REMEDIATION STRATEGY & VERIFICATION PLAN

of a site at

27 MARESFIELD GARDENS, HAMPSTEAD

for

MR RON GOLAN

Contaminated Land Solutions

t 020 8291 1354 e ask@gosolve.co.uk
4 De Frene Road, London, SE26 4AB

Project No 2166

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Issued: 18 October 2021

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Document Control		
Revision	**Issue date**	**Reason for Revision**
Draft		
Original	18/10/2021	
A		
B		
C		
D		

CONTENTS

1 EXECUTIVE SUMMARY

The site is residential property with a private garden.

The proposed site usage remains as residential with private gardens.

Based on information from the previous reports the remedial actions required comprise:

Removal from site of made ground to a depth of 600mm below finished level or to natural stratum in the impacted area, as shown on the remediation plan in appendix B.

Prior to the removal of any spoil, the WAC testing results should be agreed with the facility to which the spoil is being transported, and if any additional testing is required, this should be completed. It is critical that the WAC results are representative of the material to be disposed of and therefore care must be taken to ensure that different materials are not mixed.

Records will need to be retained and collated and a verification report prepared on completion of the remediation works.

It is considered that provided the recommendations of this report are implemented that the risk to sensitive receptors will be reduced to an acceptable level for the proposed development.

Risk Summary

Very Low	Low	Moderate / Low	Moderate	High

		Receptors					
		Site Users	Ground Workers	Neighbours	Proposed Building	Aquifer	Watercourse
Sources	Lead (On-Site)						

2 BRIEF

Mr Ron Golan requested GO Contaminated Land Solutions to develop a remediation strategy for a site at 27 Maresfield Gardens, Hampstead.

This report should be read in conjunction with the following GO Contaminated Land Solutions Reports:

- 2166-ST, issued 12 October 2021,

3 PRINCIPLES OF REMEDIATION

The principles of the strategy are to:

- Demonstrate that the level of contamination does not represent a significant risk to any sensitive receptors.
- Demonstrate that the made ground from impacted area has been removed to at least 600mm or to natural ground.
- Provide a barrier of 600mm of clean soil to remove the pathway between any residual contamination and site users.

4 PREVIOUS CONTAMINATION TESTING

In the soil testing investigation one of the samples exceeded the screening values for lead. A further six samples were taken in close proximity to the original exceedance, in two concentric circles of 1m and 2m radius to determine whether the lead exceedance is a hotspot or more widespread. The test results showed no exceedances for lead in the additional samples; therefore the exceedance is considered to be restricted to within 1m radius from BH2.

There is a potential risk to sensitive receptors and appropriate remediation is required.

Based on the results, the lead hotspot exceedance is considered to be restricted to within 1m radius from BH2, and therefore remediation in the form of removal of 600mm of soil in a radius of 1m from the original hotspot is required.

The laboratory test results are attached for your reference in appendix D

5 PROPOSED DEVELOPMENT

The proposed development comprises a single storey extension. Access to the property is gained via a dedicated entrance from Maresfield Gardens.

6 REVISED CONCEPTUAL MODEL

The legislative framework for the regulation of contaminated land is embodied in Part IIA of the Environmental Protection Act 1990, implemented in the Contaminated Land (England) Regulations 2000. This legislation allows for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment. The approach adopted by UK contaminated land policy is that of "suitability for use" which implies that the land should be suitable for its current use and made suitable for any proposed future use.

In this revised contamination assessment, the site has been modelled using the Source-Pathway-Receptor approach to produce a site specific conceptual model.

Source - substances or potential contaminants which may cause harm

Pathway - a linkage or route between a source and receptor

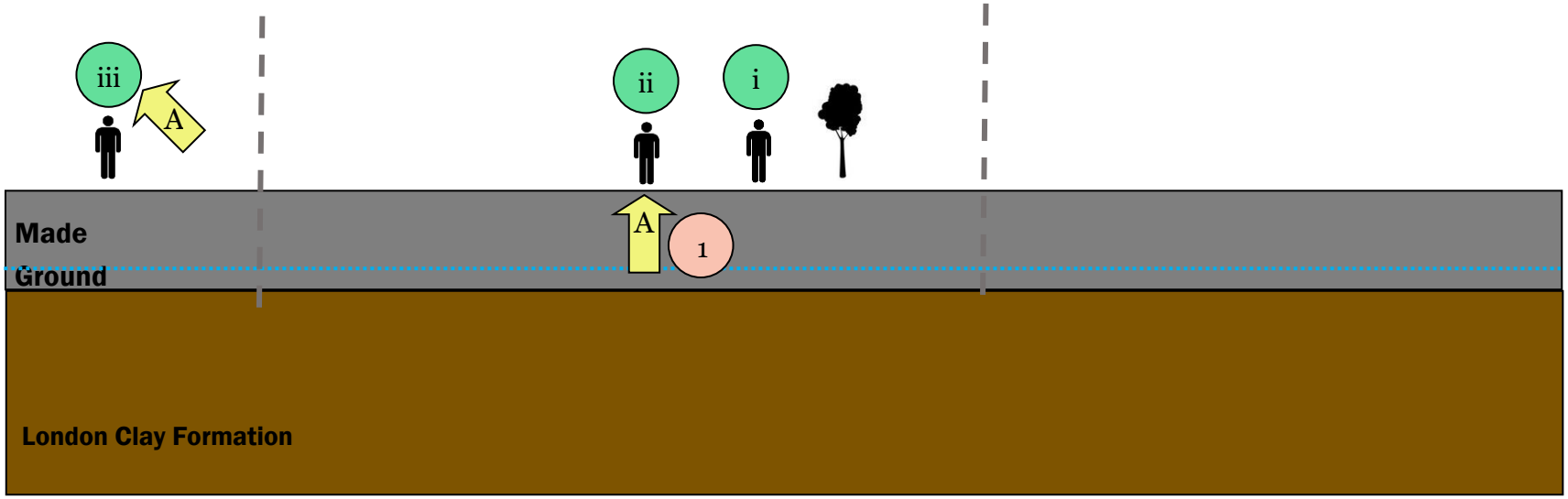
Receptor - humans, plant life, groundwater etc., which could be harmed by a contaminant

Geological records indicate that the site is not underlain by an aquifer in the bedrock or superficial stratum and therefore there is not considered to be a significant potential for contaminants to be transported either to or from site in the groundwater.

From the information available at present a conceptual model has been considered.

		Inhalation of contaminated vapour	Inhalation of contaminated dust	Direct Soil Ingestion	Direct dermal contact	Inhalation of asbestos	Drinking contaminated water supply	Surface water run-off	Surface water percolation to groundwater	Migration via groundwater	Comments on discounted pathways	
Receptors	Site Users	N	Y	Y	Y	N	N					No asbestos detected No potential vapours detected
	Ground Workers	N	Y	Y	Y	N						
	Neighbours	N	Y			N		N		N	No likelihood of occurrence for surface water run-off & groundwater migration	
	Proposed Building											
	Watercourse							N		N	No nearby watercourse	
	Aquifer								N		No aquifer in the bedrock or superficial stratum	

Schematic Conceptual Model



Sources	Pathways	Receptors
1 Made Ground (Lead) (On Site)	A Inhalation, ingestion, dermal contact	i Site Users ii Ground Workers iii Neighbours

7 RISK ASSESSMENT

The level of information provided by the previous reports, together with the other information within the report is considered suitable to provide the data for a satisfactory risk assessment for the site. While there will always be uncertainties due to known or unknown gaps in information it is considered that sufficient information is available to reduce those uncertainties to within acceptable limits for the nature of the site under review.

An asbestos survey of existing structures and infrastructure (as defined under Section 5(a) of the Control of Asbestos Regulations 2012) was beyond the brief of this report. The risk assessment has been undertaken on the basis that should asbestos be identified within buildings or infrastructure, these materials will be removed appropriately by licensed contractors and asbestos materials disposed of in accordance with legal requirements prior to demolition or other works in order to avoid contaminating soils at the site.

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Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Made Ground (On Site)	Lead	Site Users	Dermal contact	Medium	Low likelihood	Moderate/Low risk	Remediation of impacted area
			Soil Ingestion and Home Produce Consumption	Medium	Low likelihood	Moderate/Low risk	
			Inhalation of contaminated dust	Medium	Unlikely	Low risk	
Made Ground (On Site)	Lead	Ground Workers	Dermal contact	Medium	Low likelihood	Moderate/Low risk	Information to be contained in site Health & Safety Plan and File. Use of appropriate PPE and normal good hygiene measures. Appropriate dust control measures during construction.
			Soil Ingestion	Medium	Low likelihood	Moderate/Low risk	
			Inhalation of contaminated dust	Medium	Unlikely	Low risk	

Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Made Ground (On Site)	Lead	Neighbours	Inhalation of contaminated dust (during construction)	Medium	Unlikely	Low risk	Appropriate dust control measures during construction.
			Inhalation of contaminated dust (after construction)	Medium	Unlikely	Low risk	No action required, however remediation of the impacted area has been recommended

Any visual or olfactory evidence of contamination noted during works should be investigated by a suitably qualified person and their recommendations implemented.

8 SITE WORKS

8.1 Excavation Arisings

Spoil removed from the site should be taken to an appropriate land fill facility.

If any potentially contaminated spoil is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported. It is critical that the WAC results are representative of the material to be disposed of and therefore care must be taken to ensure that different materials are not mixed. Guidance can be obtained from Environment Agency document *Waste Sampling and Testing for Disposal to Landfill*.

8.2 Impacted Area of Soft Landscaping

In terms of human health for residents provision of a simple cover system comprising a layer of clean topsoil in soft landscaped areas should be sufficient to provide a reduction of the hazard to human health and to provide a suitable medium for plant growth.

Removal from site of made ground to a depth of 600mm below finished level or to natural stratum in the impacted area, as shown on the remediation plan in appendix B.

For the impacted area a barrier should be placed between site users and any made ground, in the form of 600mm of clean soil.

Clean soil free from invasive plants and complying with the relevant criteria, refer to appendix E, shall be used to replace excavated material and bring the soft landscaping up to finished level. Assessment levels used should be for residential with plant uptake.

Care should be taken when importing soils and aggregates as asbestos is a common contaminant, even in certified materials.

8.3 Watching Brief

Soil contamination sampling and testing was undertaken across the site, sufficient to ensure an acceptable level of certainty of the nature of the made ground.

A watching brief is to be maintained by a suitably experience person during ground works with instructions to advise GO Contaminated Land Solutions Ltd should any made ground appear to vary significantly from the soil sampled and tested.

If any potential contamination is identified works must be stopped and GO Contaminated Land Solutions Ltd advised. Works must not recommence until further investigation has been completed and if required a revised remediation strategy has been produced to remediate the impacted area.

9 VERIFICATION PLAN

In order to demonstrate that the made ground within the soft landscape area has been removed to a depth of 600mm or to natural strata, photographs will be taken of the impacted area following removal of made ground. A plan showing the locations of the photographs will be prepared.

Test certification for any proposed fill, demonstrating compliance with the requirements of section 8.2, is to be obtained prior to importation, the list of determinands is provided in appendix D. Documentation such as purchase records to confirm the volume of imported material is also to be provided.

After placing of the topsoil verification samples will be taken and tested. The clean fill for the impacted areas should comply with the requirements set out in appendix E. Verification samples will be taken in accordance with the plan in appendix C.

The verification pit will be excavated to a minimum depth of 600mm to confirm the thickness of the capping layer.

An indicative plan of the proposed sample location and verification pit is contained in appendix C. The actual locations will be determined during the verification visit.

10 DUTY OF CARE DOCUMENTATION

A full record of “Duty of Care” documentation must be retained and a copy provided to GO Contaminated Land Solutions. This will include Waste Transfer Notes (WTN) and for hazardous waste, a Consignment Note, also tickets from the landfill confirming receipt at their

facility.

Documentation must be provided to demonstrate compliance of imported fill with the criteria in appendix E.

11 CONCLUSIONS

11.1 In the soil testing investigation one of the samples exceeded the screening values for lead. A further six samples were taken in close proximity to the original exceedance, in two concentric circles of 1m and 2m radius to determine whether the lead exceedance is a hotspot or more widespread. The test results showed no exceedances for lead in the additional samples; therefore the exceedance is considered to be restricted to within 1m radius from BH2. A circular area with 1m radius and 600mm deep will be remediated and then filled with clean fill.

11.2 If any potentially contaminated material is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported.

11.3 It is recommended that appropriate dust control measures are implemented during construction. To assist in establishing what would be appropriate reference should be made to the Institute of Air Quality Management report entitled: *Guidance on the assessment of dust from demolition and construction*, version 1.1.

11.4 Asbestos within the building(s) is to be managed in accordance with the refurbishment and demolition survey recommendations.

11.5 If any unexpected contamination encountered during development (eg discoloured soil or odours or buried waste), then all works should be stopped and be investigated by a suitably qualified person and their recommendations implemented. Council should be notified and any additional remediation requirements agreed in writing before any works recommence.

11.6 Therefore if the strategy recommended herein is adopted the risk to site users and potential off site receptors will be reduced to an acceptable level for the proposed residential end use.

11.7 If any potentially contaminated spoil is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported.

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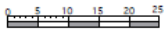
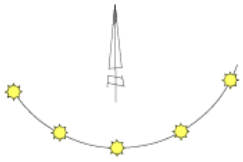
Appendix A – Site Location Plan

LOCATION PLAN 1:1250 scale @ A2 size



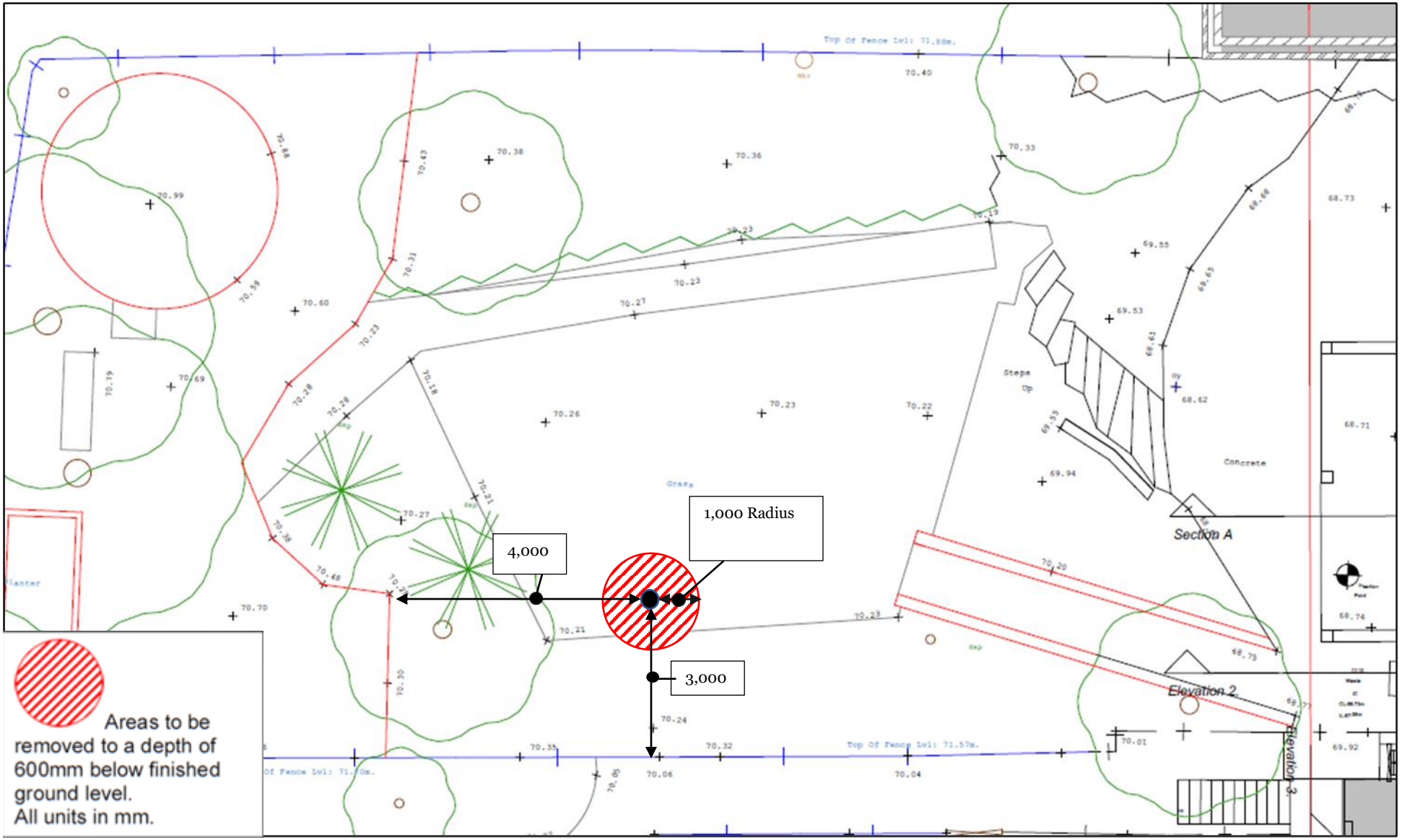
SITE PLAN 1:500 scale @ A2 size



2166-P3E-1: 27 Maresfield Gardens, Hampstead
Mr Ron Golan

Contaminated Land Solutions

Appendix B – Site Remediation Plan



2166-P3E-1: 27 Maresfield Gardens, Hampstead
Mr Ron Golan

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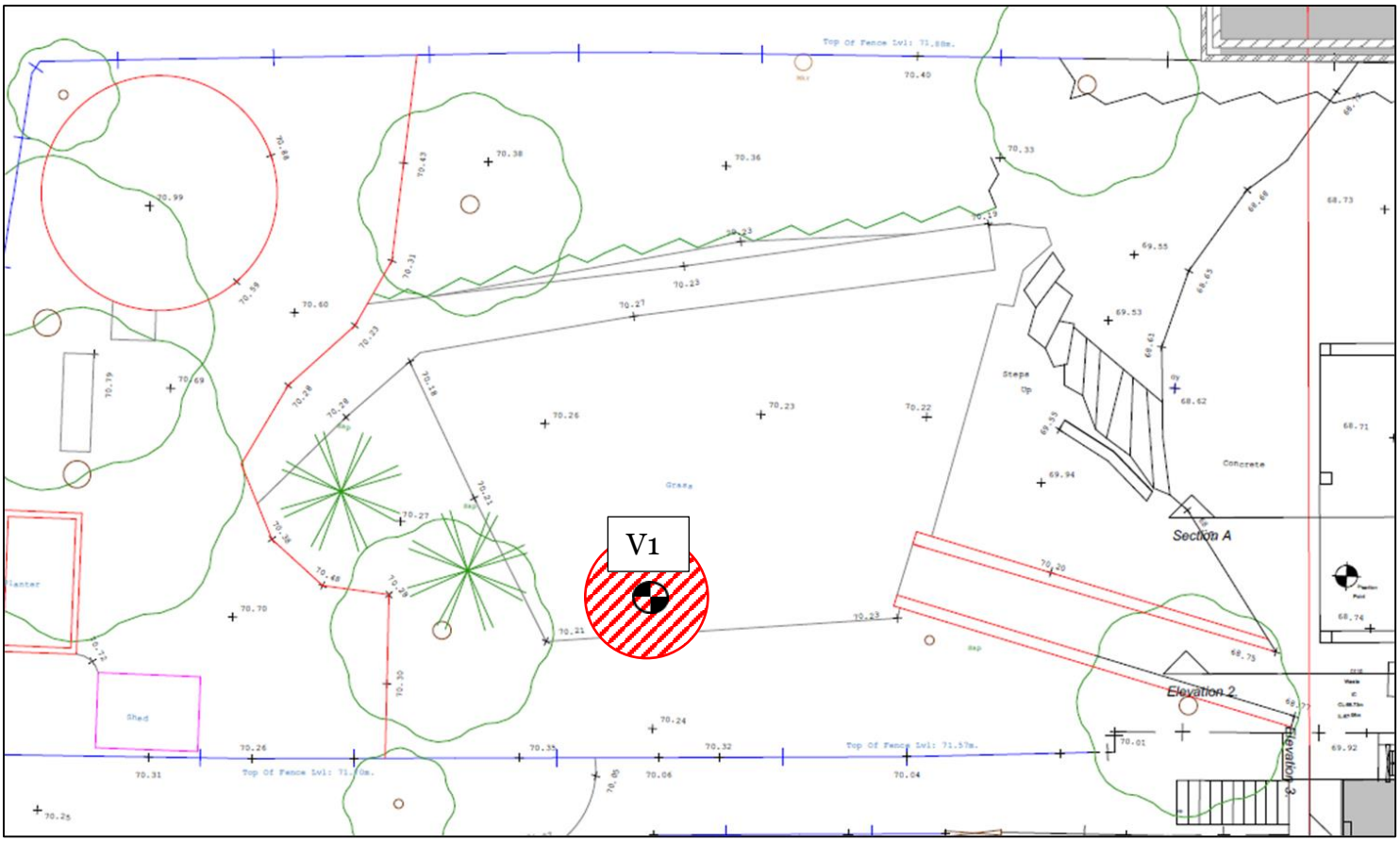
Appendix C – Indicative Verification Sample Plan



2166-P3E-1: 27 Maresfield Gardens, Hampstead
Mr Ron Golan

Appendix D – Previous Contamination Testing

GO Contaminated Land Solutions
4 De Frene Rd
London, SE26 4AB
Tel.: 020 8291 1354
Email: askgo@gosolve.co.uk
Web: www.gosolve.co.uk

BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	16/09/21	

Log ID BH1 Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments and clinker	-0.10
							-0.20
				0.30			-0.30
						MADE GROUND Clayey SUBSOIL containing brick fragments and clinker	-0.40
	C	0.30 - 0.60		0.45			-0.50
						MADE GROUND Light Brown CLAY with rootlets and brick fragments	-0.60
				0.70			-0.70
						Borehole Terminated	-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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Web: www.gosolve.co.uk

BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	16/09/21	

Log ID BH2 Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL	-0.10
				0.20			-0.20
						MADE GROUND Silty SUBSOIL containing brick fragments	-0.30
				0.35			
	C	0.20 - 0.60				MADE GROUND Dark Brown Silty CLAYcontaining brick fragments and clinker	-0.40
				0.50			-0.50
						MADE GROUND Light Brown CLAY containing brick fragments and occasional gravels	-0.60
				0.70			-0.70
						Borehole Terminated	-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	16/09/21	

Log ID BH3 Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments and pockets of sand	-0.10
				0.30			-0.20
	C	0.20 - 0.60				MADE GROUND Brown Silty CLAY containing brick fragments and clinker	-0.30
				0.45			-0.40
						MADE GROUND Light Brown CLAY with grey mottling containing brick fragments.	-0.50
				0.70			-0.60
						Borehole Terminated	-0.70
							-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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Web: www.gosolve.co.uk

BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	30/09/21	

Log ID BH2A Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments	-0.10 -0.20 -0.30
	C	0.20 - 0.60		0.30		MADE GROUND Mid Brown Silty CLAYcontaining brick fragments and clinker Rootlets present at 0.5m	-0.40 -0.50 -0.60
				0.70		Borehole Terminated	-0.70 -0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	30/09/21	

Log ID BH2B Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments and gravel	-0.10 -0.20 -0.30
				0.30			
	C	0.20 - 0.60				MADE GROUND Mid Brown Silty CLAYcontaining brick fragments and rootlets	-0.40 -0.50 -0.60 -0.70
				0.70		Borehole Terminated	-0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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Email: askgo@gosolve.co.uk
Web: www.gosolve.co.uk

BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	30/09/21	

Log ID BH2B Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments and gravel	-0.10 -0.20 -0.30
				0.30			
	C	0.20 - 0.60				MADE GROUND Mid Brown Silty CLAYcontaining brick fragments and rootlets	-0.40 -0.50 -0.60 -0.70
				0.70		Borehole Terminated	-0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead					Project No.	2166	
Client						Survey date:	30/09/21	

Log ID BH2C Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
						MADE GROUND Silty TOPSOIL containing brick fragments and gravel	-0.10
							-0.20
				0.30			-0.30
	C	0.20 - 0.60				MADE GROUND Light Brown Silty CLAYcontaining brick fragments and rootlets	-0.40
				0.50			-0.50
							-0.60
				0.70		Borehole Terminated	-0.70
							-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

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Email: askgo@gosolve.co.uk
Web: www.gosolve.co.uk

BOREHOLE/TRIAL PIT LOG

Project	Maresfield Gardens, Hampstead	Project No.	2166
Client		Survey date:	30/09/21

Log ID BH2D Hole type: BH

Water Strikes	Samples Type	Samples depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
							-0.10
						MADE GROUND Silty TOPSOIL containing brick fragments	-0.20
				0.30			-0.30
	C	0.20 - 0.60					-0.40
						MADE GROUND Light to Mid Brown Silty CLAYcontaining brick fragments and clinker	-0.50
							-0.60
				0.70			-0.70
						Borehole Terminated	-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70

▽ Water strike

Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.

Key: C - Contamination sample W - Water sample P - PID test

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

UKAS TESTING 2683

mCERTS

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-36044
Issue:	1
Date of Issue:	23/09/2021
Contact:	Peter George
Customer Details:	GO Contaminated Land Solutions Ltd 4 De Frene Road Sydenham London SE26 4AB
Quotation No:	Q14-00029
Order No:	2166
Customer Reference:	2166
Date Received:	17/09/2021
Date Approved:	23/09/2021
Details:	Maresfield Gardens, Hampstead
Approved by:	

Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

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Sample Summary

Report No.: 21-36044, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
251258	BH1 0.30 - 0.60	16/09/2021	17/09/2021	Silty clayey loam	
251259	BH2 0.20 - 0.60	16/09/2021	17/09/2021	Silty clayey loam	
251260	BH3 0.20 - 0.60	16/09/2021	17/09/2021	Silty clayey loam	

Results Summary

2683

Report No.: 21-36044, issue number 1

	ELAB Reference	251258	251259	251260
	Customer Reference			
	Sample ID			
	Sample Type	SOIL	SOIL	SOIL
	Sample Location	BH1	BH2	BH3
	Sample Depth (m)	0.30 - 0.60	0.20 - 0.60	0.20 - 0.60
	Sampling Date	16/09/2021	16/09/2021	16/09/2021
Determinand	**Codes**	**Units**	**LOD**	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	28.1	21.3	27.4
Stones Content	N	%	0.1	< 0.1	< 0.1	< 0.1
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None
Metals						
Arsenic	M	mg/kg	1	14.2	20.4	15.8
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	37.5	39.2	34.5
Copper	M	mg/kg	5	46.8	49.2	44.9
Lead	M	mg/kg	5	156	1030	186
Mercury	M	mg/kg	0.5	< 0.5	0.6	0.7
Nickel	M	mg/kg	5	34.2	29.9	21.5
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	83.2	96.8	85.5
Inorganics						
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8
Miscellaneous						
pH	M	pH units	0.1	7.5	7.0	7.7
Soil Organic Matter	U	%	0.1	1.5	2.4	2.0
Phenols						
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	0.2	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1	0.3	< 0.1
Pyrene	M	mg/kg	0.1	0.1	0.3	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	0.2	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	0.2	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	0.2	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	0.2	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	2.2	< 0.4

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Results Summary

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			ELAB Reference	251258	251259	251260
			Customer Reference			
			Sample ID			
			Sample Type	SOIL	SOIL	SOIL
			Sample Location	BH1	BH2	BH3
			Sample Depth (m)	0.30 - 0.60	0.20 - 0.60	0.20 - 0.60
			Sampling Date	16/09/2021	16/09/2021	16/09/2021
Determinand	**Codes**	**Units**	**LOD**			
TPH CWG						
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0	< 1.0

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Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY
Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

Results Summary

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Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
251258	0.30 - 0.60	BH1	Brown Soil, Stones	No asbestos detected	n/t	n/t	n/t	n/t
251259	0.20 - 0.60	BH2	Brown Soil, Stones, Clinker	No asbestos detected	n/t	n/t	n/t	n/t
251260	0.20 - 0.60	BH3	Brown Soil, Stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

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Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Free cyanide	N	As submitted sample	21/09/2021	107	Colorimetry
Hexavalent chromium	N	As submitted sample	21/09/2021	110	Colorimetry
pH	M	Air dried sample	21/09/2021	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	21/09/2021	118	ICPMS
Phenols in solids	N	As submitted sample	21/09/2021	121	HPLC
PAH (GC-FID)	M	As submitted sample	21/09/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	21/09/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	21/09/2021	181	GC-MS
Aliphatic hydrocarbons in soil	N	As submitted sample	21/09/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	22/09/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	21/09/2021	214	GC-FID
Asbestos identification	U	Air dried sample	22/09/2021	280	Microscopy
Soil organic matter	U	Air dried sample	22/09/2021	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-36044, issue number 1

Key	
U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.
ELAB are unable to provide an interpretation or opinion on the content of this report.
The results relate only to the sample received.
PCB congener results may include any coeluting PCBs
Uncertainty of measurement for the determinands tested are available upon request
Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
All water samples will be retained for 7 days following the date of the test report
Charges may apply to extended sample storage

Appendix E – Imported Material

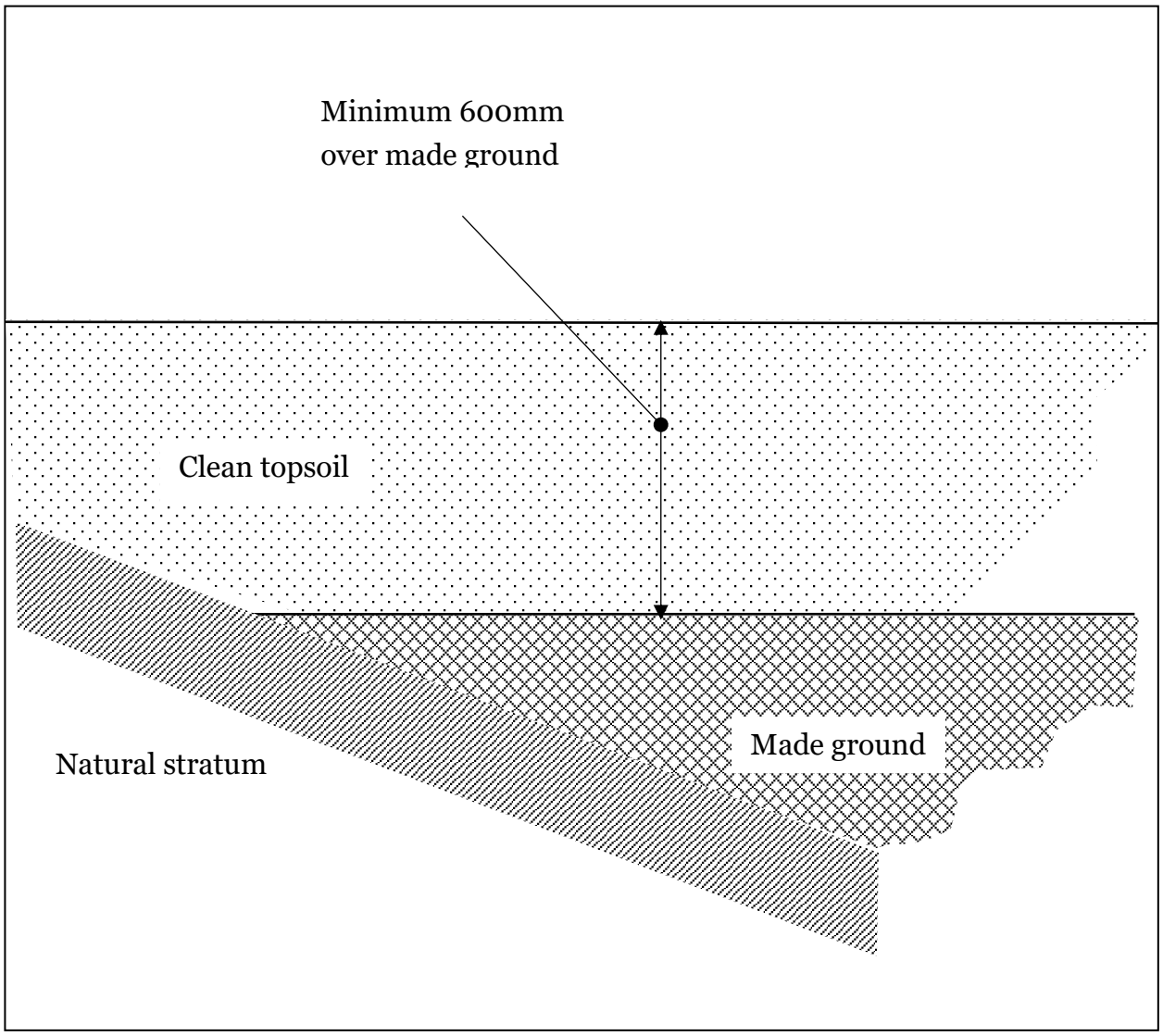
Any imported material should be tested for the following parameters, and compared against the current environmental screening levels to ensure that the fill material meets the criteria for the proposed end use.

Care should be taken when importing soils and aggregates as asbestos is a common contaminant, even in certified materials.

Determinand	
Arsenic	
Cadmium	
Chromium	
Lead	
Mercury	
Nickel	
Copper	
Zinc	
Selenium	
Hexavalent Chromium	
pH Value	
Free Cyanide	
Naphthalene	
Acenaphthylene	
Acenaphthene	
Fluorene	
Phenanthrene	
Anthracene	
Fluoranthene	
Pyrene	
Benz(a)anthracene	
Chrysene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Benzo(a)pyrene	
Indeno(123-cd)pyrene	
Dibenz(ah)anthracene	
Benzo(ghi)perylene	
TOTAL PAH	
Aromatic Hydrocarbons	>C_5-C_7
	>C_7-C_8
	>C_8-C_{10}
	>C_{10}-C_{12}
	>C_{12}-C_{16}
	>C_{16}-C_{21}
	>C_{21}-C_{35}
Aliphatic Hydrocarbons	>C_5-C_6
	>C_6-C_8
	>C_8-C_{10}
	>C_{10}-C_{12}
	>C_{12}-C_{16}
	>C_{16}-C_{35}
TOTAL TPH	
Asbestos	

Contaminated
Land
Solutions

Appendix F – Indicative Capping Layer



Cross-section

Contaminated
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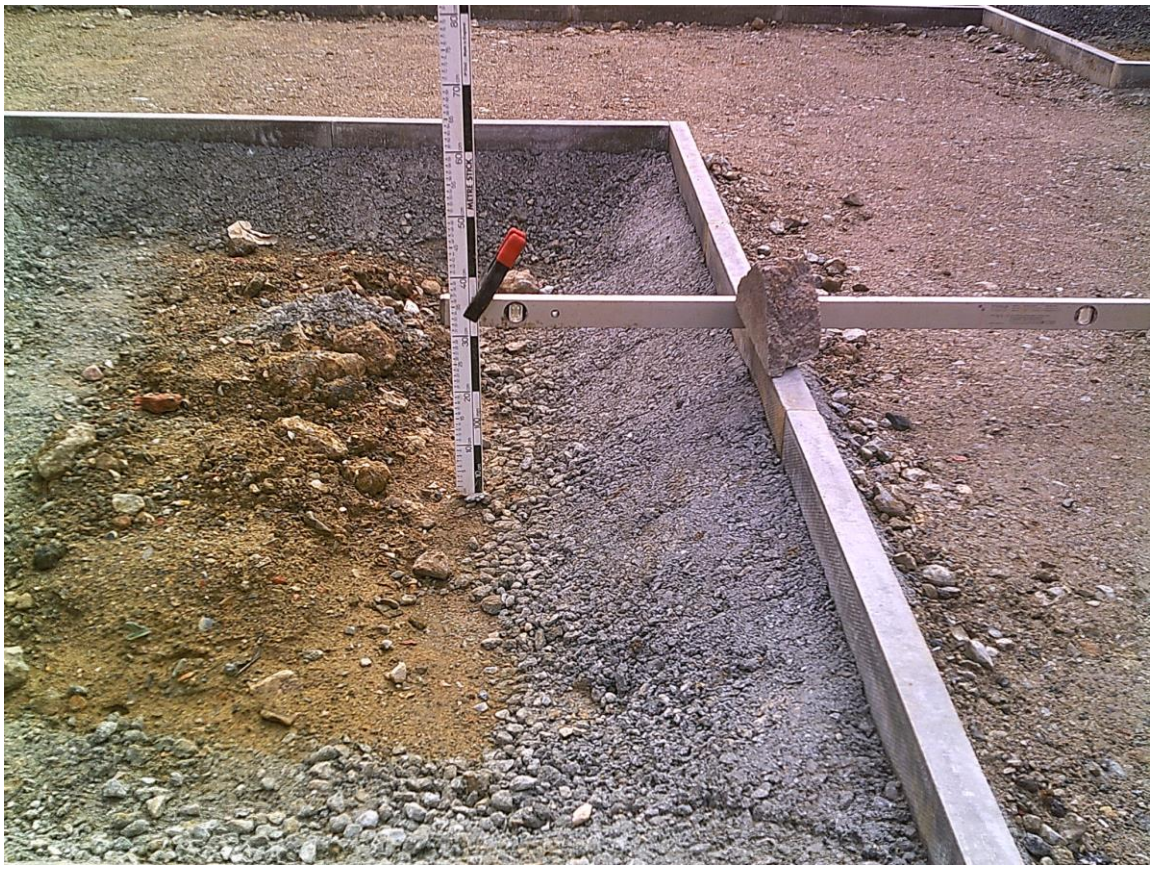
Appendix G – Example Record Photographs

Example A: Close up, showing the depth clearly.

Example A: Showing the location of the close up

Example B: Close up, showing the depth clearly



Example B: Showing the location of the close up

2166-P3E-1: 27 Maresfield Gardens, Hampstead
Mr Ron Golan