Gedney, Oliver

From: Grant, David
Sent: 19 October 2021 11:20
To: _planningadvice
Subject: FW: Cassini Lodge H13-0189-21
Attachments: We sent you safe versions of your files; C15356B Additional report for Moulton Seas End.pdf

Please add this email and attachment to the file under 6SUP – Additional Surveying Report.

Many thanks,

David Grant | Senior Planning Officer | **South Holland District Council**
Direct Dial: 01775 764472
www.sholland.gov.uk
Please note that any informal officer opinion expressed by this email is without prejudice and is not binding on the Council during the consideration of any formal application.

served by One Team

From: Jason Thomas <jasonadservices@yahoo.co.uk>
Sent: 19 October 2021 10:45
To: Grant, David <dgrant@sholland.gov.uk>
Subject: Re: Cassini Lodge H13-0189-21

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

This message originated from outside your organization

Hi Again David,

You looking through my emails it would appear that I received the report on the 8th October....please see attached report...that I thought I had sent over to you.

If not already received please can you pass it over to Sue as soon as possible for checking so the approval can be issued.

Many thanks in advance.

Kindest regards & Keep safe,

Jason

ADServices
07841 521271
01733 252850

On Tuesday, 7 September 2021, 20:51:42 BST, Grant, David <dgrant@sholland.gov.uk> wrote:

Dear Jason,

Please find attached a consultation response from Sue Armour that requires your attention.

Kind regards,

David Grant | Senior Planning Officer | **South Holland District Council**
Direct Dial: 01775 764472
www.sholland.gov.uk

Please note that any informal officer opinion expressed by this email is without prejudice and is not binding on the Council during the consideration of any formal application.

From: planningadvice@sholland.gov.uk <planningadvice@sholland.gov.uk>
Sent: 24 August 2021 14:19
To: Grant, David <dgrant@sholland.gov.uk>
Subject: Online web comments received for application: H13-0189-21

H13-0189-21

Comments have been received on the above application via the website and have been

transferred to Ocella.

The comments are as follows:

Consultee Name: Sue Armour

Address: Environmental Protection Officer SHDC

Date Transferred: Unrecognised Format

Planning Officer: David Grant

Response Type: **Comments**

Comments:

I have reviewed the Ground Engineering Limited 'Ground gas monitoring report Land adjacent Cassini Lodge 58 Seas End Road Moulton Seas End ref C15356A' dated August 2021. I am in agreement with the report conclusions that ground gas protection measures are not required at this location. However, the desk study report recommended chemical laboratory testing of the soils to show that they are suitable for use, and made ground soil was encountered. Is this information to follow?

Consult_Off_WM ODB127

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GROUND ENGINEERING LIMITED
Newark Road, Peterborough PE1 5UA
Tel: 01733 566566
Email: admin@groundengineering.co.uk

FURTHER GROUND INVESTIGATION FOR PROPOSED RESIDENTIAL DEVELOPMENT LAND ADJACENT CASSINI LODGE MOULTON SEAS END LINCOLNSHIRE

Report Reference C15356B

On behalf of:

DMT Developments Limited
Runway Office
Easton Lodge Farm
Old Oundle Road
Wansford
PE8 6NP

October 2021

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DMT DEVELOPMENTS LIMITED

ARCHITECTURAL DESIGN SERVICES

FURTHER GROUND INVESTIGATION

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

LAND ADJACENT CASSINI LODGE

MOULTON SEAS END

LINCOLNSHIRE

Report Reference No. C15356B **October 2021**

INTRODUCTION

The client, DMT Developments Limited, is proposing to construct a new residential development at land adjacent Cassini Lodge, 58 Seas End Road, Moulton Seas End, Lincolnshire.

The proposed development is to comprise five dwellings with associated gardens.

Ground Engineering Limited was instructed by the client, under the direction of Architectural Design Services, to undertake a ground investigation to check for soil contamination within the proposed garden areas. Reference should be given to previous investigation works comprising a desk study and soil gas monitoring respectively presented in Ground Engineering Limited reports C15356: May 2021 and C15356A: August 2021.

LOCATION, TOPOGRAPHY AND GEOLOGY OF THE SITE

The 0.48 hectare site, which is approximately centred on National Grid Reference TF 3205 2698 is located on the western side of Seas End Road (B1357), on the southern side of the village of Moulton Seas End. Moulton Seas End is approximately 4km north-west of Holbeach and 8km north-east of Spalding in Lincolnshire.

The irregular shaped site was approximately 30m wide fronting Seas End Road, widening to 60m behind an adjacent bungalow to the south, and extended 110m west. The site was bounded to the north by a dormer bungalow (No.56) fronting Seas End Road, and a new housing development under construction off Hall Lane; a field to the west; a field to the south; and a bungalow (No.60) to the south-east, which also fronts Seas End Road.

The site contains Cassini Lodge (No.58), a detached house in the north-eastern part of the site fronting Seas End Road, with a front lawned garden containing trees and rear garden/patio with a summerhouse. The site also contains another grassed area fronting Seas End Road, with a conifer hedge at its rear (west) screening a workshop building, which is accessed by a central roadway. The workshop is an operational vehicle servicing business, which was remarkably clean and tidy. There was a small pile of metal scrap to the side of the workshop, and a storage area to the rear included drums of oil. In the central northern part of the site there was a skip on a concrete surfaced area, and two glasshouses containing an assortment of things, which included a London Taxi and a boat. The majority of the rear western part of the site is a grassed area, and with an immature orchard alongside the northern boundary. An old trailer is also present adjacent the southern corner of the site. There are hedges and trees including Hawthorn and Cypress along most of the site boundaries.

The site stands at an elevation of approximately 3.5mOD, on level ground within the Lincolnshire Fens.

The geological map for the area, sheet 144 at 1:50,000 scale, shows the site to be underlain by a thick succession of Terrington Beds, more recently identified as Tidal Flat Deposits.

These initially clayey, becoming silt and fine sand soils are indicated to rest on the solid geology of the West Walton Formation at depth. Previous work in the vicinity has found Tidal Flat Deposits underlain by Marine Sand to at least 11m depth. Seas End Road to the east and Hall Lane to the north are shown as 'Seabanks', and mark the limit of reclamation of salt marsh between circa 1000AD and 1300AD.

SITE WORK

The site work was carried out on 16 September 2021. The works comprised six hand auger boreholes (HA1A & HA1B to HA5) carried out to depths of 0.25m and 1.40m at locations shown in Figure 1. Borehole HA1A was abandoned on a concrete obstruction and subsequently the hole was moved to position HA1B. Soil samples were taken at regular intervals from the boreholes in plastic tubs (D) and amber glass jars (ES).

The exploratory hole records have been produced in accordance with British Standard BS5930:2015+A1:2020 'Code of Practice for Site Investigations' and are given in Appendix 1. The records provide the descriptions and depths of the various strata encountered, samples taken, and the groundwater conditions observed during excavation, boring and on completion.

Service plans were consulted, and a cable avoidance tool (CAT) was used to check for the absence of buried services prior to boring.

CHEMICAL LABORATORY TESTING

Selected soil samples were submitted to a UKAS Accredited Laboratory who carried out a suite of tests, which encompassed a wide range of potential contaminants outlined by the Environment Agency (EA) and National House Building Council (NHBC) document R&D 66; 2008 'Guidance for the Safe Development of Housing on Land Affected by Contamination'.

Tests were carried out to screen the samples for the following potential contaminants: total arsenic, total cadmium, total chromium, hexavalent chromium, total lead, total mercury, total selenium, water soluble boron, total copper, total nickel, total zinc, total cyanides, free cyanides, soluble sulphate, sulphides and pH-value, phenols and polyaromatic hydrocarbons (PAH), including benzo[a]pyrene, and petroleum hydrocarbons (TPH). Screening for asbestos was also carried out on selected soils.

The results of chemical testing are presented in Appendix 2.

GROUND CONDITIONS

The ground conditions within HA1B to HA5 comprised between 0.30m and 0.60m thickness of made ground, which rested on Marine Sand.

Made Ground Adjacent Workshop and Glasshouses (Boreholes HA1A & HA1B)

Borehole HA1A was abandoned in concrete, which was present from 0.05m to at least 0.25m depth. A 0.05m thick layer of brown, slightly sandy, slightly gravelly silt overlay the concrete.

Within borehole HA1B a surface layer of brown, slightly gravelly, sandy silt was encountered to 0.30m, below which was a layer of brown and orange brown, locally speckled black, silty sand present to 0.50m depth.

The gravel fraction comprised angular to rounded flint, with rare fragments of brick, ash, pottery and scrap metal.

Made Ground within Grass Paddock and Orchard Areas (Boreholes HA2 to HA5)

A 0.20m to 0.50m thick surface layer of brown and dark brown, fine sandy silt made ground/topsoil was encountered in HA2 to HA5.

This was underlain by reworked natural ground comprising light brown and brown, silty sand, which was present between 0.50m and 0.60m depth.

Marine Sand

Beneath the surface layers of made ground, at depths between 0.30m and 0.60m, in HA1B to HA5, a brown and orange brown, silty sand was encountered. These boreholes were completed within this Marine Sand at depths between 0.70m and 1.40m below ground level.

Evidence of Contamination

The soils encountered during this investigation were not noted to have olfactory or visual evidence of hydrocarbon contamination. The made ground encountered by the workshop/glasshouse in HA1A and HA1B and contained fragments brick, pottery, wood and scrap metal.

Groundwater

No groundwater was encountered in HA1A to HA5, which were all dry on completion between 0.25m and 1.40m depth.

COMMENTS ON SOIL CHEMICAL TESTING

The results of the laboratory chemical testing on near surface soil samples have primarily been compared to soil screening values (SSVs) produced by Land Quality Management Limited (LQM) and the Chartered Institute for Environmental Health (CIEH) presented in their document 'The LQM/CIEH S4ULs for Human Health Risk Assessment: 2015 (Publication Number S4UL3608)'. The LQM/CIEH S4ULs are intended for use in assessing the potential risks posed to human health by contaminants in soil and are transparently-derived and cautious 'trigger values' above, which further assessment of the risks or remedial action may be needed. The S4ULs (Suitable for Use Levels) have been derived, in accordance with UK legislation and Environment Agency policy, using a modified version of the Environment Agency CLEA 1.06 software.

Reference has also been given to ATRISKsoil soil screening values produced by Atkins Limited and provided under licence to Ground Engineering Limited. Atkins SSVs have been derived in line with the Environment Agency 2009 guidance using the CLEA 1.071 software. With the absence of a S4UL for cyanide the ATRISKsoil SSV has been used as the soil screening criteria within this report.

In 2014 the Department for Environment Food and Rural Affairs (DEFRA) published, in their document SP1010, Category 4 Screening Levels (C4SL) for several contaminants including lead. The C4SL represent screening levels below, which the land could be considered suitable for a specified use and definitely not contaminated land in respect of those determinands. With the absence of S4UL for lead the C4SL has been used as the soil screening criteria within this report.

For each contaminant the adopted soil screening criteria have been calculated for the following land uses:

- Residential use with home grown produce
- Residential use without home grown produce
- Commercial and industrial usage

The intended purpose of the SSVs are as "intervention values" in the regulatory framework for assessment of human health risks in relation to land use. These values are not binding standards but are intended to inform judgements about the need for action to ensure that a new use of land does not pose any unacceptable risks to the health of the intended users.

Tables 1A & 1B compare the test results for the made ground in HA1A (workshop) with the SSVs in relation to the specified uses. Tables 2A & 2B compare the test results for the made ground in HA2 to HA5 (paddock & orchard) with the SSVs in relation to the specified uses. The number of test results, which exceed these values, are also provided.

Residential usage values are considered appropriate screening values for the proposed residential development.

Table 1A: Borehole HA1A Comparison of Chemical Test Results for Near Surface Soil with Soil Screening Values (SSV)

Determinand	Number of Samples	Value (mg/kg)	Number of Samples Exceeding SSV for:			Measured 95th Percentile (mg/kg)	Soil Screening Values (SSV) (1% SOM)			
			Residential with home grown produce	Residential without home grown produce	Commercial/ Industrial (mg/kg)		Assessment Method	Residential with home grown produce (mg/kg)	Residential without home grown produce (mg/kg)	Commercial/ Industrial (mg/kg)
Organic matter	1	5.1%	-	-	-	-	-	-	-	-
Arsenic	1	18	0	0	0	-	S4UL	37	40	640
Cadmium	1	0.32	0	0	0	-	S4UL	11	85	190
Total Chromium	1	24	0	0	0	-	S4UL	910	910	8600
Hexavalent Chromium	1	<0.50	0	0	0	-	S4UL	6	6	33
Lead	1	46	0	0	0	-	C4SL	200	310	2330
Mercury	1	<0.10	0	0	0	-	S4UL	11	15	320
Selenium	1	<0.20	0	0	0	-	S4UL	250	430	12,000
Nickel	1	19	0	0	0	-	S4UL	130	180	980
Phenols	1	<0.10	0	0	0	-	S4UL	120	440	440
Copper	1	22	0	0	0	-	S4UL	2400	7100	68,000
Zinc	1	420	0	0	0	-	S4UL	3700	40,000	730,000
Free Cyanide	1	<0.50	0	0	0	-	ATRISK	34	34	34

Notes
S4UL and C4SL for metals were derived using 6% SOM. These values are not sensitive to SOM and would also be applicable for 1% SOM and 2.5% SOM
LQM/CIEH S4ULs 'Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3608. All rights reserved'
ATRISKsoil SSVs produced by Atkins Limited and provided under licence to Ground Engineering Limited

Table 1B: Borehole HA1A Comparison of PAH Chemical Test Results for Near Surface Soil with Soil Screening Values (SSV)

Determinand	Number of Samples	Value (mg/kg)	Number of Samples Exceeding SSV for:			Measured 95th Percentile (mg/kg)	Soil Screening Values (SSV) (1% SOM)			
			Residential with home grown produce	Residential without home grown produce	Commercial/ Industrial		Assessment Method	Residential with home grown produce (mg/kg)	Residential without home grown produce (mg/kg)	Commercial/ Industrial (mg/kg)
Acenaphthene	1	0.12	0	0	0	-	S4UL	210	3000	84,000
Acenaphthylene	1	0.36	0	0	0	-	S4UL	170	2900	83,000
Anthracene	1	0.55	0	0	0	-	S4UL	2400	3100	520,000
Benzo[a]anthracene	1	2.7	0	0	0	-	S4UL	7.2	11	170
Benzo[a]pyrene	1	3.6	1	1	0	-	S4UL	2.2	3.2	35
Benzo[b]fluoranthene	1	4.8	1	1	0	-	S4UL	2.6	3.9	44
Benzo[g,h,i]perylene	1	5.2	0	0	0	-	S4UL	320	360	390
Benzo[k]fluoranthene	1	2.0	0	0	0	-	S4UL	77	110	1200
Chrysene	1	2.9	0	0	0	-	S4UL	15	30	350
Dibenzo[a,h]anthracene	1	1.0	1	1	0	-	S4UL	0.24	0.31	3.5
Fluoranthene	1	4.6	0	0	0	-	S4UL	280	1500	23,000
Fluorene	1	0.15	0	0	0	-	S4UL	170	2800	63,000
Indeno[1,2,3-cd]pyrene	1	3.2	0	0	0	-	S4UL	27	45	500
Naphthalene	1	0.12	0	0	0	-	S4UL	2.3	2.3	190
Phenanthrene	1	2.5	0	0	0	-	S4UL	95	1300	22,000
Pyrene	1	4.9	0	0	0	-	S4UL	620	3700	54,000

Notes

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Table 2A: Boreholes HA2 to HA5 Comparison of Chemical Test Results for Near Surface Soil with Soil Screening Values (SSV)

Determinand	Number of Samples	Min Value (mg/kg	Max Value (mg/kg)	Number of Samples Exceeding SSV for:			Measured 95th Percentile (mg/kg)	Soil Screening Values (SSV) (1% SOM)			
				Residential with home grown produce	Residential without home grown produce	Commercial/ Industrial (mg/kg)		Assessment Method	Residential with home grown produce (mg/kg)	Residential without home grown produce (mg/kg)	Commercial/ Industrial (mg/kg)
Organic matter	4	2.1%	4.0%	-	-	-	-	-	-	-	-
Arsenic	4	12	14	0	0	0	14.36	S4UL	37	40	640
Cadmium	4	<0.10	0.27	0	0	0	0.28	S4UL	11	85	190
Total Chromium	4	15	21	0	0	0	20.69	S4UL	910	910	8600
Hexavalent Chromium	4	<0.50	<0.50	0	0	0	0.50	S4UL	6	6	33
Lead	4	21	41	0	0	0	39.68	C4SL	200	310	2330
Mercury	4	<0.10	0.19	0	0	0	0.18	S4UL	11	15	320
Selenium	4	<0.20	0.30	0	0	0	0.28	S4UL	250	430	12,000
Nickel	4	14	17	0	0	0	17.23	S4UL	130	180	980
Phenols	4	<0.10	0.11	0	0	0	0.11	S4UL	120	440	440
Copper	4	18	230	0	0	0	196.82	S4UL	2400	7100	68,000
Zinc	4	52	180	0	0	0	190.86	S4UL	3700	40,000	730,000
Free Cyanide	4	<0.50	<0.50	0	0	0	0.50	ATRISK	34	34	34

Notes
S4UL and C4SL for metals were derived using 6% SOM. These values are not sensitive to SOM and would also be applicable for 1% SOM and 2.5% SOM
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Table 2B: Boreholes HA2 to HA5 Comparison of PAH Chemical Test Results for Near Surface Soil with Soil Screening Values (SSV)

Determinand	Number of Samples	Min Value (mg/kg)	Max Value (mg/kg)	Number of Samples Exceeding SSV for:			Measured 95th Percentile (mg/kg)	Soil Screening Values (SSV) (1% SOM)			
				Residential with home grown produce	Residential without home grown produce	Commercial/ Industrial		Assessment Method	Residential with home grown produce (mg/kg)	Residential without home grown produce (mg/kg)	Commercial/ Industrial (mg/kg)
Acenaphthene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	210	3000	84,000
Acenaphthylene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	170	2900	83,000
Anthracene	4	<0.10	0.14	0	0	0	0.13	S4UL	2400	3100	520,000
Benzo[a]anthracene	4	<0.10	0.71	0	0	0	0.73	S4UL	7.2	11	170
Benzo[a]pyrene	4	<0.10	0.67	0	0	0	0.58	S4UL	2.2	3.2	35
Benzo[b]fluoranthene	4	<0.10	0.85	0	0	0	0.73	S4UL	2.6	3.9	44
Benzo[g,h,i]perylene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	320	360	390
Benzo[k]fluoranthene	4	<0.10	0.53	0	0	0	0.46	S4UL	77	110	1200
Chrysene	4	<0.10	0.63	0	0	0	0.72	S4UL	15	30	350
Dibenzo[a,h]anthracene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	0.24	0.31	3.5
Fluoranthene	4	<0.10	0.75	0	0	0	0.68	S4UL	280	1500	23,000
Fluorene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	170	2800	63,000
Indeno[1,2,3-cd]pyrene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	27	45	500
Naphthalene	4	<0.10	<0.10	0	0	0	<0.10	S4UL	2.3	2.3	190
Phenanthrene	4	<0.10	0.38	0	0	0	0.33	S4UL	95	1300	22,000
Pyrene	4	<0.10	0.87	0	0	0	0.77	S4UL	620	3700	54,000

Notes

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Discussion of Results

Made Ground Adjacent Workshop (Boreholes HA1A & HA1B)

With the exception of polyaromatic hydrocarbons (PAH) none of the determinand concentrations exceeded the respective SSV for residential with home grown produce, residential without home grown produce end use.

The made ground contained elevated concentrations of the following PAHs: benzo[a]pyrene, benzo[b]fluoranthene and dibenzo[a,h]anthracene. These were present with concentrations exceeding residential SSVs but none exceeded the respective SSV for commercial usage. No visual or olfactory evidence of petroleum pollution was observed in the soil recovered from the boreholes and the TPH results reflected this with concentrations of less than 10mg/kg. Soil screening provided no evidence of asbestos containing materials.

The near surface soil adjacent the workshop areas is considered unsuitable for reuse at the surface within new garden areas featuring within the proposed residential development.

Made Ground within Grass Paddock and Orchard Areas (Boreholes HA2 to HA5)

None of the determinand concentrations exceeded the respective SSV for residential with home grown produce, residential without home grown produce end use or commercial/industrial usage. No visual or olfactory evidence of petroleum pollution was observed in the soil recovered from the boreholes and the TPH results reflected this with concentrations of less than 10mg/kg. Soil screening provided no evidence of asbestos containing materials.

The near surface soil across the grass paddock and orchard areas is therefore considered suitable for reuse at the surface within new garden areas featuring within the proposed residential development.

UPDATED CONCEPTUAL MODEL

A generalised conceptual model provided in Ground Engineering Limited report C15356: May 2021, has been updated following the intrusive works and testing, is presented below in Table 3 and follows the comparison of consequence against probability presented in CIRIA 552.

Table 3: Updated Conceptual Model & Risk Assessment Relative to Construction and Future Development

Source	Pathway	Receptor	Probability of risk being realised	Consequence of risk being realised	Risk Classification
Soil Beneath Site Adjacent Workshop (HA1A & HA1B)	Ingestion and Inhalation of contaminated Soil, Dust and Vapour	Human Health Groundworkers	Likely	Minor	Low Risk
		Human Health Site Users if exposed at surface	Likely	Minor	Low Risk
		Human Health Site Users if present beneath permanent hardstanding/roads	Unlikely	Minor	Very Low Risk
	Migration through ground into surface water or groundwater	Water Environment	Unlikely	Minor	Very Low Risk
Soil Beneath Site Grass Paddock and Orchard Areas (HA2 to HA5)	Ingestion and Inhalation of contaminated Soil, Dust and Vapour	Human Health Groundworkers	Low Likelihood	Minor	Very Low Risk
		Human Health Site Users if exposed at surface	Low Likelihood	Minor	Very Low Risk
		Human Health Site Users if present beneath permanent hardstanding/roads	Unlikely	Minor	Very Low Risk
	Migration through ground into surface water or groundwater	Water Environment	Unlikely	Minor	Very Low Risk

Key to Table 3 Risk	Definition
Very High risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, or there is evidence that severe harm to a designated receptor is currently happening. The risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) and remedial works may be necessary in the short term and likely over the long term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

COMMENTS ON GROUND CONTAMINATION IN RELATION TO PROPOSED RESIDENTIAL REDEVELOPMENT

The ground investigation works have been carried out in advance of proposed residential development.

This investigation may not have revealed the full depth or extent of made ground or contamination on the site and appropriate professional advice should be sought if subsequent site works reveal materials that appear to be contaminated.

Anticipated exposure scenarios relating to the site and future use, in the context of the conceptual model, are discussed as follows.

Asbestos in Existing Buildings

It would be recommended that an asbestos survey is conducted prior to any demolition or building works. Asbestos presents a very high risk and consequently suitable precautions, in line with current best practice, should be put in place to protect workers from the effects of asbestos material, during demolition or building works. Care should be taken to during demolition to ensure that asbestos fragments or fibres are not spread onto other areas of the site or get mixed into the soil.

Contamination Risk - Near Surface Soil

Without further testing the made ground encountered around the workshop (HA1A & HA1B) would be considered unsuitable for reuse within residential garden areas.

The made ground and near surface soils within the grass paddock and orchard area (HA2 to HA5) are considered suitable for reuse within residential garden areas.

Human Health - Construction Workers

No special precautions would be required during the development of the site by workers who may come into contact with the soil during groundworks, providing standard precautions are adopted, which should generally include the procedures given by the Health and Safety Executive (The Blue Book).

For the protection of these workers during groundworks the following is recommended:

a) Limit repeated or prolonged skin contact with soils by wearing gloves with sleeves rolled down.

b) Washing facilities should be made available to groundworkers, so as to minimise the potential for inadvertent ingestion of soil.

c) If any soils are revealed, which are different to those encountered by this ground investigation, the advice of a specialist should be sought in view of classifying the material and ascertaining its risk to groundworkers.

Human Health – Residential Garden Areas HA1A & HA1B

Prior to demolition of the workshop all containers and drums containing oil, solvents and chemicals should be carefully removed to an appropriate licensed disposal facility.

The near surface soil adjacent the workshop areas is considered unsuitable for reuse at the surface within new garden areas featuring within the proposed residential development whose layout is provided in Figure 2.

Within residential garden areas where boreholes HA1A & HA1B were located, all unsuitable soil within gardens or landscaped areas should be replaced with a suitably thick, clean capping layer.

- For front garden areas it would be recommended that the underlying natural ground be exposed, or in deeper areas the made ground should be removed to a minimum depth of 0.60m and replaced with an equivalent thickness of clean inert soil.
- For private rear residential gardens it is recommended that the underlying natural ground should be exposed, or in deeper areas the made ground should be removed to a minimum depth of 1.00m and replaced with an equivalent thickness of clean inert soil.

All garden/landscaped areas should be inspected prior to final capping to ensure that unsuitable materials have not been inadvertently placed in the garden or landscaped areas during the preceding stages of redevelopment works.

All imported soils should be certified 'clean' fill and should be suitable for use in accordance with UK legislation and Environment Agency policy.

Human Health – Residential Garden Areas HA2, HA3, HA4 & HA5

The near surface soil across the grass paddock and orchard areas is considered suitable for reuse at the surface within new garden areas featuring within the proposed residential development whose layout is provided in Figure 2. Therefore no formal scheme of remediation work be required within these residential areas where boreholes HA2, HA3, HA4 & HA5 were undertaken.

Off-Site Disposal of Soil Arisings

The results of chemical analysis are provided in Appendix 2 and can be used within the suite of information necessary for basic characterisation of the soil destined for landfill. Excavated material and excess spoil should always be classified prior to removal from site as required by 'Duty of Care' (Environmental Protection Act, 1990) legislation. This means that material has to be given a proper description and waste classification prior to removal. Basic characterisation is the responsibility of the waste producer and compliance checking and on-site

verification are generally the responsibility of the landfill operator. The landfill operator will need to liaise with the waste producer as the approach relies on the information from basic characterisation.

The clean arisings from the underlying natural soils, excluding peat and topsoil, across this site should fall under the EWC code 17 05 04 inert category.

GROUND ENGINEERING LIMITED

J. H. GIBB

B.Sc.(Hons.), M.Sc.(Eng.), C.Geol., F.G.S.

Senior Geo-Environmental Engineer

S. J. FLEMING

M.Sc., M.C.S.M., C.Geol., F.G.S.

Director

Figures

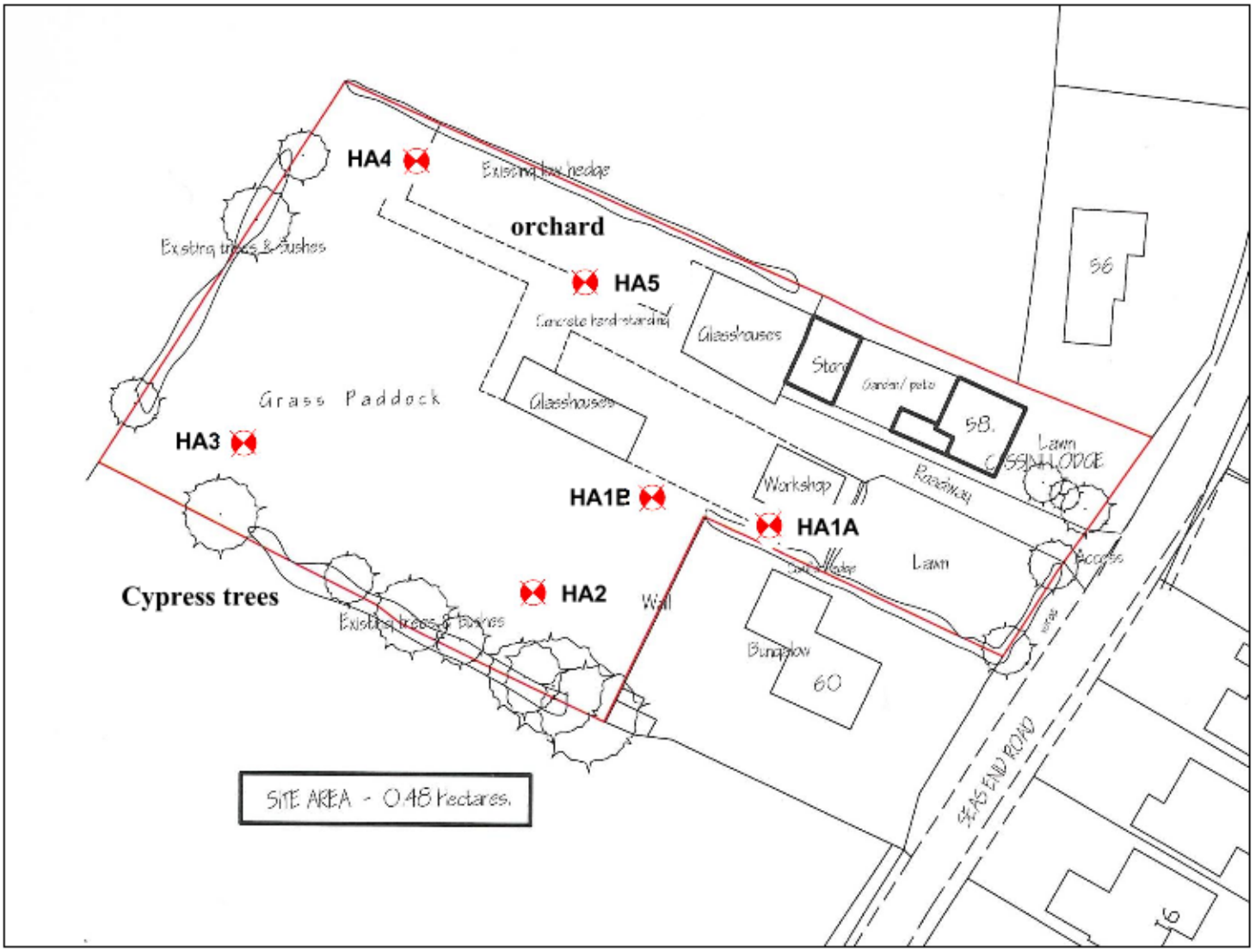
Figure 1: Exploratory Hole Location Plan

Figure 2: Proposed Development Plan

Exploratory Hole Location Plan

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Figure 1



Scale

30m

KEY

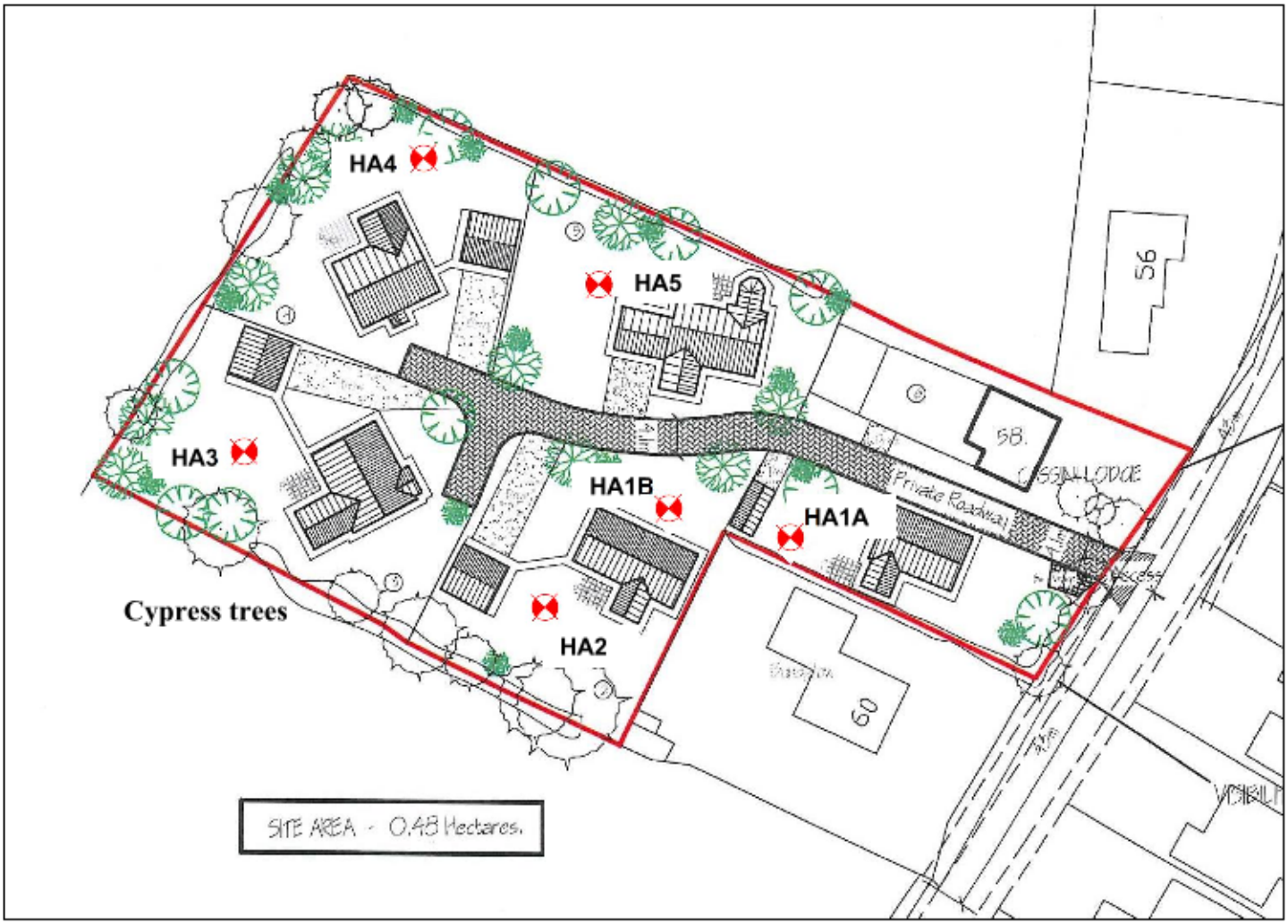
Boreholes HA1A, HA1B, HA2, HA3, HA4 & HA5

Project : Land adjacent Cassini Lodge, 58 Seas End Road, Moulton Seas End, Lincolnshire **Client :** DMT Developments Limited	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15356B**

Proposed Development Plan

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Figure 2



Scale

30m

Project : Land adjacent Cassini Lodge, 58 Seas End Road, Moulton Seas End, Lincolnshire **Client :** DMT Developments Limited	**GROUND ENGINEERING LIMITED** Peterborough Tel : 01733 566566	**Project No.** **C15356B**

Appendix 1

Records of
Boreholes HA1A to HA5

GROUND ENGINEERING LIMITED

Tel: 01733-566566
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA1A

Date: 16/09/21

Hole Size: 250mm dia to 0.20m

Ground Level:

Samples and In-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.02	D1			MADE GROUND - Grass over brown, slightly sandy, slightly gravelly SILT. Gravel comprise fragments of scrap metal, pottery and wood.		0.05	
				MADE GROUND - CONCRETE obstruction.		0.25	
				Hole abandoned at 0.25m depth			

REMARKS 1. No live roots observed
2. Hole sides stable

Project No 153568

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▼c Level on completion
MP - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes

Depth m					
No	Struck	Rose to	Rate	Cased	Sealed

Groundwater Observations

	Depth m		
Date	Hole	Casing	Water
16/09/21	0.25		dry

GROUND ENGINEERING LIMITED

Tel: 01733-566566
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA1B

Date: 16/09/21

Hole Size: 70mm dia to 1.00m

Ground Level:

Samples and In-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Grass over brown, slightly gravelly, sandy SILT. Gravel of angular to rounded flint and rare fragments of pottery and ash.			
0.20	ES1					0.30	
0.40	D2			MADE GROUND - Brown and orange brown, locally speckled black, silty SAND. Rare fine gravel of brick.			
0.40	ES2					0.50	
				Brown and orange brown, silty, fine SAND.			
0.65	D3						
0.65	ES3						
				(MARINE SAND)			
						1.00	
				Hole completed at 1.00m depth			

REMARKS 1. Live roots observed to 0.30m depth
2. Hole sides stable

Project No 15356B

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▼c Level on completion
MP - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes						Groundwater Observations			
	Depth m						Depth m		
No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
						16/09/21	1.00		dry

GROUND ENGINEERING LIMITED

Tel: 01733-568568
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA2

Date: 16/09/21

Hole Size: 70mm dia to 0.70m

Ground Level:

Samples and In-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - Grass over dark brown, fine sandy SILT.			
0.30	D1						
0.30	ES1					0.50	
				Brown and yellow brown, very silty, fine SAND. (MARINE SAND)			
						0.70	
0.70	D2						
0.70	ES2			Hole completed at 0.70m depth			

REMARKS 1. Live roots observed to 0.70m depth
2. Hole sides stable

Project No 15356B

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
U - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▼u Level on completion
MP - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes						Groundwater Observations			
	Depth m						Depth m		
No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
						16/09/21	0.70		dry

GROUND ENGINEERING LIMITED

Tel: 01753-656656
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA3

Date: 16/09/21

Hole Size: 70mm dia to 0.80m

Ground Level:

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20 0.20	D1 ES1			MADE GROUND - Grass over brown and dark brown, fine sandy SILT.		0.30	
				Light brown, silty, fine SAND. (MARINE SAND)		0.80	
0.70 0.70	D2 ES2			Hole completed at 0.80m depth			

REMARKS 1. Live roots observed to 0.80m depth
2. Hole sides stable

Project No 15356B

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▼n Level on completion
MP - MacIntosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes						Groundwater Observations			
	Depth m						Depth m		
No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
						16/09/21	0.80		dry

GROUND ENGINEERING LIMITED

Tel: 01733-566566
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA4

Date: 16/09/21

Hole Size: 70mm dia to 1.00m

Ground Level:

Samples and In-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.10 0.10	D1 ES1			MADE GROUND - Grass over dark brown, fine sandy SILT.		0.20	
0.40 0.40	D2 ES2			MADE GROUND - Light brown and brown, very silty, fine SAND.		0.50	
0.70 0.70	D3 ES3			Light brown and yellow brown, silty, fine SAND. (MARINE SAND)		1.00	
				Hole completed at 1.00m depth			

REMARKS 1. Live roots observed to 0.20m depth
2. Hole sides stable

Project No 15356B

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▼c Level on completion
MP - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes

No	Struck	Rose to	Depth m Rate	Cased	Sealed

Groundwater Observations

Date	Depth m Hole	Casing	Water
16/09/21	1.00		dry

GROUND ENGINEERING LIMITED

Tel: 01733-566566
www.groundengineering.co.uk

Site: LAND ADJ. CASSINI LODGE, 58 SEAS END ROAD, MOULTON SEAS END

HAND AUGER
HA5

Date: 16/09/21

Hole Size: 70mm dia to 1.40m

Ground Level:

Samples and In-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.10 0.10	D1 ES1			MADE GROUND - Grass over dark brown, fine sandy SILT.		0.20	
				MADE GROUND - Light brown and brown, silty, fine SAND.		0.60	
0.70 0.70	D2 ES2			Brown, light brown and orange brown, very silty, fine SAND. (MARINE SAND)			
1.35 1.35	D3 ES3			Hole completed at 1.40m depth		1.40	

REMARKS 1. Live roots observed to 0.20m depth
2. Hole sides stable

Project No 153568

Scale 1:25

Page 1/1

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed Sample
W - Water Sample
R - Root Sample
▽ Water Strike
▽c Level on completion
MP - Mackintosh Probe
V - Vane Shear Test Cohesion ( ) kPa
ES - Environmental Sample
▼ Water Rise
▼s Standpipe Level

Groundwater Strikes

Depth m						
No	Struck	Rose to	Rate	Cased	Sealed

Groundwater Observations

	Depth m		
Date	Hole	Casing	Water
16/09/21	1.40		dry

Appendix 2

Laboratory Chemical Test Results

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

UKAS TESTING 2183

mCERTS

Final Report

Report No.:	21-32513-1
Initial Date of Issue:	24-Sep-2021
Client	Ground Engineering Limited
Client Address:	Newark Road Peterborough Cambridgeshire PE1 5UA
Contact(s):	Simon Weatherley
Project	SW/C15356B 58 Seas End Road, Moulton Seas End

Quotation No.:		**Date Received:**	20-Sep-2021
Order No.:	SW/C15356B	**Date Instructed:**	20-Sep-2021
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	24-Sep-2021
Date Approved:	24-Sep-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: SW/C15356B 58 Seas End Road, Moulton Seas End

Client: Ground Engineering Limited				**Chemtest Job No.:**	21-32513	21-32513	21-32513	21-32513	21-32513	21-32513
Quotation No.:				**Chemtest Sample ID.:**	1281918	1281919	1281920	1281921	1281922	1281923
Order No.: SW/C15356B				Client Sample Ref.:	D1	D1+ES1	D1+ES1	D1+ES1	D1+ES1	D1+ES1
				Sample Location:	HA1A	HA2	HA3	HA4	HA5	HA1B
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.02	0.30	0.20	0.10	0.10	0.20
				Date Sampled:	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
pH	M	2010		4.0	8.6	8.3	8.2	8.4	8.4	
Moisture	N	2030	%	0.020	11	5.7	11	6.6	6.5	14
Stones and Removed Materials	N	2030	%	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.4	1.6	1.1	0.73	0.93	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.012	< 0.010	< 0.010	< 0.010	< 0.010	
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	1.8	6.7	1.6	2.3	26	
Arsenic	M	2450	mg/kg	1.0	18	14	12	12	14	
Cadmium	M	2450	mg/kg	0.10	0.32	0.27	0.24	< 0.10	0.16	
Chromium	M	2450	mg/kg	1.0	24	21	18	15	17	
Copper	M	2450	mg/kg	0.50	22	29	230	18	25	
Mercury	M	2450	mg/kg	0.10	< 0.10	0.14	0.12	0.19	0.10	
Nickel	M	2450	mg/kg	0.50	19	17	16	14	16	
Lead	M	2450	mg/kg	0.50	46	41	30	21	25	
Selenium	M	2450	mg/kg	0.20	< 0.20	0.30	< 0.20	< 0.20	< 0.20	
Zinc	M	2450	mg/kg	0.50	420	180	160	52	65	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Organic Matter	M	2625	%	0.40	5.1	4.0	3.9	2.1	3.3	
Acenaphthene	M	2700	mg/kg	0.10	0.12	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthylene	M	2700	mg/kg	0.10	0.36	< 0.10	< 0.10	< 0.10	< 0.10	
Anthracene	M	2700	mg/kg	0.10	0.55	0.14	< 0.10	< 0.10	< 0.10	
Benzo[a]anthracene	M	2700	mg/kg	0.10	2.7	0.35	0.54	< 0.10	0.71	
Benzo[a]pyrene	M	2700	mg/kg	0.10	3.6	< 0.10	0.67	< 0.10	< 0.10	
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	4.8	< 0.10	0.85	< 0.10	< 0.10	
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	5.2	< 0.10	< 0.10	< 0.10	< 0.10	
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	2.0	< 0.10	0.53	< 0.10	< 0.10	
Chrysene	M	2700	mg/kg	0.10	2.9	0.62	0.63	< 0.10	0.31	
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	1.0	< 0.10	< 0.10	< 0.10	< 0.10	
Fluoranthene	M	2700	mg/kg	0.10	4.6	0.33	0.75	< 0.10	0.15	
Fluorene	M	2700	mg/kg	0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10	
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	3.2	< 0.10	< 0.10	< 0.10	< 0.10	
Naphthalene	M	2700	mg/kg	0.10	0.12	< 0.10	< 0.10	< 0.10	< 0.10	
Phenanthrene	M	2700	mg/kg	0.10	2.5	0.38	< 0.10	< 0.10	< 0.10	
Pyrene	M	2700	mg/kg	0.10	4.9	0.30	0.87	< 0.10	0.22	
Total Of 16 PAH's	M	2700	mg/kg	2.0	39	2.1	4.8	< 2.0	< 2.0	
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	
ACM Type	U	2192		N/A		-	-	-	-	-

Results - Soil

Project: SW/C15356B 58 Seas End Road, Moulton Seas End

Client: Ground Engineering Limited				**Chemtest Job No.:**	21-32513	21-32513	21-32513	21-32513	21-32513	21-32513
Quotation No.:				**Chemtest Sample ID.:**	1281918	1281919	1281920	1281921	1281922	1281923
Order No.: SW/C15356B				Client Sample Ref.:	D1	D1+ES1	D1+ES1	D1+ES1	D1+ES1	D1+ES1
				Sample Location:	HA1A	HA2	HA3	HA4	HA5	HA1B
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.02	0.30	0.20	0.10	0.10	0.20
				Date Sampled:	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021	16-Sep-2021
				Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
Total TPH >C6-C40	M	2670	mg/kg	10		< 10	< 10	< 10	< 10	< 10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key	
U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com