Our ref: 0927-4/L1/ds
Your ref: **H22-0381-19**

13 November 2023

South Holland District Council
Council Offices
Priory Road
Spalding
Lincolnshire
PE11 2XE

For the attention: South Holland District Council - Planning Dept.
Mr D Grant.
& Environmental Health
Ms Sue Armour

Cc Mr A Mcloughlin by email only.

Dear David & Sue

Re:H22-0381-19: Location: R/O 30 Austendyke Road, Weston Hills.
Contaminated Land Condition ~ Candidate Import Soils for Private Gardens & Soft Landscaping.

1. Overview

This letter contains a human health risk assessment for a proposed source of import soils to form soft landscaped and garden areas in the development, and for which this Author seeks SHDC approval on behalf of the Principal Contractor [Aarons General Builders.] and their Client.

Comparison of these test results against current guidance [LQM-CIEH S4UL, CSL, etc.] shows that they would pose a *Negligible-Low* risk to human health and therefore may be considered suitable for use in domestic gardens subject to the agreement of the Regulator.

Goldfinch Environmental Ltd
19 Palmer Street, Walsham Le Willows, Bury St Edmunds, Suffolk. IP31 3BZ
Tel: 01359 258681

We trust this correspondence now provides sufficient information such that the proposed source can be approved by SHDC. A Validation Report would be prepared and provided to SHDC by a suitable independent person upon completion of the works.

On behalf of the Principal Subcontractor we thank you in advance for your prompt attention in this matter.

Yours faithfully

D Sargeant

D Sargeant

For & on behalf of
Goldfinch Environmental Ltd

Goldfinch Environmental Ltd
19 Palmer Street, Walsham Le Willows, Bury St Edmunds, Suffolk. IP31 3BZ
Tel: 01359 258681

UKAS TESTING 2531

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

CHEMTECH environmental part of Cawood

ANALYTICAL TEST REPORT

Contract no: 119400

Contract name: Boston Pad, Recycled Soils

Client reference: -

Clients name: Total Aggregates

Clients address: Wigwam Lane
Hucknall
Nottingham
NG15 7SZ

Samples received: 20 February 2023

Analysis started: 20 February 2023

Analysis completed: 28 February 2023

Report issued: 28 February 2023

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by: ANeasham-Bourn

Abbie Neasham-Bourn

Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
119400-1	Boston Pad Soils	-	Loamy Clay with Gravel	-	-	13.8

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SOILS

Lab number			119400-1
Sample id			Boston Pad Soils
Depth (m)			-
Date sampled			16/02/2023
Test	**Method**	**Units**	
Antimony (total)	CE127 U	mg/kg Sb	1.0
Arsenic (total)	CE127 M	mg/kg As	13
Barium (total)	CE127 M	mg/kg Ba	106
Cadmium (total)	CE127 M	mg/kg Cd	<0.2
Chromium (total)	CE127 M	mg/kg Cr	23
Copper (total)	CE127 M	mg/kg Cu	29
Lead (total)	CE127 M	mg/kg Pb	141
Mercury (total)	CE127 M	mg/kg Hg	<0.5
Molybdenum (total)	CE127 M	mg/kg Mo	1.3
Nickel (total)	CE127 M	mg/kg Ni	17
Selenium (total)	CE127 M	mg/kg Se	0.9
Zinc (total)	CE127 M	mg/kg Zn	78
pH	CE004 M	units	8.3
Sulphate (acid extractable)	CE062 M	mg/kg SO_4	1421
Total Organic Carbon (TOC)	CE197	% w/w C	2.6
Loss On Ignition at 440°C	CE006 U	% w/w	5.4
PAH			
Naphthalene	CE087 M	mg/kg	0.02
Acenaphthylene	CE087 M	mg/kg	0.05
Acenaphthene	CE087 M	mg/kg	<0.02
Fluorene	CE087 U	mg/kg	<0.02
Phenanthrene	CE087 M	mg/kg	0.27
Anthracene	CE087 U	mg/kg	0.08
Fluoranthene	CE087 M	mg/kg	0.95
Pyrene	CE087 M	mg/kg	0.90
Benzo(a)anthracene	CE087 U	mg/kg	0.59
Chrysene	CE087 M	mg/kg	0.61
Benzo(b)fluoranthene	CE087 M	mg/kg	0.82
Benzo(k)fluoranthene	CE087 M	mg/kg	0.33
Benzo(a)pyrene	CE087 U	mg/kg	0.75
Indeno(123cd)pyrene	CE087 M	mg/kg	0.55
Dibenz(ah)anthracene	CE087 M	mg/kg	0.11
Benzo(ghi)perylene	CE087 M	mg/kg	0.50
Coronene	CE087	mg/kg	0.07
PAH (total of 17)	CE087	mg/kg	6.61
BTEX & TPH			
Benzene	CE192 U	mg/kg	<0.01
Toluene	CE192 U	mg/kg	<0.01
Ethylbenzene	CE192 U	mg/kg	<0.01
m & p-Xylene	CE192 U	mg/kg	<0.02

Chemtech Environmental Limited

SOILS

Lab number			119400-1
Sample id			Boston Pad Soils
Depth (m)			-
Date sampled			16/02/2023
Test	**Method**	**Units**	
o-Xylene	CE192 U	mg/kg	<0.01
EPH (>C10-C40)	CE033 M	mg/kg	173
PCB			
PCB Congener 28	CE137 M	mg/kg	<0.004
PCB Congener 52	CE137 M	mg/kg	<0.004
PCB Congener 101	CE137 M	mg/kg	<0.008
PCB Congener 118	CE137 M	mg/kg	<0.006
PCB Congener 138	CE137 M	mg/kg	<0.006
PCB Congener 153	CE137 M	mg/kg	<0.009
PCB Congener 180	CE137 M	mg/kg	0.02
PCB (total of ICES 7)	CE137 M	mg/kg	<0.045
Subcontracted analysis			
Asbestos (qualitative)	$	-	NAD

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Antimony (total)	Aqua regia digest, ICP-MS	Dry	U	0.2	mg/kg Sb
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Barium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ba
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Molybdenum (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Mo
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE062	Sulphate (acid extractable)	HCl extract, analysed by ICP-OES	Dry	M	100	mg/kg SO_4
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE006	Loss On Ignition at 440°C	Based on BS 1377, Gravimetry	Dry	U	0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Coronene	Solvent extraction, GC-MS	As received		0.02	mg/kg
CE087	PAH (total of 17)	Solvent extraction, GC-MS	As received		0.36	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg
CE033	EPH (>C10-C40)	Solvent extraction, GC-FID	As received	M	19	mg/kg
CE137	PCB Congener 28	Solvent extraction, GC-MS	As received	M	0.004	mg/kg
CE137	PCB Congener 52	Solvent extraction, GC-MS	As received	M	0.004	mg/kg
CE137	PCB Congener 101	Solvent extraction, GC-MS	As received	M	0.008	mg/kg
CE137	PCB Congener 118	Solvent extraction, GC-MS	As received	M	0.006	mg/kg

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE137	PCB Congener 138	Solvent extraction, GC-MS	As received	M	0.006	mg/kg
CE137	PCB Congener 153	Solvent extraction, GC-MS	As received	M	0.009	mg/kg
CE137	PCB Congener 180	Solvent extraction, GC-MS	As received	M	0.008	mg/kg
CE137	PCB (total of ICES 7)	Solvent extraction, GC-MS	As received	M	0.045	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
119400-1	Boston Pad Soils	-	N	