

Gedney, Oliver

From: Grant, David
Sent: 25 March 2021 14:24
To: _planningadvice
Subject: FW: FW: Horseshoe Road H16-0935-20
Attachments: We sent you safe versions of your files; 0756-3 Proposed Residential Development Horseshoe Road Spalding Lincs -signed.pdf

Please add this email and attachment to the file under 6SUP – Remediation Method Statement.

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.

I will be away from my computer all day on Friday 26th March and will return to work on Monday 29th March.

From: G R MERCHANT LTD <grmerchant.arch.cons@gmail.com>

Sent: 25 March 2021 09:23

To: Grant, David <dgrant@sholland.gov.uk>

Subject: Re: FW: Horseshoe Road H16-0935-20

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

This message originated from outside your organization

Dear David,

Please see attached statement as requested.

Regards
Hannah

G R Merchant Ltd

01406 490800

www.grmerchantltd.com

On Thu, 11 Feb 2021 at 19:40, Grant, David <dgrant@sholland.gov.uk> wrote:

Dear Sarah,

Please see the below email from the Environmental Protection Officer, Sue Armour.

Will the remediation method statement be forthcoming?

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: Armour, Susan <Susan.Armour@breckland-sholland.gov.uk>
Sent: 01 February 2021 14:14
To: Grant, David <dgrant@sholland.gov.uk>
Subject: RE: Horseshoe Road H16-0935-20

Hi David,

I'm still waiting for it?

There's a been site investigation report uploaded but that's not a remediation method statement.

Thanks,

Sue

Sue Armour | Environmental Protection Officer | **South Holland District Council**

Telephone : 01775 764738

www.sholland.gov.uk

Please note my current working days are Monday to Thursday termtime, Monday and one other day in school holidays.



From: Grant, David [<mailto:dgrant@sholland.gov.uk>]
Sent: 01 February 2021 09:36
To: Armour, Susan <Susan.Armour@breckland-sholland.gov.uk>
Subject: Horseshoe Road H16-0935-20

Hi Sue,

Would you please be able to take a look at the remediation statement on file?

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.

I am on leave Saturday 30 January 2021 to Sunday 07 February 2021 (inclusive)

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**PROPOSED RESIDENTIAL
DEVELOPMENT
LAND OFF HORSESHOE ROAD
SPALDING
LINCS.**

**PROPOSED RESIDENTIAL
DEVELOPMENT
LAND OFF HORSESHOE ROAD
SPALDING
LINCS.**

**REMEDICATION METHOD STATEMENT
– PHASE 3**

Report Ref.: 0756/3

Prepared by

D Sargeant
D Sargeant

Date

March 2021

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PROPOSED RESIDENTIAL DEVELOPMENT
LAND OFF HORSESHOE ROAD
SPALDING
LINCS.

1. INTRODUCTION

BLM Builders Ltd (the Client), via the offices of G R Merchant proposes to develop a site located off Horseshoe Road, Spalding, Lincolnshire, to a residential end use.

The purpose of the Remediation Method Statement [RMS] is to provide a strategy for the management [mitigation] of 'unacceptable' risk[s] from 'contamination', as identified in a Phase 2 investigation report, such that the identified risk[s] are reduced to a level that human health is protected in the present and for the future and that the site can be considered "safe for development".

A site location plan has been provided as Figure 1, with the proposed layout shown on Figure 2 towards the back of this RMS report to assist the Reader.

2. BACKGROUND

2.1 Phase 2 Investigations

2.1.1 Phase 2 – Intrusive Investigation

Dated April 2018, Goldfinch Environmental Ltd report reference 0492/2, this Phase 2 Investigation Report revealed the following:~

Measured concentrations of inorganic determinants (nickel, zinc, and lead) exceeded their guidance values as shown below.

Sample I.D.	WS3	WS8	Guidance Value (mg kg ⁻¹)
Nickel	1100	-	180
Zinc	4200	-	3700
Lead	330	360	200

Measured concentrations of organic determinants Dibenz(a,h)Anthracene and Benz(a)pyrene exceeded their guidance values as shown below.

Sample I.D.	WS1	WS6	Guidance Value (mg kg ⁻¹)
Dibenz(a,h)Anthracene	0.72	1.1	0.28
Benz(a)pyrene	3.3	-	2.7

In the context of the proposed end use for the site and the localised distribution, depth, measured concentration values and contaminant type:-

A Low-Medium risk has been identified and remedial treatment of the soils would be required where the affected areas are coincident with private gardens in the completed development to mitigate the risk to human health. [Areas of permanent hard cover would be excluded, as this would provide a permanent physical barrier between the source and the End User].

3. SCOPE

This document details the remediation works as highlighted in the Phase 2 investigation report required to prevent or control pollution and the protection of public health as a result of the presence of contamination as outlined above thus bringing the site into a condition where it can be deemed to be 'suitable for use' and mitigate the current 'unacceptable' environmental risk thus protecting the future end users of the site and wider environment.

The Environmental Engineer is Goldfinch Environmental Limited.

4. LIMITATIONS

This report is for the sole reliance and use of the Client. Any Third Party coming into possession of this report relies on it at their risk, unless written permission is expressly sought from, and provided by, Goldfinch Environmental Limited. The author owes them no duty of care and skill. Goldfinch Environmental Ltd accepts no responsibility or liability for the consequences of this document being used for purposes other than that for which it was commissioned and the assessments provided herein should not be relied on as a legal opinion.

The findings and opinions expressed are relevant to the time of the site visit and information review and should not be relied upon to represent conditions at substantially later dates. The assessments and opinions given in this report are based upon information available at the time of the report. Where additional information comes available which may affect or identify a need to review our conclusions or assessments we request the opportunity (and reserve the right), to review the information and where warranted, modify our assessment / opinion in part or wholly, accordingly.

This RMS does not include any geotechnical considerations pertaining to the site as these were outside the agreed brief.

The recommendations given in this report are based on guidance and best practice in place at the time of issue of the report, the information available at the time of the investigation, the nature of the indicated proposed development and associated end user behaviour patterns. Should any of the foregoing change at any time, then this report should be reviewed in the context of proposed changes.

This report has been based upon the construction details, layout drawings and pattern of occupancy/usage provided by the Client and/or their Agent. Where these details are subject to change either by the commissioning Party (Client), (or a subsequent owner where a site is 'sold-on'), then this report will need to be reviewed and amended accordingly in the light of any such proposed design changes. It is the responsibility of the commissioning Party(-ies) to ensure our Office is provided with this information. It is (reasonably) anticipated that this review would be required by the Planning Authority.

Where a document has been prepared with inclusion or based upon supplied Third Party information this Author accepts no responsibility or liability (direct/indirect) for the accuracy or reliability of said Third Party reports and any data contained therein.

5. CONCEPTUAL MODEL & RISK ASSESSMENT (Pre-remediation)

The following Conceptual Model has been incorporated from the referred Phase 2 investigation report to provide background for the reader. (However they are not intended to replace the referred report wholly which should be read in conjunction with this RMS.).

5.1 Conceptual Model & Risk Assessment (Reproduced From The Phase 2 Report – April 2018)

5.1.1 Conceptual Model.

Sources (Proven)	Pathway	Target	Risk
Soil: The intrusive investigation has proved two instances of measured concentrations of metals (nickel, zinc and lead) which exceeded the respective assessment criteria (Boreholes WS3 and WS8). See Section 6.2.1 of this report. There were two instances of measured concentrations of PAH Congeners which exceeded assessment criteria (Boreholes WS1 and WS6). See Section 6.2.2i-xv of this report.	• Dermal contact ingestion and inhalation • Wind erosion and atmospheric dispersion • Leaching	• Present users • End users • Construction workers • General public	• Low-Med • Low-Med • Low-Med • Neg-Low
		• Adjacent properties • General public • Shallow groundwater • Services/construction materials • Plant life • Surface water	• Neg-Low • Neg-Low • Low • Low • Low • Low
Shallow groundwater: Groundwater was not encountered in any of the exploratory locations and site was underlain by cohesive soils. The measured concentrations of all determinants were not considered to pose an 'unacceptable' risk to this medium.	Groundwater migration	• Adjacent properties • Deep groundwater • Services/construction materials • Plant life • Surface Water	• Low • Low • Low • Low • Neg-Low
	Dermal contact, ingestion and inhalation	• Present users • End users • Construction workers • General public	• Low • Low • Low • Neg
Gas: Measurable (background) concentrations of ground gas would not (reasonably) be anticipated to be present as a result of historical site use or the underlying natural geology	Direct inhalation Soil migration Services migration	• End users • Construction workers • Buildings	• Neg-Low • Neg-Low • Neg-Low
Negligible Risk Defined as the site should be considered suitable for present or future use and environmental setting. Contaminants unlikely to be present, which might have unacceptable impact on key targets.			
Low Risk Defined as the site should be considered suitable for present or future use and environmental setting. Contaminants may be present but unlikely to have unacceptable impact on key targets.			
Medium Risk Defined as the site may not be suitable for present or future use and environmental setting. Contaminants are probably present and might have unacceptable impact on key targets.			
High Risk Defined as the site is probably or certainly not suitable for present or future use and environmental setting. Contaminants probably or certainly present and likely to have an unacceptable impact on key targets.			

The risk assessment follows below:~

5.2 Risk Assessment.

5.2.1 Targets.

Potential targets/receptors in the context of the risk assessment where a plausible pathway can be proven, are discussed under separate subheadings as follows:-

5.2.2 Human Health (Site Users¹ & Construction Workers).

Measured concentrations of inorganic determinants (nickel, zinc, and lead) exceeded their guidance values as shown below.

Sample I.D.	WS3	WS8	Guidance Value (mg kg ⁻¹)
Nickel	1100	-	180
Zinc	4200	-	3700
Lead	330	360	200

Measured concentrations of organic determinants (Dibenz(a,h)Anthracene and Benz(a)pyrene exceeded their guidance values as shown below.

Sample I.D.	WS1	WS6	Guidance Value (mg kg ⁻¹)
Dibenz(a,h)Anthracene	0.72	1.1	0.28
Benz(a)pyrene	3.3	-	2.7

In the context of the proposed end use for the site and the localised distribution, depth, measured concentration values and contaminant type:-

A Low-Medium risk has been identified.

¹ Current & End User

² UK Water Industry Research. GUIDANCE FOR THE SELECTION OF WATER SUPPLY PIPES TO BE USED IN BROWNFIELD SITES. Report Ref. No. 10/WM/03/21. 2010.

5.2.3 Construction Workers.

During the opening up and disturbance of ground at the referred locations, as part of demolition and construction works, construction staff, particularly groundworkers, may likely be exposed to (locally Lead, Nickel, Zinc and Speciated PAH impacted soils and soil dusts (e.g., when manually handling soil and working in excavations):-

Based on the localised distribution, depth, measured concentration and contaminant type:- A Low-Medium risk has been identified.

5.2.4 Services and Construction Materials.

5.2.4.1 Concrete.

Concentrations of determinants are not considered to present an 'unacceptable' risk to this medium.

A Low risk has been identified.

5.2.4.2 Potable Water Supplies.

UK Water Industry Research (UKWIR), provides guidance on material selection to prevent water supply lines failing prematurely. The chosen parameters are based on the potential for:

- (a) taste or odour impairment of potable waters by permeation of organic contaminants through polymer-based pipework;
- (b) the structural or physical deterioration of pipework materials;
- (c) the contamination of the interior surfaces pipework when undertaking maintenance;
- (d) health and safety of workers when undertaking repairs.

Some of these parameters follow other existing guidance, which have either been withdrawn or updated including the WRAS guidance of October 2002 (e.g., ICRCL and BRE Special Digest 1).

The UKWIR report only cites organic determinants as contaminants of concern. The investigation has shown very localised instances of marginally elevated PAHs in soils.

Therefore:~

A Low risk has been identified.

5.3. Landscaping & Planting.

No signs of stress or unusual staining in plant life was noted. A Low risk to plantlife has been identified.

6. REMEDIATION RECOMMENDATIONS.

6.1. Land Contamination - Soils.

The results of the chemical laboratory testing showed [locally] raised concentrations of determinants in four of the exploratory locations [WS1, WS3, WS6 and WS8] as shown in Figure 3 towards the back of this RMS.

Three of the four referred locations are coincident with private gardens and soft landscaping. The fourth, WS3 falls within a proposed driveway, permanent hard cover which will provide a physical barrier between the End User and the affected soils.

'Management' (remediation) of soils in the affected plots [Plots 1, 3 and 4] is warranted where these are coincident with soft landscaping and private gardens in the proposed development in order to bring the site into a condition where the Regulator may consider it 'suitable for use' and thus consider discharging the relevant planning condition.

6.2 Remediation Strategy

The preferred remediation option as proposed by this RMS comprises replacement of the soils in the soft landscaped and garden areas such that a clean cover of 600mm depth is provided [relative to finished topographic levels](#).

6.3. Contamination Management

6.3.1 'residential with home-grown produce' land use

The referred instances of contamination [based upon the 'residential with home-grown produce' land use] have been shown on the proposed site layout in Figure 3 towards the back of this report with remedial areas shown on Figure 4.

It is anticipated that the Regulator will require replacement of the affected soils in the areas shown in Figure 2 such that [600mm of clean cover soils are provided relative to finished topographic levels](#) to provide the appropriate level of human health protection and to provide a suitable growing medium.

In the interest of sustainable construction and where planning allows, consideration may be given to :~

- locally raising site topographic levels to minimise soil disposal quantities
- installation of some permanent hard capping [e.g. hard landscaping, shed bases, patios] to provide a physical barrier between the source (affected soils) and the End User thus breaking the existing pollutant linkage. It was understood that the hard cover proposed at the rear of the dwelling may be extended, which would provide a permanent physical barrier between this

source and the End User.

- Consideration may be given to the installation of a semi-permeable membrane ('terram') at the interface between the residual soils and the new clean cover soils as a 'marker' layer and to prevent any future soil 'mixing'.

On completion a Verification Report (VR) may also be required to demonstrate that the remedial works have been carried out in accordance with the (LPA-approved) RMS.

To assist the Client it should be noted that following LPA-Approval of the Verification Report an application may be made to discharge the relevant contaminated land planning condition.

6.4 Management of Arisings.

The arising soils may be *temporarily* stored on a membrane nearby until removed off site [or sustainably reused under permanent hard capping as discussed elsewhere in this RMS] and where this is the case, it is recommended that they are covered to mitigate run-off and mobilisation of contamination by percolating rainfall. Where this takes place it is the responsibility of the Developer to ensure materials designated as 'contaminated' are not mixed with 'uncontaminated' materials or redistributed in other parts of the site without prior LPA-approval.

Subject to the agreement of the LPA, and in the interest of sustainability, consideration may be given to reusing the contaminated soils where changes in site levels can be accommodated. These arising soils should only be reused only under areas, which are to be *capped with a permanent physical barrier*, e.g. driveways, parking areas and roads, buildings.

It is recommended that any 'uncontrolled' movement of soil or water beyond the site boundaries is recorded and investigated. Appropriate corrective and preventive action to prevent recurrence is also recommended.

6.5 Requirements for Clean Cover System & Restoration of Site Levels.

Consideration may be given to placement of a permeable geotextile ('terram') on the residual soil surface prior to upfilling / restoration of site levels.

Where reinstatement of the excavation is required, replacement fill materials shall comprise compliant soils of known provenance, whether 'site-generated' or 'imported' that shall not contain:

1. Contamination exceeding the CLEA SGVs or LQM-CIEH S4ULs, ['C4SL' for lead] or other guidance current at the time of this document as indicated in Section 5.1 of this RMS. (See Table 1 below).

2. Demolition waste, made ground or fill materials (crushed and graded concrete from site demolition works is an acceptable exception).
3. Wood, timber, vegetation and other putrescible or biodegradable waste liable to generate hazardous gases.
4. Compliance testing of candidate import materials, irrespective of source, would normally be required to satisfy the Regulator that suitable materials are being imported for the proposed end use. However, in this instance, the Developer may wish to consider the use of soils sourced from British Sugar, which is accompanied by a test certificate demonstrating the environmental suitability. It will be necessary to seek LPA approval for any soils imported to site for use in soft landscape and garden areas.
5. Importation of soils will be required to replace those taken off-site due to their unsuitability for retention within the proposed residential development. Chemical laboratory criteria have been provided in Table 1 below.

Table 1. Criteria For Imported Soils.

Determinant	Maximum Concentration (mg/kg)		
Arsenic *	32		
Boron	3		
Cadmium*	10		
Chromium*	3000		
Lead***	200		
Mercury*	170		
Nickel****	75		
Selenium*	350		
Copper ****	130		
Zinc ****	200		
Asbestos	None detected		
pH	5 - 10		
	1% Soil Organic Matter	2.5% Soil Organic Matter	6% Soil Organic Matter
Polycyclic Aromatic Hydrocarbons			
Naphthalene**	2.3	5.6	13
Acenaphthylene **	170	420	920
Acenaphthene **	210	510	1100
Fluorene **	170	400	860
Phenanthrene **	95	220	440
Anthracene**	2400	5400	11000
Fluoranthene**	280	560	890
Pyrene**	620	1200	2000
Benz(a)anthracene**	7.2	11	13
Chrysene**	15	22	27
Benzo(b)fluoranthene**	2.6	3.3	3.7
Benzo(k)fluoranthene**	77	93	100
Benzo(a)pyrene**	2.2	2.7	3.0
Indeno(123-cd)pyrene**	27	36	41
Dibenzo(a,h)anthracene**	0.24	0.28	0.3
Benzo(ghi)perylene**	320	340	350
Total Petroleum Hydrocarbons			
TPH C ₅ -C ₆ **	42	78	160
TPH C ₆ -C ₈ **	100	230	500
TPH C ₈ -C ₁₀ **	27	65	150
TPH C ₁₀ -C ₁₂ **	74	180	380
TPH C ₁₂ -C ₁₆ **	140	330	500
TPH C ₁₆ -C ₂₁	260	500	500
TPH C ₂₁ -C ₃₅	500	500	500
Total TPH C ₅ -C ₃₅	500	500	500

Source of Values

* Soil guideline value, DEFRA/Environment Agency

** Tier 1 GAC are based on Nathanail, C. P., McCaffrey, C., Gillett, A. G., Ogden, R. C. and Nathanail, J. F. 2015. The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3086.

*** - Category 4 Screening Level.

**** BS 3882 British Standards Specification for Top Soil.

***** B2G level to ensure no visible or olfactory evidence.

It is recommended that Regulatory approval of this RMS is sought prior to importing the referred soils to site where this activity is considered 'necessary'.

6.6 Concluding Remarks To Section 5.

On completion of the works in accordance with the referred RMS it is anticipated this will further reduce the existing 'Low-Medium' risk to '*Negligible - Low*'.

On that basis and on completion of the above works it is considered that the 'contamination' at the site will have been adequately managed and that the site can be considered "suitable for development".

7. INSPECTION.

The EE will need to visit the site to verify the depth of the placed cover system and possibly any reused soils and record this photographically via checking internal and external measurements of the installed drainpipe sections (See Section 7 of this RMS).

7.1 Importation of Soils.

At the time of issue of this RMS, this Author was provided with a Third Party chemical laboratory test report indicating the source of imported topsoils. This Author has reviewed the supplied information and all the determinant concentrations are BELOW the current guidance values and therefore this source is considered suitable for use at the affected locations subject to the agreement of the Regulator.

7.2 Possible Membrane Installation.

Consideration may be given to placement of a geotextile membrane between the residual soil surface and the placed cover soils, where this option is included in the works it is anticipated the Regulator will require photographic evidence demonstrating that the membrane has been installed in accordance with the proposal in this RMS together with the appropriate upfill depth of compliant soils.

This will require site attendance by the EE or the Developer to obtain the photographic records for this aspect of the remediation.

8. VERIFICATION REQUIREMENTS

8.1 Overview

The Phase 2 report stated that the RMS should provide details of the work to be undertaken and validation requirements.

To support the Validation process the following information to be collected both as the remedial works progress and on completion or forwarded to by a Third Party to the office of the Environmental Engineer this is anticipated to include:~

1. Soil removal documentation - Waste Transfer Notes
2. Soil import documentation – Delivery notes with volume/weight information included
3. The Environmental Engineer will make the required visit(s) to site [as the works progress] or on completion of the works to collect and collate depth data for the affected plots and any other required information necessary for satisfactory validation of the remediation.
4. The depth of the placed cover system can be verified by placement of vertical sections of drainpipe once the residual level has been established and prior to commencement of the upfill/backfill operations.
5. The thickness of the placed cover soils will be determined by measurement of internal and external pipe sections depths - the **difference** between these two measurements should be not less than 600mm. [At this point reader is reminded that these measurement are relative to finished / final topographic levels.].
6. It is recommended that **two** of these pipe sections are placed in each of the affected areas [or plots] where soil replacement is required.
7. Photographic records to show the reduced level and placement of the membrane where this option is chosen.
8. Upon completion of the remedial works it is anticipated that future monitoring *will not be required* as the 'unacceptable' soils – the identified source of 'contamination' at the site will have been removed to a less sensitive area and capped with permanent hardstanding in the proposed development.

9.1 HEALTH & SAFETY

9.1 Overview

The following general measures are recommended to the contractor during ground and construction works and are not intended to replace Contractors in-house requirements or practices:

To prevent inadvertent ingestion of contaminated soil or water:

- Those working with or manual handling soils should wear gloves with sleeves rolled down. (Consideration may be given to application of barrier cream).
- Facilities should be available on site for washing hands and face.
- These facilities should be used prior to welfare/comfort breaks including mealtimes and leaving the site each day.
- Measures shall be put in place to prevent unauthorised access to the site.

To prevent inhalation/respiration of contaminated soil dusts:

- Contaminated soils or dusts shall not be discharged onto the public highway.
- All vehicles shall be sheeted prior to leaving site to avoid soil dusts becoming airborne/fugitive.
- During dry or windy conditions, water suppression measures may be required to prevent soil dusts becoming airborne. Alternatively, consideration may be given to a temporary stoppage of this activity until calmer weather conditions prevail.

10. CONCLUSIONS

BLM Builders Ltd (the Client), via the offices of G R Merchant proposes to develop a site located off Horseshoe Road, Spalding, Lincolnshire, to a residential end use.

The Phase 2 report showed that soils within the site had been locally impacted by a limited number of determinants thus identifying a need for mitigating action and hence according to the planning regime, the need for the preparation of this Remediation Method Statement (RMS) which provides details of how the risk posed by the referred raised determinant concentrations is to be managed (i.e. remediated) such that the site can be considered 'suitable for use by the LPA.

It is recommended that this Remediation Method Statement is read in conjunction with the previously issued report(s) referred above.

This RMS and its content are subject to the approval of the Regulator, which should be sought prior to implementation of any of the works proposed within this document.

Should unanticipated contamination be suspected, or revealed during any groundworks, then the area should be temporarily isolated and further advice sought by a suitably independent qualified person and a management strategy for these occurrences should be submitted to the Local Authority for their approval prior to proceeding, as required by Regulatory Offices.

FIGURES

N ↑



Site Location Plan

Goldfinch
Environmental
Ltd

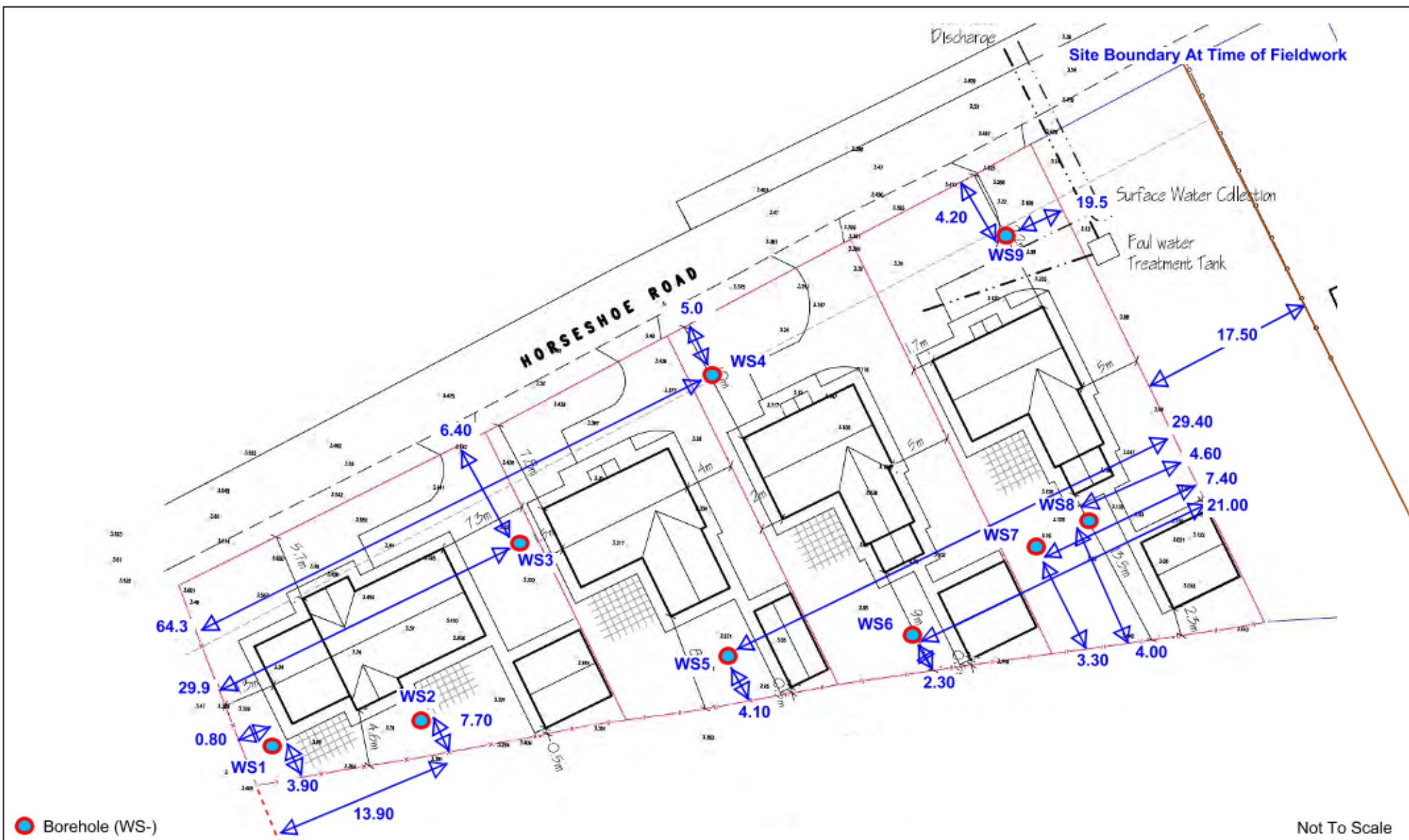


Figure 2

Ref: 0756/3

Exploratory Location Plan

Goldfinch
Environmental
Limited

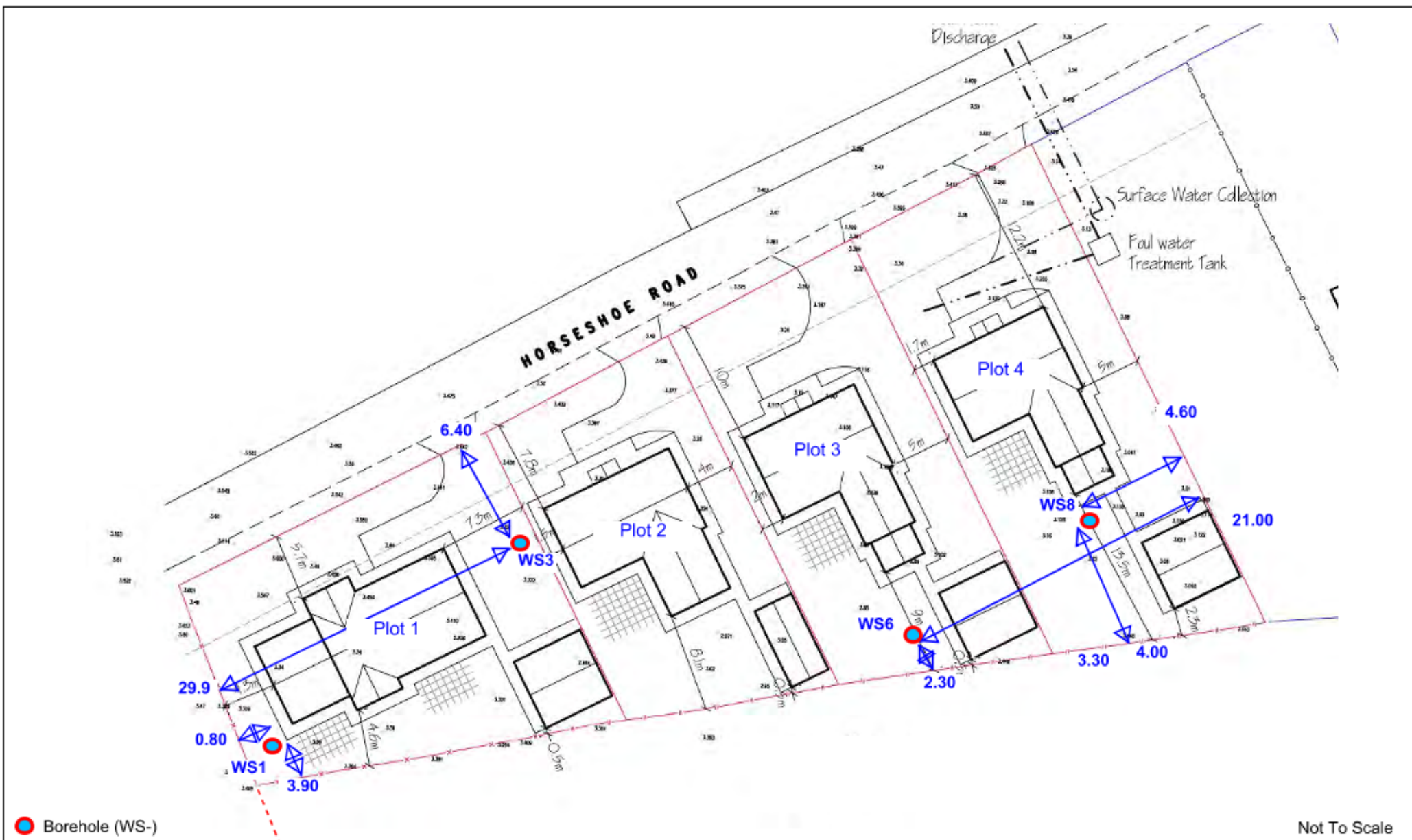
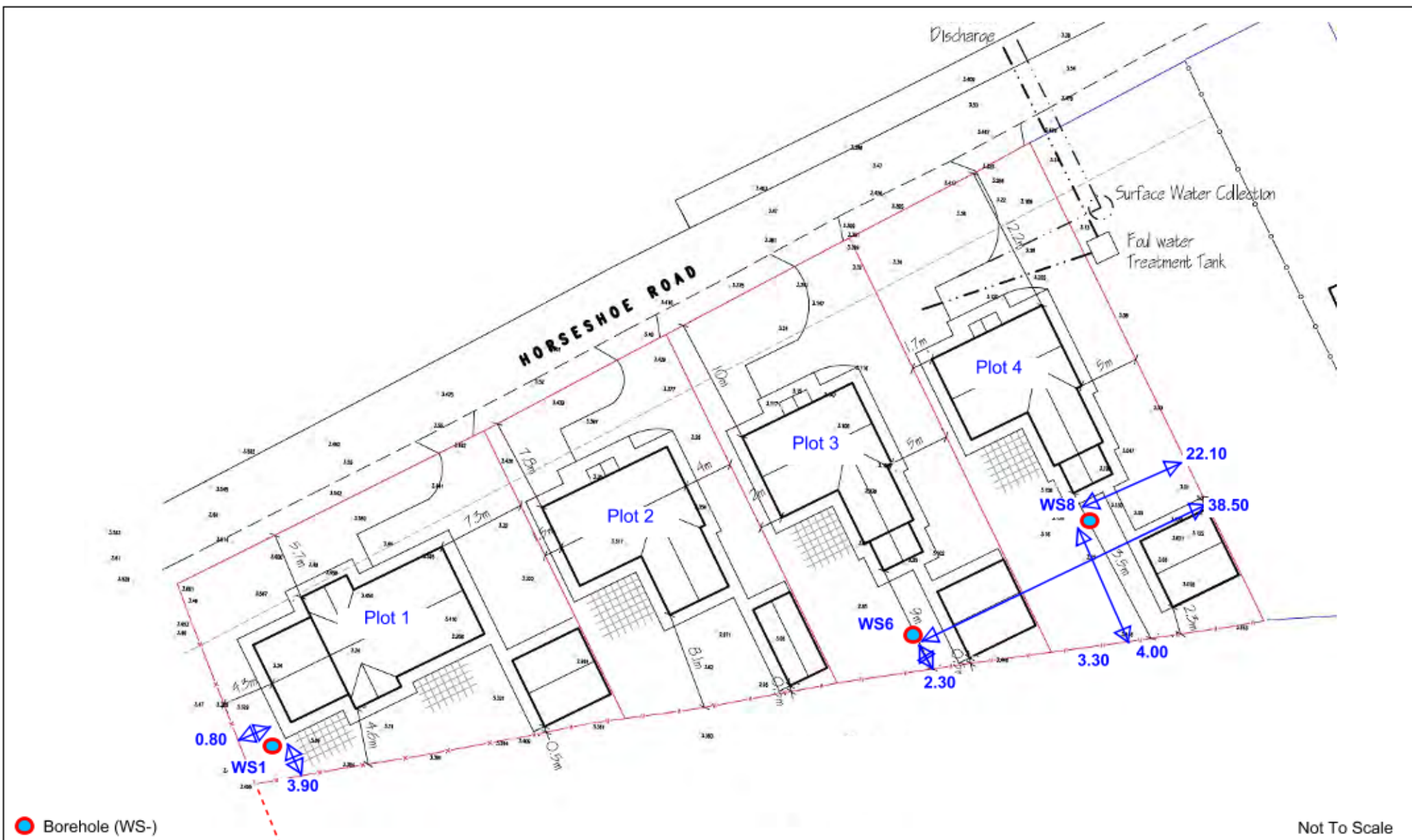


Figure 3

Plan To Show Locations of Raised Determinant Concentrations

Ref: 0756/3

Goldfinch
Environmental
Limited



● Borehole (WS-)

Not To Scale

Figure 4

Plan To Show Areas Proposed For Remediation [Soil Replacement]

Ref: 0756/3

Goldfinch
Environmental
Limited

APPENDIX 1

Chemical Laboratory Test Report Report - Candidate Import Soils



Final Report

Report No.: 19-37105-1

Initial Date of Issue: 15-Nov-2019

Client P J Thory Ltd

Client Address: White Walls
Eldermell, Coates
Whittlesey
Peterborough
Northamptonshire
PE7 2DD

Contact(s): Glen O'Gorman

Project PJSP2 Camel Gate, Spalding

Quotation No.: **Date Received:** 06-Nov-2019

Order No.: **Date Instructed:** 06-Nov-2019

No. of Samples: 1

Turnaround (Wkdays): 5 **Results Due:** 12-Nov-2019

Date Approved: 15-Nov-2019

Approved By:

Details: Amy Parekh-Pross, Technical Projects
Manager

Client: P J Thery Ltd		Chemtest Job No.:		18-37105
Quotation No.:		Chemtest Sample ID.:		919414
Order No.:		Client Sample Ref.:		1
		Client Sample ID.:		1
		Sample Location:		1
		Sample Type:		SOIL
		Top Depth (m):		0.1
		Bottom Depth (m):		0.8
		Date Sampled (\$):		31-Oct-2019
		Asbestos Lab:		DURHAM
Determinand	Accrad.	SOP	Units	LOD
ACM Type	U	2192		N/A
Asbestos Identification	U	2192	%	0.001
ACM Detection Stage	U	2192		N/A
Moisture	N	2030	%	0.020
Stones and Removed Materials	N	2030	%	0.020
pH	U	2010		N/A
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010
Cyanide (Free)	U	2300	mg/kg	0.50
Cyanide (Total)	U	2300	mg/kg	0.50
Thiocyanate	U	2300	mg/kg	5.0
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50
Sulphate (Total)	U	2430	%	0.010
Arsenic	U	2450	mg/kg	1.0
Cadmium	U	2450	mg/kg	0.10
Chromium	U	2450	mg/kg	1.0
Copper	U	2450	mg/kg	0.50
Mercury	U	2450	mg/kg	0.10
Nickel	U	2450	mg/kg	0.50
Lead	U	2450	mg/kg	0.50
Selenium	U	2450	mg/kg	0.20
Zinc	U	2450	mg/kg	0.50
Chromium (Hexavalent)	N	2490	mg/kg	0.50
Organic Matter	U	2625	%	0.40
Total TPH >C35	N	2670	mg/kg	10
Naphthalene	U	2700	mg/kg	0.10
Acenaphthylene	U	2700	mg/kg	0.10
Acenaphthene	U	2700	mg/kg	0.10
Fluorene	U	2700	mg/kg	0.10
Phenanthrene	U	2700	mg/kg	0.10
Anthracene	U	2700	mg/kg	0.10
Fluoranthene	U	2700	mg/kg	0.10
Pyrene	U	2700	mg/kg	0.10
Benzo[a]anthracene	U	2700	mg/kg	0.10
Chrysene	U	2700	mg/kg	0.10

Client: P J Thory Ltd	Chemtest Job No.:	19-37105		
Quotation No.:	Chemtest Sample ID.:	919414		
Order No.:	Client Sample Ref.:	1		
	Client Sample ID.:	1		
	Sample Location:	1		
	Sample Type:	SOIL		
	Top Depth (m):	0.1		
	Bottom Depth (m):	0.8		
	Date Sampled (\$):	31-Oct-2019		
	Asbestos Lab:	DURHAM		
Determinand	Accred.	SOP	Units	LOD
Benzol(b)fluoranthene	U	2700	mg/kg	0.10
Benzo(k)fluoranthene	U	2700	mg/kg	0.10
Benzo(a)pyrene	U	2700	mg/kg	0.10
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10
Benzo(g,h,i)perylene	U	2700	mg/kg	0.10
Total Of 16 PAH's	U	2700	mg/kg	2.0
Total Phenols	U	2820	mg/kg	0.30