

Phase 2 Site Investigation Report Glenboig Farm Road Glenboig

**Client: CMM Architects** 

## Head Office

Innovation Centre, 1 Ainslie Road, Hillington Park, Glasgow G52 4RU

#### Northern Office

Algo Business Centre, Glenearn Road, Perth PH2 0NJ

#### Southern Office

Mintworks, 124 Highgate, Kendal , LA9 4HE

T: 0330 800 1060





Issue No.	Date	Status	Prepared by	Reviewed & Approved by
1	02/07/2020	Draft	Name and Qualification	Name and Qualification
			Mark P Kerr	Stuart Mitchell
			BSc (Hons)	CEng MICE AMIStructE, AMICES,
				MAPS
				Chartered Engineer
			Signature	Signature
			Moure P Kem	Sum

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	Executive Summary						
Site Address	Glenboig Farm Road, ML5 2RA						
Grid Reference	NS 722 688						
Site Area	0.05 hectares						
Current Site	The site is an undeveloped plot of land.						
Use							
Adjacent Site	The site is bounded on the north and west by farmland, on the east by a private						
Uses	domestic road and domestic housing and the south by a derelict commercial yard.						
	The site is gently sloping.						
Environmental	Geology						
Setting	Alluvial Till: Boulder Clay						
	Bedrock: Sandstone						
	Hydrogeology: The closest named water feature to the site is an unnamed burn						
	approximately 210m south-east, the next closest water feature is Garnqueen Loch						
	approximately 390m west.						
Coal Mining/	The Coal Authority CON29M Coal Mining Report records the site as having known						
Land Stability	or potential coal mining risks.						
Radon	The property is in a lower probability radon area (less than 1% of homes are						
	estimated to be at or above the action level). No radon protective measures are						
	necessary in the construction of new dwellings.						
Landfill Gas	Landmark Sitecheck Report did not registered landfill sites on site or within the						
	surrounding area. It is considered unlikely that these landfill locations will affect						
	ground gas on site, but it is a potential source.						
Intrusive Ground	Investigation						
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	basis we would recommend reinforced concrete strip foundation as the most
	suitable foundation solution.
Sulphate	DS-1 / ACEC-AC-1.
Assessment	
Concrete	It is recommended the foundation concrete be designed with sulphate resistant
	concrete when below ground level.
Asbestos	No evidence of asbestos was encountered on site and no traces of asbestos were
	found in the soil samples provided.
Developed Conc	eptual Site Model (CSM)
Human Health	The results of laboratory tests, together with consideration of the conceptual and
	exposure models for the proposed development, did not highlight any
	contaminants on site. Made ground and general waste from fly-tipping was
	encountered across the site. It is recommended the made ground and
	miscellaneous waste from fly-tipping is screened and only the inert material is kept
	on site, remaining waste should be cleared from site and taken to landfill.
Controlled	Soakaways would not be a viable drainage solution.
Water	
Ground Gas	N/A



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Phase 2 Site Investigation New Build Development AP827 Glenboig Farm Road

# **Appendices**

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# 1.0 Site Investigation

Ardmore Point Ltd was commissioned by CMM Architects to carry out a site investigation of an area of land in Glenboig, off Glenboig Farm Road for a proposed residential development project.

This investigation was undertaken in consideration of the Phase 1 Desk Study, to identify the prevailing ground conditions and to establish factors relevant to foundation design and highlight abnormalities in respect of engineering properties of the substrata.

This report is based upon facts established by observation, excavation, sampling and testing. It should be recognised that natural strata may vary considerably from point to point, and that man-made deposits may be subject to even greater random variation. Groundwater regime may be influenced by seasonal or other factors. While it is attempted in reporting to assess the likelihood and extent of such variations, conditions may nevertheless exist which remain undisclosed by the investigation.

This report has been prepared for CMM Architects and may not be relied upon by a third party for any purpose without the written consent of this practice.

# 2.0 The Site

# 2.1 Site location

The site is an undeveloped plot of land, located on Glenboig Farm Road, to the north of Glenboig town centre. The site may be located by National Grid reference NS 722 688 and is located approximately 4.00km north from the centre of Coatbridge. The nearest postcode to site is ML5 2RA.

The Site Location Plan and Proposed Site Plan is included in Appendix A and B.

# 2.2 Geology

The British Geological Survey (BGS) Geology of Britain Viewer has no records of the local surface geology.

The British Geological Survey (BGS) Geology of Britain Viewer Borehole Records indicated local geology of made ground upon sandstone, shale and fireclay.



# 3.0 Site Work

# 3.1 Fieldwork

Work on site comprised boreholes, in-situ testing, sampling and standpipe installation, and was carried out generally in accordance with BS 10175 and BS 5930. The work was carried out on the 11<sup>th</sup> June 2020. The positions of the exploratory hole positions are shown in the site plan in Appendix C.

Three window sample boreholes, designated BH01 to BH03, were sunk by cable percussion method. The depths of the boreholes, descriptions of the strata encountered, and comments on the groundwater conditions, are given in the borehole records in Appendix D. Representative disturbed and undisturbed samples were taken in the various strata at the depths shown in the records. Standard penetration tests, SPT, were made at regular intervals. The values of penetration resistance are given in the borehole records in Appendix D.

Note: Two boreholes designated BH02 and BH03 where terminated early due to obstruction, both boreholes were relocated and designated BH02A and BH03A.

Combined ground gas and groundwater monitoring standpipes were installed in 3 of the boreholes, BH01, BH02A and BH03. Details of the installations are given in the borehole records.

Soil samples destined for chemical analysis were collected in appropriate sampling containers. All samples were subsequently stored in cooled boxes prior to submission to analytical laboratory. The samples were collected using appropriate PPE and sampling equipment and a more detailed copy of REC Ltd sampling methodology, QA procedures and laboratory chain of custody forms can be provided upon request.

Ground surface levels and National Grid coordinates for these positions were not determined.

# 3.2 Summary of Site Work

The ground conditions encountered during the investigation were generally consistent across the site, all boreholes with the exclusion of borehole BH02A encountered similar made ground strata. BH02A encountered a natural firm boulder clay on to a sandstone gravel.

Groundwater was not encountered within any of the test holes on the site.

There was evidence of potentially contaminated materials, from fly-tipping across the site.

Exploratory Hole Location	Date	Туре	Method	Depth
BH01	11/06/2020	Window Sample	Cable Percussion	0.00 - 1.50
BH02	11/06/2020	Window Sample	Cable Percussion	0.00 - 1.30
BH02A	11/06/2020	Window Sample	Cable Percussion	0.00 - 3.30
BH03	11/06/2020	Window Sample	Cable Percussion	0.00 - 0.80
BH03A	11/06/2020	Window Sample	Cable Percussion	0.00 - 1.50

Table 1: Summary of Site Work

Table 2: Summary of Site Installation

Location Hole	Potential Source/ Rational	Туре	Maximum Depth (m, bgl)	Monitoring Wells Response Zone (m, bgl)
BH01	Baseline Conditions & Ground Gas		1.50	0.50 - 1.50



BH02	Baseline Conditions	Cable	1.30	N/A
BH02A	Baseline Conditions & Ground Gas	Percussion	3.30	1.00 - 2.00
BH03	Baseline Conditions	Borehole	0.80	N/A
BH03A	Baseline Conditions & Ground Gas		1.50	0.50 - 1.50

Soil samples destined for chemical analysis were collected in appropriate sampling containers. All samples were subsequently stored in cooled boxes prior to submission to analytical laboratory. The samples were collected using appropriate PPE and sampling equipment and a more detailed copy of REC Ltd sampling methodology, QA procedures and laboratory chain of custody forms can be provided upon request.

# 3.3 In-Situ Testing

# 3.3.1 Standard Penetration Test - Specification

In-Situ geotechnical testing as conducted on site using Standard Penetration Tests (SPT). In the window sampling boreholes SPT's were conducted at 1m intervals to the base of the borehole. Following SPT's were conducted at 1.00m.

# 3.3.2 Standard Penetration Test – Results

Table 3: Standard Penetration Test Results

Borehole No.	Start Depth	Strata Description	SPT 'N' Value	Consistency (Cohesive)
BH01	1.2	Made Ground	100	-
BH02	1.2	Made Ground	100	-
	1.2	Topsoil/ Clay	56	Very Stiff
BH02A	2	Clay	12	Firm
	3	Gravel	50	Very Dense
BH03A	1.2	Made Ground	46	-



# 4.0 Laboratory Testing

# 4.1 Environmental Testing

Samples of soil and groundwater were tested for a standard screening suite of potential contaminants. The nature of the analyses is detailed below:

Metals - arsenic, boron (water soluble), cadmium, chromium, copper, lead, Mercury, nickel, zinc

Inorganic – pH, total cyanide, organic matter, Sulphate Aqueous Extract as SO4

**Petroleum Hydrocarbons** - Aliphatic C5-C6, Aliphatic C6-C8, Aliphatic C8-C10, Aliphatic C10-C12, Aliphatic C12-C16, Aliphatic C16-C21, Aliphatic C21-C35, Aliphatic C5-C35, Aromatic C5-C7, Aromatic C7-C8, Aromatic C8-C10, Aromatic C10-C12, Aromatic C12-C16, Aromatic C16-C21, Aromatic C21-C35, Aromatic C5-C35, TPH Ali/Aro Total

**PAHs** – Naphthalene, Acenaphthylene, ,Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, PAH - USEPA 16, Total

#### Other - asbestos

The results are given in Appendix E.



# 5.0 Ground & Groundwater Conditions Encountered

# 5.1 Summary of Ground Conditions

The ground conditions were as expected geologically within the area. A summary of the excavated pits is tabled below:

## Table 4: Summary of Site Work

Strata	Typical Description	Depth to Top (m)	Depth to Base (m)	Maximum Strata
				Thickness (m)
Topsoil	Turf over topsoil	0.00	0.10 - 1.30	1.30
Made Ground	Brown sandy cobbly	0.00 -0.10	0.80 - 1.50	1.50
	gravel			
	Sandy gravelly	0.40	1.50	1.10
	backfill			
Alluvial Till	Sandy clay	1.30	1.80	0.50
	Sandy gravelly clay	1.80	3.00	1.20
Bedrock	Sandstone	3.00	Up to 3.30 proven	Up to 0.30 proven

The main elements of this succession are described in the following sections.

# 5.2 Topsoil

Topsoil was encountered in BH02, BH02A and BH03 described in each location as turf over topsoil.

# 5.3 Made Ground

Made ground was present in all boreholes excluding BH02A. The made ground mainly consisted of a sandy gravelly backfill with occasional cobbles to a maximum depth of 1.50m.

# 5.4 Alluvial Till

Alluvial Till was encountered in BH02A consisting of two stratas, a brown mottled grey slightly sandy clay and a reddish brown sandy gravelly clay to a maximum depth of 3.00m.

# 5.5 Bedrock

Possible bedrock was encountered in BH02A, consisting of a yellowish grey sandstone, recovered as a fine to coarse gravel, up to 0.30m of sandstone was proven.

# 5.6 Groundwater

All boreholes remained dry during excavation.



# 6.0 Environmental Risk Assessment

# 6.1 Contaminated Land

The statutory definition of contaminated land is given in the Environmental Protection Act 1990 and was introduced by the Environment Act 1995. It is land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances in, on, or under the land, that:

- significant harm is being caused or there is a significant possibility of such harm being caused; or
- significant pollution of water environment is bring caused, or there is a significant possibility of such pollution being caused.

## 6.2 Risk Assessment

The definition of contaminated land is based on the principle of risk assessment. Risk is defined as a combination of:

- the probability, or frequency of exposure to a substance with the potential to cause harm,
- the seriousness of the consequence.

# 6.3 Pollution Linkage

The basis of an environmental risk assessment involves identifying a 'source' of contamination, a 'pathway' along which the contamination may migrate and a 'receptor' at risk from the contamination.

Current legislation defines the various elements of the pollution linkage as:

- a contaminant is a substance which is in or under the ground and which has the potential to cause harm or to cause pollution of the water environment.
- a pathway is one or more routes through which a receptor is being exposed to, or affected by, a contaminant, or could be so affected.
- a receptor is either a living organism, an ecological system, a piece of land or property, or the water environment.

A pollutant linkage indicates that all three elements have been identified.

The hazard identification and hazard assessment have been based upon the historical study, and form the initial conceptual model outlined in Phase 1.

# 6.4 Risk Estimation – Humans

The risk assessment has been based upon the guidelines for residential development without homegrown produce. The exposure assumptions for the main receptor in this case is based on a female child being exposed to the contaminant(s) within garden areas and indoors. Should any more sensitive enduse be envisaged, the assessment should be revised accordingly.

The results of the soils analyses have been compared to the LQM/S4ULs, and the DEFRA C4SLs for lead, determined in accordance with current legislation and guidance. The comparison is tabulated below.



#### Table 5: Soil Contamination

Contaminant	LOD	Concentration	Guidance	Number of	Number of	Pass/
		Range (mg/kg)	Level (mg/kg)	Samples Tested	Exceedances	Fail
Metals						
Arsenic	0.2	2.6 to 7.1	37	6	0	Pass
Boron, Water Soluble	0.2	<0.2 to 0.8	290	6	0	Pass
Cadmium	0.1	0.1 to 0.5	11	6	0	Pass
Chromium	0.15	12 to 28	910	6	0	Pass
Copper	0.2	39 to 190	2400	6	0	Pass
Lead	0.3	29 to 180	200	6	0	Pass
Mercury	0.05	<0.05 to 0.16	1.2	6	0	Pass
Nickel	1	25 to 52	130	6	0	Pass
Zinc	1	81 to 240	3700	6	0	Pass
Inorganic		L				
pH		6.7 to 9.2	-	6	0	Pass
Cyanide, Total	0.1	<0.1 to 0.3	-	6	0	Pass
Organic matter	0.1	1.4 to 7.3	-	6	0	Pass
Sulphate Agueous	10		-	6		Pass
Extract as SO4		12 to 85		-	0	
Petroleum Hydrocarbon						
Aliphatic C5-C6	0.01	<0.01 to <0.01	160	6	0	Pass
Aliphatic C6-C8	0.01	<0.01 to <0.01	530	6	0	Pass
Aliphatic C8-C10	0.01	<0.01 to <0.01	150	6	0	Pass
Aliphatic C10-C12	1.5	<1.5 to <1.5	760	6	0	Pass
Aliphatic C12-C16	1.2	<1.2 to <1.2	-	6	0	Pass
Aliphatic C16-C21	1.5	<1.5 to <1.5	_	6	0	Pass
Aliphatic C21-C35	3.4	<3 4 to <3 4	1700	6	0	Pass
Aliphatic C5-C35	10	<10 to <10	-	6	0	Pass
Aromatic C5-C7	0.01	<0.01 to <0.01	_	6	0	Pass
Aromatic C7-C8	0.01	<0.01 to <0.01	-	6	0	Pass
Aromatic C8-C10	0.01	<0.01 to <0.01	150	6	0	Pass
Aromatic C10-C12	0.9	<0.9 to <0.9	760	6	0	Pass
Aromatic C12-C16	0.5	<0.5 to <0.5	-	6	0	Pass
Aromatic C16-C21	0.6	<0.6 to 1.3	_	6	0	Pass
Aromatic C21-C35	1.4	<1.4 to 30	1700	6	0	Pass
Aromatic C5-C35	10	<10 to 32	-	6	0	Pass
TPH Ali/Aro Total	10	<10 to 32	_	6	0	Pass
	10	101032		0	Ŭ	1 435
Nanhthalene	0.03	<0.03 to <0.03	13	6	0	Pass
Acenanbtbylene	0.03	<0.03 to <0.03	920	6	0	Pass
Acenanbthene	0.03	<0.03 to <0.03	1100	6	0	Pass
Fluorene	0.03	<0.03 to <0.03	860	6	0	Pass
Phenanthrene	0.03		890	6	0	Dace
Anthracene	0.03		11000	6	0	Dass
Fluoranthene	0.03		800	6	0	Dace
Dyropo	0.05		080	6	0	Pass
Benzo(a)anthracene	0.05		12	6	0	Pass
Chrycopo	0.05		13 27	6	0	Pass
Ronzo(h)fluoronthono	0.03		27	6	0	Pass
	0.03	<0.05 L0 0.04	5./	0	U U	PdSS



Benzo(k)fluoranthene	0.03	<0.03 to <0.03	100	6	0	Pass
Benzo(a)pyrene	0.03	<0.03 to 0.04	3	6	0	Pass
Indeno(1,2,3-c,d)pyrene	0.03	<0.03 to 0.04	41	6	0	Pass
Dibenzo(a,h)anthracene	0.03	<0.03 to <0.03	0.30	6	0	Pass
Benzo(g,h,i)perylene	0.03	<0.03 to 0.09	350	6	0	Pass
PAH - USEPA 16, Total	0.1	<0.10 to 0.29	-	6	0	Pass

Where the guideline value for any contaminant has not been exceeded, it may be removed from further consideration. It is concluded that in the absence of significant contamination, no remedial strategy is required.

From the soil analysis it has been found that no contamination or potential sources of contamination were encountered, all laboratory test results demonstrate values below SGV trigger values for residential development.

## 6.4.1 Sulphate Assessment

**Sulphate Assessment:** Data is based on BS 8500-1 & 2 and BRE Special Digest 1, which covers a range of chemical aggressiveness.

#### Design Sulphate Class: DS-1 / ACEC-AC-1.

#### 6.4.2 Asbestos Assessment

Table 6: Asbestos Contamination

Location	Depth (m)	Asbestos	Comment
BH01	0.50	None	None
BH01	1.00	None	None
BH02	0.50	None	None
BH02	1.00	None	None
BH03	0.50	None	None
BH3A	1.00	None	None

Where the guideline value for any contaminant has not been exceeded, it may be removed from further consideration. It is concluded that in the absence of significant contamination, no remedial strategy is required.

## 6.6 Risk Estimation – Phytotoxicity

The soil test results have been compared to BS 3882. No exceedances were found. It is concluded that in the absence of significant contamination, no remedial strategy is required.

## 6.6 Risk Estimation – Ground Gas

Combined ground gas and groundwater monitoring standpipes were installed in 3 of the boreholes, BH01, BH02A and BH03. Ground gas monitoring was conducted on 4 occasions following installation, no ground gas emissions exceeded nominal values and gas protection measures would not be required.

The results are shown in the Gas Spike results contained within Appendix F.



# 7.0 Geotechnical Assessment

# 7.1 Proposed Constructions

It is understood that the proposed development will be a residential multi-storey unit with associated access and parking. Details of the proposed loads to be imposed on foundations were not stated, it is presumed that finished site levels will not deviate significantly from the existing ground level.

# 7.2 Foundation Design

Information provided indicates that the site is to be developed for a new build residential property. It is presumed that future ground levels will be similar to those which currently exist, and we understand that the proposed FFL would typically be 200mm above existing ground level and that foundations will be placed at the shallowest convenient depth.

It is considered the proposed development should be built on the flat and level, lower section of the site. From a review of the proposed buildings proposed for the site these would typically generate line loads of approximately 60-70kN/m2.

The access ramp from the road into the site is predominantly composed of made ground, it is recommended the material is screened and the inert material should be placed in 250mm layers to rebuild against the house retaining wall. All screened material, i.e. Plastic, timber, metal waste etc, should be removed from site and taken to landfill.

From inspection of the ground conditions we would suggest a bearing capacity at depths of 1.00m into the boulder clay in the order of 80 to 100kN/m2 and on this basis we would recommend reinforced concrete strip foundation as the most suitable foundation solution.

# 7.3 Chemical Attack on Buried Concrete

Foundation concrete may therefore be designed with sulphate resistant concrete when below ground level.



# 8.0 Revised Conceptual Site Model

The results of laboratory tests, together with consideration of the conceptual and exposure models for the proposed development, did not highlight any contaminants on site, however made ground and general waste from fly-tipping was encountered across the site.

# 8.1 Remedial Strategy

It is recommended the made ground and miscellaneous waste from fly-tipping is screened and only the inert material is kept on site, remaining waste should be cleared from site and taken to landfill.

# 8.2 Management of Unidentified Sources of Contamination

There is the possibility that other sources of contamination may be present on the site, and which were not disclosed by the investigation. Should such contamination be identified or suspected during development or during any works on site, these should be dealt with accordingly.

- The removal from site and disposal to a suitably licensed tip of all material suspected of being contaminated.
- Short-term storage of the suspected material while undertaking verification testing for potential contamination. The storage area should be a contained area to ensure that contamination does not migrate and affect other areas of the site. Depending upon the amounts of material under consideration, this could be either a skip or a lined area.
- Having a suitably experienced environmental engineer either on-call or with a watching brief for the visual and olfactory assessment of the material, and sampling for verification purposes.

# 8.3 Consultation

During the development of the site, consultation may be required for a variety of reasons with a number of regulatory Authorities. The following provides an indication as to the most likely Authorities with which consultation may be required.

- Local Authority. There may be a planning condition regarding contamination and consultation will be required with a designated Contaminated Land Officer within the Environmental Health Department. The Local Authority is generally concerned with human health risks. Some Authorities now require 'Completion Certificates' to be signed off following remediation works.
- Scottish Environment Protection Agency. Where a site is within a groundwater protection zone or has been designated as a special site, the Scottish Environment Protection Agency is likely to be involved to ensure that the water environment is protected. This would appear to be an unlikely circumstance for this site.

Based on the results of any consultation, there may be specific remediation requirements imposed by one or more of the Authorities.

# 8.4 Risk Management During Site Work

For good practice, during ground works, some simple measures may have to be put in place to mitigate the risk of potential unidentified contamination affecting the site workers and the environment.

• Where appropriate, the provision of suitable PPE for workers who may be potentially impacted by working in areas of the contamination.

Phase 2 Site Investigation New Build Development AP827 Glenboig Farm Road



- Ensuring good hygiene is enforced on site and washing facilities are maintained on the site.
- Workers are discouraged from smoking, eating or drinking without washing their hands first.
- Dust monitoring, and if necessary, suppression measures should be put into practice where contamination is becoming airborne.
- Particular vigilance should apply in respect of the identification of any material suspected to comprise or include asbestos fibres, consultation being made if necessary, with an appropriately licenced asbestos removal specialist.



# 9.0 Conclusion

#### Foundations

From inspection of the ground conditions we would suggest a bearing capacity at depths from 1.00m into the boulder clay in the order of 80 to 100kN/m2 and on this basis we would recommend reinforced concrete strip foundation as the most suitable foundation solution.

#### Sulphate Assessment

Data is based on BS 8500-1 & 2 and BRE Special Digest 1, which covers a range of chemical aggressiveness.

Design Sulphate Class: DS-1 / ACEC-AC-1.

#### Concrete

It is recommended the foundation concrete be designed with sulphate resistant concrete when below ground level.

#### Contamination

The results of laboratory tests, together with consideration of the conceptual and exposure models for the proposed development, did not highlight any contaminants on site. Made ground and general waste from fly-tipping was encountered across the site. It is recommended the made ground and miscellaneous waste from fly-tipping is screened and only the inert material is kept on site, remaining waste should be cleared from site and taken to landfill.

## **Ground Gas**

No ground gas emissions exceeded nominal values and gas protection measures would not be required.



# 10.0 References

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CIRIA C665, 'Assessing Risks posed by Hazardous Ground Gases to Buildings', CIRIA 2007

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Appendix A

Site Location Plan



Local Plan extract

Aerial







Glenboig Farm Road

Important The contractor will be held to have examined the site and checked all dimensions and levels before commencing construction work. Any discrepancies must be brought to the attention of the architect. No dimensions should be scaled from this drawing.









FENCE TYPE

rough sawn slats fixed to rails all timber treated and light stained . with posts at max 1.8m c/c.



materials specification

walls white Skye Marble cementatious render

parking areas etc. red/purple paviors and grey concrete slabs





Client Janita Lovell Project Title 2 detached house 39 Glenboig Farm Road Drawing Title Site Plan Images Scale 1:100 Date 20.08.19 Checked Drawn cmm Architects 2nd Floor 202 Bath Street Glasgow G2 4HW Tel: 0141 204 4498 web site: www.cmmarchitects.co.uk e-mail: campbell@cmmarchitects.co.uk

Project Ref:	Drawing No:	Revision:	
12-006	(P2)A001		



Appendix B Proposed Site Plan







Important The contractor will be held to have examined the site and checked all dimensions and levels before commencing construction work. Any discrepancies must be brought to the attention of the architect. No dimensions should be scaled from this drawing. Date: Revision:



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Front Elevation 1 : 100



Front Elevation section B - B 1 : 100

E

Rear Elevation 1 : 100





North Elevation 1 : 100





South Elevation 1 : 100

Section A - A 1 : 100









Appendix C Exploratory Hole Location Plan





Appendix D

Borehole Logs

Ŵ	Pho Drilli	oenix ng Ltd			P	ercı	ıssi	on l	Drill	ing L	_og			
Proje	ct Name	: Glenboi	g Farm		Client: A	rdmore Po	oint			Date: 11/0	6/2020			
Locat	ion: Gler	nboig			Contract	or:								
Proje	ct No. : 3	3505			Crew Na	ime: CM				Drilling Eq	uipment: Te	errier		
Boi	rehole N BH01	umber	Hole	e Type NS		Level		Logged CG	ΙВу	So 1	cale :50	Page	e Numbe eet 1 of 1	er I
Wall	Water	Sai	mple and I	n Situ Testin	g	Depth	Level	Logond		Strati		tion		-
vveii	Strikes	Depth (	(m) Type	Result	s	(m)	(m)	Legend		Stratt	um Descrip			
		0.50 0.50 1.00 1.20 1.20 - 1 1.20	.50 B ES SPT U SPT	Ublow=1 8 (3,3/8 for 2	00 25mm)	1.50			MADE ( cobbly ( ash not various	GROUND: Ve gravel with cc ed. Gravel is lithologies.	Possible bed Possible bed Borehole at 1	eyish brown ers and trace to coarse of <u>Irock or boul</u> .500m	sandy so of f	
														- 10 —
<b></b>	Hole Diam	eter	Casing	Diameter		<b>B</b>	Chiselling			D. # =	Inclination	and Orientation	1	
Rema # Desc Inspec SPT re U sam	Base [ arks cription ba ction pit du efusal at 1 ple at 1.2	Diameter ased on dr ug to 1.20r 1.20m. 20m recove	illers records	Diameter S. Scanned.	Depth Top	o Depth B	ase Dura	ation	Tool	Depth Top	Depth Base	Inclination	Orienta	ation

Phoenix	
Drilling Ltd	

# Percussion Drilling Log

		5												
Projec	oject Name: Glenboig Farm Client: Ardmore Point Date: 11/06/2020													
Locatio	on: Gler	nboig			Contrac	tor:								
Projec	t No. : 3	505			Crew N	ame: CM				Drilling Eq	uipment: Te	errier		
Bore	ehole N	umber	Hole	е Туре		Level		Logged	Ву	S	cale	Pag	e Numbe	er
	BH02		V	VS				CG		1	:50	She	eet 1 of 1	
Well	Water Strikes	Sample	and I	n Situ Testir	ng to	Depth (m)	Level (m)	Legend		Strat	um Descrip	otion		
		Depth (m)	Туре	Resul	ls	0.10	( )		# Turf o	ver TOPSOI	L.			
									MADE ( gravel v	GROUND: G vith common	reyish browi cinders and	n sandy cobl traces of as	oly sh	
		0.50 0.50	B ES						noted. ( lithologi	Gravel is ang ies.	ular fine to c	oarse of var	ious	
		1.00	B											1
		1.00	ES	0 (E0 for 7En	m/0 for	1 20								' -
		1.20	501	0 (50 10r 7 5ri 0mm)	) )	1.30			∖#OBST	RUCTION: I End of	Possible bed Borehole at 1	rock or boul .300m	der/	-
														2 -
														-
														3 —
														-
														-
														4 —
														-
														-
														5 _
														-
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														7 _
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														8 —
														-
														-
														9 —
														-
										1				10 —
Depth E	Hole Diame Base E	eter Diameter Dep	Casing th Base	Diameter Diameter	Depth To	op Depth Ba	Chiselling ase Dura	tion	Tool	Depth Top	Inclination Depth Base	and Orientation	n Orienta	ition
Rema	rks												Sal	
# Desci Inspect SPT ref	ion pit du fusal at 1	ug to 1.20m and .20m.	d CAT s	canned.									<b>W</b>	



# Percussion Drilling Log

		<b>..</b>								U	U				
Projec	t Name:	Glenboig Fa	arm		Client: A	Ardmore Po	pint			Date: 11/0	6/2020				
Locati	on: Gler	nboig			Contrac	ctor:									
Projec	ct No. : 3	505			Crew N	ame: CM				Drilling Ec	uipment: T	errier			
Bor	ehole N	umber	Hole	е Туре		Level		Logged	Ву	S	cale		Page	e Numb	ber
,	BH02/	<u>م</u>	V	VS				CG			1:50		She	et 1 of	1
Well	Water Strikes	Sampi	e and I	n Situ Testir	ng to	Depth (m)	Level (m)	Legend		Strat	tum Descrij	otion			
	Water Strikes	Sampi Depth (m) 1.20 - 2.00 2.00 2.20 - 3.00 3.00 3.00	U SPT SPT U SPT	N=12 (3,2/3 Ublow= 50 (10,15/ 150mn	19 ts 556 3,3,3,3) 100 50 for n)	Depth (m) 1.30 1.80 3.00 3.30	Level (m)	Legend	# Turf o Brownis is fine to Firm rec sub-ang various	Strat ver TOPSO sh mottled g o coarse. ddish brown gular to sub- lithologies in ellowish grey one (possible fine to coars End of	tum Descrij IL. rey slightly s sandy grave rounded fine ncluding san fine to coar. e rockhead) i se GRAVEL Borehole at 3	andy CL ly CLAY to coars dstone. se graine recovere 3.300m	AY. S Grantse of	Sand vel is an	
	Hole Diar	ator	Casia	Diamotor	1		Chicollin				Inclinet	and Orie	1-1-1		10 -
Depth I	Base E	Diameter De	casing pth Base	Diameter	Depth Te	op Depth Ba	ase Dura	ation	Tool	Depth Top	Depth Base	Inclina	ition	Orien	itation
Rema	arks				1	1		I		1	1	-	, Y	bri	14
# Desc Inspect SPT re	tion pit du fusal at 3	ug to 1.20m ar 8.00m.	nd CAT s	s. canned.											Land

Ŵ	Pho Drilli	oenix ng Ltd	Percussion Drilling Log											
Projec	t Name	: Glenboig F	arm		Client: A	Ardmore Po	oint			Date: 11/0	6/2020			
Locati	on: Gler	nboig			Contrac	tor:								
Projec	:t No. : 3	505			Crew N	ame: CM				Drilling Eq	uipment: Te	errier		
Bor	ehole N BH03	umber	Hole V	: Type VS		Level		Logged CG	I Ву	So So	cale :50	Page	e Number et 1 of 1	
Well	Water	Samp	le and Ir	n Situ Testin	g	Depth	Level	Legend		Strat	um Descrip	tion		
		Depth (m) 0.50 0.50	Type B ES	Result	S	0.10	(11)		# Turf o MADE ( gravel v noted. ( lithologi	ver TOPSOI GROUND: G vith common Gravel is ang es.	 reyish brown cinders and ular fine to c	sandy cobb traces of as oarse of vari	oly h ous	
						0.80			¥ OBST	RUCTION: I End of I	Possible bed Borehole at 0.	rock or bould 800m	der.	1
														2
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	Hole Diam	eter	Casing	Diameter			Chiselling				Inclination	and Orientation	10	U
Depth	Base [	Diameter De	epth Base	Diameter	Depth To	p Depth Ba	ise Dura	tion	Tool	Depth Top	Depth Base	Inclination	Orientatio	'n

#### Remarks

# Description based on drillers records. Inspection pit dug to 0.80m and CAT scanned.



10 -

	Pho Drilli	oenix ng Ltd				Ρ	ercu	JS	si	on [	Drill	ing L	_og		
Project	t Name	: Glenboi	ig Far	m		Client: /	Ardmore P	oint				Date: 11/06	6/2020		
Locatio	on: Glei	nboig				Contrac	ctor:								
Project	t No. : 3	3505				Crew N	ame: CM					Drilling Equ	uipment: Te	errier	
Bore	ehole N	umber ₄		Hole	e Type NS		Level			Logged	Ву	So	cale ·50	Page	e Number
	Water	Sa	mple	and I	n Situ Testir	ng	Depth	Le	vel						
Well	Strikes	Depth	(m)	Туре	Resul	ts	(m)	(r	n)	Legend		Stratu	um Descrip	otion	
		1.00 1.00 1.20 1.20 - 1	) ) .50	B T SPT U	Ublow=	100	0.40				MADE cobbly ash not various MADE backfill angular predom	GROUND: Gi gravel with cc ed. Gravel is lithologies. GROUND: Gi of crushed m fine to coars inantly muds	reyish brown ommon cind angular fine reyish black udstone. Gr e of various tone.	n clayey sand ers and trace to coarse of sandy grave ravel is sub- lithologies	dy es of f elly 1
•		1.20	)	SPT	N=46 (3,3/12	,4,12,18)	1.50				V # OBS1	RUCTION: F End of E	Possible bed Borehole at 1	Irock or bould .500m	<u>der.</u> /2
															3
															4
															5
															6
															7
															8
															9
															10
	Hole Diam	eter		Casing	Diameter			Chis	elling				Inclination	and Orientation	
Rema	rintion by	Diameter	Depti	h Base	Diameter	Depth To	op   Depth B	ase	Dura	tion	Tool	Depth Top	Depth Base		Orientation

Inspection pit dug to 1.20m and CAT scanned. No recovery of U sample at 1.20m.



10 -



Appendix E

# Dets Laboratory Test Results



#### Certificate Number 20-10698

Client Ardmore Point Innovation Centre 1 Ainslie Road Hillington Park Glasgow G52 4RU

- *Our Reference* 20-10698
- Client Reference 3505
  - Order No (not supplied)
  - Contract Title Glenboig Farm Road
  - Description 6 Soil samples.
  - Date Received 18-Jun-20
  - Date Started 18-Jun-20
- Date Completed 01-Jul-20
- Test Procedures Identified by prefix DETSn (details on request).
  - *Notes* 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.

Approved By

Adam Fenwick Contracts Manager



Derwentside Environmental Testing Services Limited Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk 01-Jul-20



# Summary of Chemical Analysis Soil Samples

*Our Ref* 20-10698 *Client Ref* 3505 *Contract Title* Glenboig Farm Road

			Lab No	1685441	1685442	1685443	1685444	1685445	1685446
		Sa	ample ID	BH1	BH1	BH2	BH2	BH3	BH3A
			Depth	0.50	1.00	0.50	1.00	0.50	1.00
			Other ID						
		Sam	ple Type	ES	ES	ES	ES	ES	Т
		Sampl	ing Date	n/s	n/s	n/s	n/s	n/s	n/s
		Sampl	ing Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	Method	LOD	Units						
Metals	1	,							
Arsenic	DETSC 2301#	0.2	mg/kg	4.8	2.7	3.3	2.6	7.1	4.1
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.6	< 0.2	0.2	< 0.2	0.8	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.4	0.4	0.5	0.4	0.1
Chromium	DETSC 2301#	0.15	mg/kg	13	23	28	21	28	12
Copper	DETSC 2301#	0.2	mg/kg	47	85	78	93	190	39
Lead	DETSC 2301#	0.3	mg/kg	180	/6	88	29	130	140
Mercury	DETSC 2325#	0.05	mg/kg	0.16	< 0.05	0.11	< 0.05	0.13	0.05
Nickel	DETSC 2301#	1	mg/kg	33	33	35	44	52	25
	DETSC 2301#	1	mg/кg	120	160	160	160	240	81
		I I		0.2	0.2	0.0	0.2	67	0.2
pri Granida, Tatal	DETSC 2008#	0.1	μπ 	0.2	0.2	8.0	ð.3	0.7	9.2
Cyanide, Total	DETSC 2130#	0.1	тіg/кg	0.2	0.2	0.3	< 0.1	0.2	0.2
Sulphoto Aqueous Extract as SO4	DETSC 2002#	0.1	% mg/l	4.8 95	1.4	2.0	2.1	7.3	4.9
Botroloum Hydrosorhons	DE13C 2076#	10	IIIg/I	65	12	15	12	20	07
Aliphatic CE C6	DETCC 2221*	0.01	ma/ka	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C5-C0	DETSC 2221*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1 5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.3	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.5
Aliphatic C16-C21	DETSC 3072#	1.2	mg/kg	< 1.5	< 1.2	< 1.2	< 1.2	< 1.2	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	1.3	0.9	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	30	24	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	32	26	< 10	< 10	< 10
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg	< 10	32	26	< 10	< 10	< 10
PAHs	1			I	I		1		
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
	1		5, 5	-			-	-	-



# Summary of Chemical Analysis Soil Samples

*Our Ref* 20-10698 *Client Ref* 3505 *Contract Title* Glenboig Farm Road

			Lab No	1685441	1685442	1685443	1685444	1685445	1685446
		Sa	ample ID	BH1	BH1	BH2	BH2	BH3	BH3A
			Depth	0.50	1.00	0.50	1.00	0.50	1.00
		(	Other ID						
		Sam	ple Type	ES	ES	ES	ES	ES	Т
		Sampl	ing Date	n/s	n/s	n/s	n/s	n/s	n/s
		Sampli	ing Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	Method	LOD	Units						
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03	< 0.03	0.05
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03	< 0.03	0.05
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.09	0.05	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	0.29	< 0.10	< 0.10	0.16

# *i* DETS

# Summary of Asbestos Analysis Soil Samples

Our Ref 20-10698 Client Ref 3505 Contract Title Glenboig Farm Road

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1685441	BH1 0.50	SOIL	NAD	none	D Wilkinson
1685442	BH1 1.00	SOIL	NAD	none	D Wilkinson
1685443	ВН2 0.50	SOIL	NAD	none	D Wilkinson
1685444	BH2 1.00	SOIL	NAD	none	D Wilkinson
1685445	ВНЗ 0.50	SOIL	NAD	none	D Wilkinson
1685446	BH3A 1.00	SOIL	NAD	none	D Wilkinson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: \* not included in laboratory scope of accreditation.



# Information in Support of the Analytical Results

Our Ref 20-10698 Client Ref 3505 Contract Glenboig Farm Road

#### **Containers Received & Deviating Samples**

		Date			Inappropriate container for
Lab No	Sample ID	Sampled	<b>Containers Received</b>	Holding time exceeded for tests	tests
1685441	BH1 0.50 SOIL		GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days), Aliphatics/Aromatics (14 days), Boron (365 days), BTEX (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Naphthalene (14 days), Organic Matter (Manual) (28 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days)	
1685442	BH1 1.00 SOIL		GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days), Aliphatics/Aromatics (14 days), Boron (365 days), BTEX (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Naphthalene (14 days), Organic Matter (Manual) (28 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days)	
1685443	BH2 0.50 SOIL		GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days), Aliphatics/Aromatics (14 days), Boron (365 days), BTEX (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Naphthalene (14 days), Organic Matter (Manual) (28 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days)	
1685444	BH2 1.00 SOIL		GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days), Aliphatics/Aromatics (14 days), Boron (365 days), BTEX (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Naphthalene (14 days), Organic Matter (Manual) (28 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days)	
1685445	BH3 0.50 SOIL		GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days), Aliphatics/Aromatics (14 days), Boron (365 days), BTEX (14 days), Mercury (28 days), ICP WS Boron (182 days), Metals ICP (182 days), Metals ICP Prep (182 days), Naphthalene (14 days), Organic Matter (Manual) (28 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days)	



# Information in Support of the Analytical Results

Our Ref 20-10698 Client Ref 3505 Contract Glenboig Farm Road

contract	elenbelg i anni head		
1685446	BH3A 1.00 SOIL	GJ 250ml, PT 1L	Sample date not supplied, Anions 2:1 (30 days),
			Aliphatics/Aromatics (14 days), Boron (365 days),
			BTEX (14 days), Mercury (28 days), ICP WS Boron
			(182 days), Metals ICP (182 days), Metals ICP Prep
			(182 days), Naphthalene (14 days), Organic Matter
			(Manual) (28 days), PAH MS (14 days), pH +
			Conductivity (7 days), Cyanide/Mono pHoh (14 days)

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

#### **Soil Analysis Notes**

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377. Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis. The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

#### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



Appendix F



Client:	CMM Architects
Job Number:	AP827
Job Name:	39 Glenboig Farm Road
Monitored by:	S Mitchell
Address:	39 Glenboig Farm Road
Date:	11/06/2020

	O <sub>2</sub> % v/v	20.6	CO <sub>2</sub> % v/v	0	CH₄% v/v	0	N <sub>2</sub> % v/v	0.0			
	Weather C	onditions:		Dry , sunny							
Background Readings:	Ground Co	nditions (dry/wet etc):		Dry , sunny							
	Atmospher	ric Pressure mb (start):		1010							
	Atmospher	ric Pressure mb (finish):		1010							

Date (dd/mm/yy)	Hole No:	Time	0 <sub>2</sub> % v/v	CO <sub>2</sub> % v/v	CH <sub>4</sub> % v/v	H <sub>2</sub> S ppm	CO ppm	N <sub>2</sub> % v/v	LEL	dP	Flow l/h	Depth of Well	GWL
		(nn:mm)	Lowest	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	mBGL	mBGL
11/06/2020	BH01		20.4	20.5	0	0	0	0					
	BH02A		20.4	20.5	0	0	0	0					
	BH03		20.5	20.6	0	0	0	0					



Client:	CMM Architects
Job Number:	AP827
Job Name:	39 Glenboig Farm Road
Monitored by:	S Mitchell
Address:	39 Glenboig Farm Road
Date:	18/06/2020

	0 <sub>2</sub> % v/v	20.6	CO <sub>2</sub> % v/v	0	CH₄% v/v	0	N <sub>2</sub> % v/v	0.0			
	Weather C	onditions:		Dry , sunny							
Background Readings:	Ground Co	onditions (dry/wet etc):		Dry , sunny							
	Atmospher	ric Pressure mb (start):		1010							
	Atmospher	ric Pressure mb (finish):		1010							

Date (dd/mm/yy)	Hole No:	Time	O <sub>2</sub> % v/v	CO <sub>2</sub> % v/v	CH <sub>4</sub> % v/v	H <sub>2</sub> S ppm	CO ppm	N <sub>2</sub> % v/v	LEL	dP	Flow l/h	Depth of Well	GWL
		(nn:mm)	Lowest	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	mBGL	mBGL
18/06/2020	BH01		20.4	20.5	0	0	0	0					
	BH02A		20.4	20.5	0	0	0	0					
	BH03		20.5	20.6	0	0	0	0					



Client:	CMM Architects
Job Number:	AP827
Job Name:	39 Glenboig Farm Road
Monitored by:	S Mitchell
Address:	39 Glenboig Farm Road
Date:	25/06/2020

	0 <sub>2</sub> % v/v	20.6	CO <sub>2</sub> % v/v	0	CH₄% v/v	0	N <sub>2</sub> % v/v	0.0			
	Weather C	onditions:		Dry , sunny							
Background Readings:	Ground Co	onditions (dry/wet etc):		Dry , sunny							
	Atmospher	ric Pressure mb (start):		1010							
	Atmospher	ric Pressure mb (finish):		1010							

Date (dd/mm/yy)	Hole No:	Time	O <sub>2</sub> % v/v	CO <sub>2</sub> % v/v	CH <sub>4</sub> % v/v	H <sub>2</sub> S ppm	CO ppm	N <sub>2</sub> % v/v	LEL	dP	Flow l/h	Depth of Well	GWL
		(nn:mm)	Lowest	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	mBGL	mBGL
25/06/2020	BH01		20.4	20.5	0	0	0	0					
	BH02A		20.4	20.5	0	0	0	0					
	BH03		20.5	20.6	0	0	0	0					



Client:	CMM Architects
Job Number:	AP827
Job Name:	39 Glenboig Farm Road
Monitored by:	S Mitchell
Address:	39 Glenboig Farm Road
Date:	01/07/2020

	O <sub>2</sub> % v/v	20.8	CO <sub>2</sub> % v/v	0	CH₄% v/v	0	N <sub>2</sub> % v/v	0.0				
	Weather C	onditions:		Wet								
Background Readings:	Ground Co	nditions (dry/wet etc):		Wet								
	Atmospher	ric Pressure mb (start):		990								
	Atmospher	ric Pressure mb (finish):		990								

Date (dd/mm/yy)	Hole No:	Time	O <sub>2</sub> % v/v	CO <sub>2</sub> % v/v	CH <sub>4</sub> % v/v	H <sub>2</sub> S ppm	CO ppm	N <sub>2</sub> % v/v	LEL	dP	Flow l/h	Depth of Well	GWL
		(nn:mm)	Lowest	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	mBGL	mBGL
01/07/2020	BH01		20.6	20.7	0	0	0	0					
	BH02A		20.6	20.8	0	0	0	0					
	BH03		20.6	20.6	0	0	0	0					