0.1	< 0.1	1.1		
Acenaphthene	mg/kg	< 0.1	**MCERTS**	< 0.1	0.93	1.6		
Fluorene	mg/kg	< 0.1	**MCERTS**	< 0.1	1.1	3.1		
Phenanthrene	mg/kg	< 0.1	**MCERTS**	0.83	2.5	9.3		
Anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	1.7	5.6		
Fluoranthene	mg/kg	< 0.1	**MCERTS**	1.65	0.96	11		
Pyrene	mg/kg	< 0.1	**MCERTS**	0.57	0.70	20		
Benzo(a)anthracene	mg/kg	< 0.1	**MCERTS**	0.31	0.23	11		
Chrysene	mg/kg	< 0.1	**MCERTS**	2.31	3.8	17		
Benzo(b)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.30	2.3	6.4		
Benzo(k)fluoranthene	mg/kg	< 0.1	**MCERTS**	0.13	< 0.1	2.8		
Benzo(a)pyrene	mg/kg	< 0.1	**MCERTS**	3.27	6.7	15		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	**MCERTS**	0.19	1.9	7.4		
Dibenz(a,h)anthracene	mg/kg	< 0.1	**MCERTS**	< 0.1	1.3	2.1		
Benzo(ghi)perylene	mg/kg	< 0.1	**MCERTS**	0.18	3.2	4.8		
Total EPA-16 PAHs	mg/kg	< 1.6	**MCERTS**	9.7	27.3	119		

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Soil Analysis Certificate - EPH Banded (Type E)							
DETS Report No: 24-10119	**Date Sampled**	04/06/24	04/06/24	04/06/24		
Geo-Matters Limited	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: Site off the maltings, Donnington	**TP / BH No**	POS1	POS2	POS3		
Project / Job Ref: GML 19177	**Additional Refs**	None Supplied	None Supplied	None Supplied		
Order No: ML/GML19177/010	**Depth (m)**	None Supplied	None Supplied	None Supplied		
Reporting Date: 11/06/2024	**DETS Sample No**	668538	668539	668540		

Determinand	Unit	RL	Accreditation					
EPH (C6 - C8)	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
EPH (>C8 - C10)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1		
EPH (>C10 - C12)	mg/kg	< 1	**MCERTS**	< 1	< 1	< 1		
EPH (>C12 - C16)	mg/kg	< 1	**MCERTS**	< 1	< 1	3		
EPH (>C16 - C21)	mg/kg	< 1	**MCERTS**	4	4	13		
EPH (>C21 - C35)	mg/kg	< 6	NONE	14	26	109		
EPH (C6 - C35)	mg/kg	< 6	NONE	17	30	125		

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Soil Analysis Certificate - Sample Descriptions
DETS Report No: 24-10119
Geo-Matters Limited
Site Reference: Site off the maltings, Donnington
Project / Job Ref: GML 19177
Order No: ML/GML19177/010
Reporting Date: 11/06/2024

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
668538	POS1	None Supplied	None Supplied	15.8	Brown sandy clay with stones and vegetation
668539	POS2	None Supplied	None Supplied	14.5	Brown sandy clay with stones and vegetation
668540	POS3	None Supplied	None Supplied	14.4	Brown sandy clay with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-10119
Geo-Matters Limited
Site Reference: Site off the maltings, Donnington
Project / Job Ref: GML 19177
Order No: ML/GML19177/010
Reporting Date: 11/06/2024

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

DAVIS-WRIGHT
HAULAGE LTD
DOING IT THE WRIGHT WAY

07961 642270
ADAM@DAVISWRIGHTHAULAGE.CO.UK
WWW.DAVISWRIGHTHAULAGE.CO.UK

Office 1, 32 North Street
Bourne, PE10 9AB

Ticket Number:	**23000**
Date:	13/8/24
Gross:	20.03
Tare:	12.580
Net Weight:	7.72
Haulier/Driver:	A.O. WRIGHT
Vehicle Reg:	YD66 BWA.

Collected From
Customer & Site Address:

EA CIVILS
MALTING LANE
DONNINGTON.

Tipped At
Name & Address:

AUGEAN
STAMFORD ROAD
KINGS CLIFFE
PE8 6XX

Waiting Time/Daywork	Start:	Finish:	Waiting Time:

Material Description:

HAZARDOUS WASTE.

EWC Code
170107 Mixed hardcore
170102 Brick
170504 Inert soil
10408 Quarry waste
10409 Clay
170101 Tarmac
170303 Concrete

Signature:

EWC Code

Customer Name (PRINT):

SIC Code

Signed on behalf of customer if not present to sign:

Customers ordering vehicles off the hard road do so on their own responsibility	Signature:

CONCRETE • TIPPER WORK • MUCK AWAY • AGGREGATE • SITE CLEARANCE

DUTY OF CARE CONTROLLED WASTE TRANSFER NOTE

Waiting time may be charged if loading time exceeds 15 mins. By signing this Duty of Care Waste Transfer Note the producer/holder of the waste confirms they have fulfilled their duty to apply the waste hierarchy as required by Regulation 12 of the waste (England and Wales) Regulations 2011. Terms and conditions of sale available on request.

Registered Waste Carrier No: CBDU 383725

White: Customer **Yellow:** Office **Pink:** Transfers **Green:** Haulier