Project					TR	LIAL PIT No
Bodicote						TD116
Job No	Date 06-12-12	Ground Level (m)	Co-Ordinates ()			
12151J	06-12-12					
Contractor					Sheet	
						1 of 1
		STRATA		SA	MPLE	S & TESTS
				Depth	No	Remarks/Tests
Depth No $(3 \sqrt{3} \sqrt{3})$ 0.00-0.25 $(3 \sqrt{3} \sqrt{3})$	TOPSOIL: Soft to firm bro and rare subangular mediu	DESCRIP own slightly sandy CLAY im gravel of limestone.	TION with occasional roots and rootlets			
0.25-0.40	Firm brown slightly sandy medium of limestone.	locally slightly gravelly	CLAY. Gravel is angular, fine and			
0.40-0.50	Weak grey LIMESTONE.	1' 1/1 1 0'		0.40	ES	
	Stiff grey locally orange bi staining on some fissure su	rown slightly sandy fissur irfaces.	ed SILT/CLAY. Rust coloured			
				0.95	D	
× × × × × × × × × ×				1.75	D	
				1.75	D	
Shoring/Support: Stability:					G RI	ENERAL EMARKS
► 2.5 -	> I			e	ncounter	red
D C	B 0.4					
All dimensions in me Scale 1:25	tres Client Banner H	Iomes Me Pla	ethod/Trial Pit excavated using ant Used 3CX with 0.3 m buck	g JCB I tet	logged E	^{By} CG

Project							TRIAL PIT No					
Bo			TD117									
Job No			Date 06-12	-12	Ground Level (n	n)	Co-Ordinates ()			16117		
12	151J		06-12	-12								
Contractor									Sheet			
STRATA SA										ES & TESTS		
	1							Deptl	n No	Remarks/Tests		
Depth 0.00-0.20	No	<u>17 71</u>	DESCRIPTION OPSOIL: Soft to firm brown slightly sandy CLAY with occasional roots and rootlets and rare subangular medium gravel of limestone. 0.10						J			
0.20-0.65			Firm brown slight nedium of limest	ly sandy loo one.	cally slightly grave	lly CLAY	. Gravel is angular, fine and					
0.65-0.95			Brown very claye	y angular G	RAVEL AND CO	BBLE of	Limestone and Ironstone.	0.60	D ES			
0.95-1.90			Stiff grey locally of some fissure surfa	orange brov ces.	vn sligltly sandy fis	ssured CL	AY. Rust coloured staining or	1	IN	110, 102 101/2		
								1.10	HV	110, 102 kN/m2		
								1.60	D			
1.90-2.90			Stiff grey locally of the staining on some f	orange brov fissure surfa	vn slightly sandy fis aces.	ssured SII	T/CLAY. Rust coloured	1.80	HV	100, 110 kN/m2		
		+ + + + + + + + + +										
2 00 2 05		×	Andarotaly weak	IMESTO	NE and IDONSTO	NE rocov	arad as angular aphlas					
2.90-2.93			vioueratery weak			NE TECOV						
Shoring/S Stability:	Supp	ort:							R	JENERAL EMARKS		
⊨ D		2.5 — A C	B 0.4						No Grou encounte	undwater ered		
All dimen	iona	in mot	oc Client D	nner Uo	mes	Method/	Trial Pit excavated using	ICB	Lorged	By		
All ulmen Sca	All dimensions in metres Scale 1:25 Chent Banner Homes Method/ I fial Pit excavated using JCB Plant Used 3CX with 0.3 m bucket							Loggeu	CG			

TRIAL PIT LO	DG
--------------	-----------

Project					TR	LIAL PIT No
Bodicote						TD110
Job No	Date 06-12-12	Ground Level (m)	Co-Ordinates ()			
12151J	06-12-12					
Contractor					Sheet	
						1 of 1
		STRATA		SAI	MPLE	S & TESTS
				Depth	No	Remarks/Tests
Depth 0.00-0.25 0.25-0.65	TOPSOIL: Soft to firm bro and rare subangular mediu Firm brown slightly sandy	DESCRI own slightly sandy CLA m gravel of limestone. locally slightly gravelly	IPTION AY with occasional roots and rootlets y CLAY. Gravel is angular, fine and	0.10	ES	
0.65-1.95	medium of limestone Stiff grey locally orange be some fissure surfaces.	rown slightly sandy fisse	ured CLAY. Rust coloured staining on	_		
				1.00	ES	
				1.20	HV D	78, 84 kN/m2
1.95-2.00	Moderately weak LIMEST	FONE and IRONSTON	E recovered as angular cobbles.			
Shoring/Support: Stability:					G	ENERAL EMARKS
► 2.5 — A D C	B 0.4			N er	lo Groun ncounter	ndwater red
All dimensions in metr Scale 1:25	res Client Banner H	Iomes I	Method/Trial Pit excavated using . Plant Used 3CX with 0.3 m bucke	ICB L	ogged E	^{3y} CG

TRIAL F	PIT LOG
---------	---------

Project							TRIAL PIT No					
Bodicote									TD110			
Job No			Date 07-12	-12	Ground Level (m))	Co-Ordinates ()			16113		
12	151J	[07-12	-12								
Contractor									Sheet			
										1 of 1		
				S	TRATA			SA	MPLE	ES & TESTS		
								Depth	No	Remarks/Tests		
Depth 0.00-0.20	No	<u>, 17</u> , 17 , 11	DESCRIPTION TOPSOIL: Soft to firm brown slightly sandy CLAY with occasional roots and rootlets and rare subangular medium gravel of limestone.									
0.20-0.45			Firm brown slight nedium of limest	ly sandy loo one. Rare c	cally slightly gravell cobble of limestone r	ly CLAY. noted.	Gravel is angular, fine an	d				
0.45-1.70			irm becoming stiff below 1 m grey locally orange brown slightly sandy fissured SILT/CLAY. Rust coloured staining on some fissure surfaces. Occasional angular coars gravel of limestone below 1 m									
1.70-2.50			Compact grey loc on some fissure si	ally orange irfaces.	brown slightly sand	y fissured	SILT. Rust coloured stair	ning				
Shoring/S Stability:	Supp	oort:							R R No Grou	ENERAL EMARKS undwater ered		
D		- 1.3 — A C	B 0.4									
All dimen	sions ale 1:	in metr 25	es Client Ba	anner Hoi	mes I	Method/ T Plant Use	Trial Pit excavated usi d 3CX with 0.3 m bu	ng JCB	Logged	^{By} CG		

TRIAL PIT	LOG
------------------	-----

Project							,	TRI	AL PIT No
Bodicot	e							٦	D120
Job No		Date 07-12-12	Ground Level (n	m)	Co-Ordinates ()				
12151J		07-12-12							
Contractor							Sh	eet	1 6 1
									1 of 1
			STRATA			S	AMPI	LES	& TESTS
						Dep	th N	lo	Remarks/Tests
Depth No 0.00-0.25	$\frac{\underline{x}^{1}}{\underline{y}} = \frac{1}{2} $	OPSOIL: Soft to firm bro nd rare subangular mediu	DESC own slightly sandy CI im gravel of limestone	CRIPTION LAY with c ne.	ccasional roots and roo	tlets			
0.25-0.80	Fi m	irm brown slightly sandy edium of limestone. Rai	v locally slightly grave re cobble of limestone	elly CLAY. e noted.	Gravel is angular, fine	and			
0.80-1.35	<u>-0</u> 82 B	rown very clavey angula	r GRAVEL AND CC	OBBLE of I	imestone and Ironstone	<u> </u>			
0.00 1.55		iown vory engeg ungenu				~			
	80 80								
Shoring/Supp Stability:	ort:					I		GE RE	NERAL MARKS
	1.1	₽					No Gr encou	round	lwater d
D	A	R 04							
	С								
All dimensions Scale 1:	in metre 25	s Client Banner H	Homes	Method/ Plant Use	Trial Pit excavated u d 3CX with 0.3 m	ising JCB bucket	Logge	ed By	CG

TRIAL PIT	LOG
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Project								TRIAL PIT No			
Bo	Bodicote TD101										
Job No		Date 07-1	2-12	Ground Level (n	n)	Co-Ordinates ()			16121		
12	151J	07-1	2-12								
Contractor								Shee	t		
	STRATA SA										
							Dept	n No	Remarks/Tests		
Depth 0.00-0.25	No $\frac{\sqrt{h_z}}{h_z}$ To $\frac{1}{h_z}$ and $\frac{1}{h_z}$	$\frac{\Delta h_{e}}{\Delta h_{e}}$ TOPSOIL: Soft to firm brown slightly sandy CLAY with occasional roots and rootlets and rare subangular medium gravel of limestone.									
0.25-0.60	-° Fi 	rm brown slig edium of lime	htly sandy loc stone	ally slightly grave	elly CLAY	Gravel is angular, fine a	ind				
0.60-2.15		iff 1.5 m grey aining on some	locally orange e fissure surfa	e brown slightly sa ces. VE and IRONSTO	ndy fissure	d CLAY. Rust coloured					
Shoring/S Stability:	Shoring/Support: Stability:							R R	GENERAL CEMARKS		
│ ⊨	— 1.35 — A	►	-					encounte	ered		
D											
Δ11 dimon	cione in matra	Client I	Ranner Hor	nes	Method/	Frial Pit excavated us	sing JCB	Logged	Bv		
Sc	ale 1:25			1105	Plant Use	d 3CX with 0.3 m b	ucket		CG		

APPENDIX F

Geotechnical Laboratory Test Results



LABORATORY REPORT



4043

Contract Number: PSL13/0111

Client's Reference:

Report Date: 10 January 2013

Client Name: Discovery CE The Granary Broadwell Rugby Warwickshire CV23 8HF

For the attention of: Cathal Gilespie

Contract Title:	Bodicote
Date Received:	08/01/2013
Date Commenced:	08/01/2013
Date Completed:	10/01/2013

Notes: Observations and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

M.burd

M Beastall (Laboratory Manager)

R Gunson (Director) A Watkins (Director)

5 – 7 Hexthorpe Road, Hexthorpe, Doncaster DN4 0AR tel: +44 (0)844 815 6641 fax: +44 (0)844 815 6642 e-mail: rgunson@prosoils.co.uk awatkins@prosoils.co.uk Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Depth m			Desc	ription of Sample						
TP101		D	2.50	Brown sandy silty CLA	Y.								
TP103		D	1.00	Brown sandy silty CLA	Y.								
TP104		D	1.75	Brown sandy silty CLA	Y.								
TP105		D	0.90	Brown sandy silty CLA	Y.								
TP105		D	2.00	Brown sandy silty CLA	Y.								
TP106		D	1.10	Brown sandy silty CLA	vn sandy silty CLAY.								
TP106		D	2.20	Brown very sandy slight	tly clayey SILT.								
TP107		D	1.10	Brown sandy silty CLA	Y.								
TP108		D	1.60	Brown sandy CLAY.									
TP108		D	2.80	Brown gravelly sandy si	ilty CLAY.								
					Compiled by	Date	Checked by	Date	Approved by	Date			

	Compiled by	Date	Checked by	Date	Approved by	Date
l	\mathcal{A}	10/01/13	M. ber	10/01/13	M.Sur	10/01/13
Professional Soils Laboratory		PODI		Contract No:	PSL13/0111	
		ворг		Client Ref:		

SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

				Moisture	Bulk	Dry	Particle	Liquid	Plastic	Plasticity	%	
Hole	Sample	Sample	Depth	Content	Density	Density	Density	Limit	Limit	Index	Passing	Remarks
Number	Number	Туре	m	%	Mg/m ³	Mg/m ³	Mg/m ³	%	%	%	.425mm	
				Clause 3.2	Clause 7.2	Clause 7.2	Clause 8.	Clause 4.3/4.4	Clause 5.	Clause 6.		
TP101		D	2.50	24				42	23	19	100	Intermediate plasticity CI.
TP103		D	1.00	25				46	26	20	100	Intermediate plasticity CI.
TP104		D	1.75	23				40	22	18	100	Intermediate plasticity CI.
TP105		D	0.90	30				58	30	28	100	High plasticity CH.
TP105		D	2.00	20				48	24	24	100	Intermediate plasticity CI.
TP106		D	1.10	22				39	22	17	100	Intermediate plasticity CI.
TP106		D	2.20	25					NP			
TP107		D	1.10	24				47	24	23	100	Intermediate plasticity CI.
TP108		D	1.60	26				55	23	32	100	High plasticity CH.
TP108		D	2.80	21				35	24	11	86	Intermediate plasticity CI.

SYMBOLS: NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.

	Compiled by	Date	Checked by	Date	Approved by	Date
est.	\mathcal{A}	10/01/13	M.S.	10/01/13	M.S.S.	10/01/13
Professional Soils Laboratory		ΡΟΠΙ		Contract No:	PSL13/0111	
		Client Ref:				



APPENDIX G

Chemical Laboratory Results

PBET Results



Cathal Gillespie Discovery CE The Granary Broadwell House Farm Broadwell Rugby Warwickshire CV23 8HF

t: 01926 813909

e: c.gillespie@dce-services.co.uk



i2 Analytical Ltd. Building 19, BRE, Garston, Watford, WD25 9XX

t: 01923 67 00 20 f: 01923 67 00 30 e: reception@i2analytical.com

Analytical Report Number : 12-38437

Replaces Analytical Report Number : 12-38437, issue no. 1

Project / Site name:	Bodicote	Samples received on:	14/12/2012
Your job number:	12151J	Samples instructed on:	14/12/2012
Your order number:		Analysis completed by:	24/12/2012
Report Issue Number:	2	Report issued on:	08/01/2013
Samples Analysed:	1 2 stage wac sample - 16 soil samples		

tite Signed:

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Signed:

Rexona Rahman Customer Services Manager For & on behalf of i2 Analytical Ltd.

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.





Project / Site name: Bodicote

Sample KarbaranceInterfactThe part is interfactor is interfac	Lab Sample Number		239817	239818	239819	239820	239821		
Sample Number Jone Supplied None Supplied None Supplied None Supplied None Supplied Date Sampled	Sample Reference				TP102	TP112	TP101	TP103	TP109
Depth (m) U.S. 0 0.70 0.10 0.50 0.20 Dets Sampled U.S. 0 05/12/012 05/12/012 05/12/012 05/12/012 Time Taken Nore Supplied Nore Supplied Nore Supplied Nore Supplied Analytical Parameter (soil Analysis) g	Sample Number				None Supplied				
Date Sampled UNITY 06/12/2012	Depth (m)				0.50	0.70	0.10	0.50	0.20
Time Taken Two Supplied None Supplied None Supplied None Supplied Analytical Parameter (Soil Analysis) S	Date Sampled				05/12/2012	06/12/2012	05/12/2012	05/12/2012	05/12/2012
Analytical Parameter (Soil Analysis) gr low low low	Time Taken				None Supplied				
Stone Content % 0.1 NOME < 0.1	Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Moissner Content % NA NOME 17 20 22 17 24 Contal mass of sample received kg 0.001 NOME 0.49 0.51 0.53 0.52 General Inorganics pt pt 0.002 NAM MCRTS -<	Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total mass of sample received kg 0.001 NOME 0.49 0.49 0.51 0.53 0.52 General Longanics pH PH Ums N/A MCRYTS - </td <td>Moisture Content</td> <td>%</td> <td>N/A</td> <td>NONE</td> <td>17</td> <td>20</td> <td>22</td> <td>17</td> <td>24</td>	Moisture Content	%	N/A	NONE	17	20	22	17	24
Concrete PH Units N/A MCRITS -	Total mass of sample received	kg	0.001	NONE	0.49	0.49	0.51	0.53	0.52
pH pH units N/A MCRTS -	General Inorganics								
Water Soulie Suprate as SO ₁ (2:1) g/l 0.0025 MCRTS -<	pH	pH Units	N/A	MCERTS	-	-	-	-	-
Water Soluble Suprate as Su, (21) mg/ng 2.5 MCRRTS - <td>Water Soluble Sulphate as SO_4 (2:1)</td> <td>g/l</td> <td>0.0025</td> <td>MCERTS</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	Water Soluble Sulphate as SO_4 (2:1)	g/l	0.0025	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) % 0.1 MCRRTS - 0.4 - - - Speciated PAHs Nophthalene mg/hg 0.05 MCRRTS - <0.05	Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Speciated PAHs Naphthelene m_a/h_a 0.05 MCERTS - < < .	Total Organic Carbon (TOC)	%	0.1	MCERTS	-	0.4	-	-	-
Naphthelene mg/kg 0.05 MCRTS - < - - Acenaphthylene mg/kg 0.1 MCRTS - <.0.00	Speciated PAHs								
Acenaphthylene mg/kg 0.2 MCERTS -	Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-	-
Acenaphthene mg/kg 0.1 MCERTS - < -	Acenaphthylene	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
Fluorene mg/kg 0.2 MCERTS - < 0.20 Anthracene mg/kg 0.2 MCERTS - < 0.20 Anthracene mg/kg 0.1 MCERTS - < 0.20	Acenaphthene	mg/kg	0.1	MCERTS	-	< 0.10	-	-	-
Phenanthrene mg/kg 0.2 MCERTS - < - <td>Fluorene</td> <td>mg/kg</td> <td>0.2</td> <td>MCERTS</td> <td>-</td> <td>< 0.20</td> <td>-</td> <td>-</td> <td>-</td>	Fluorene	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
Anthracene mg/kg 0.1 MCERTS - -	Phenanthrene	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
Hudrathene mg/kg 0.2 MCERTS - -	Anthracene	mg/kg	0.1	MCERTS	-	< 0.10	-	-	-
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Fluoranthene	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
$\bert2(q) and indefine $$ mg/kg 0.2 MCERTS - < 0.20 - < - < 0.20 - < - < - < - < - < - < - < - < - < - $	Pyrene Benne (a) anthra sen a	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Chrysona	mg/kg	0.2	MCERTS	-	< 0.20	-	-	-
Dericol/Industrie Img/kg 0.1 MCERTS -	Chrysene Bonzo(b)fluoranthono	mg/kg	0.05	MCEDITE		< 0.05	-	_	
Derivativitation Implying OLZ MCLRIS Solution	Benzo(k)fluoranthene	mg/kg	0.1	MCEDIC		< 0.10	-	_	
Deficie (J) Tree: India (J) Diversion (J) Diversio	Benzo(a)nvrene	ma/ka	0.2	MCERTS	_	< 0.20	-	_	
Indext, (JLP) refixe mg/kg 0.2 MCERTS - < 0.20 -	Indeno(1,2,3-cd)pyrene	ma/ka	0.1	MCERTS	-	< 0.20	-	_	_
Benza(qhi)perviene mg/kg 0.05 MCERTS - < 0.05 -	Dibenz(a,h)anthracene	ma/ka	0.2	MCERTS	-	< 0.20	-	-	_
Coronene mg/kg 0.05 NONE - -	Benzo(ghi)pervlene	ma/ka	0.05	MCERTS	-	< 0.05	-	-	-
Total PAH Total WAC-17 PAHs mg/kg 1.6 NONE - <1.6	Coronene	mg/kg	0.05	NONE	-	< 0.05	-	-	-
Total WAC-17 PAHs mg/kg 1.6 NONE - < - -	Total PAH								
Heavy Metals / Metalloids Arsenic (aqua regia extractable) mg/kg 1 MCERTS - 47 27 110 Barium (aqua regia extractable) mg/kg 1 MCERTS - - - 70 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS - - - 4.9 Boron (water soluble) mg/kg 0.2 MCERTS - - - 4.9 Chromium (hexavalent) mg/kg 0.2 MCERTS - - - 4.9 Chromium (hexavalent) mg/kg 0.2 MCERTS - - <0.2	Total WAC-17 PAHs	mg/kg	1.6	NONE	-	< 1.6	-	-	-
Arsenic (aqua regia extractable) mg/kg 1 MCERTS - 47 27 110 Barlum (aqua regia extractable) mg/kg 1 MCERTS - - - 70 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS - - - 4.9 Boron (water soluble) mg/kg 0.2 MCERTS - - - 4.9 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - - - 4.9 Chromium (hexavalent) mg/kg 0.2 MCERTS - - - 0.2 <0.2	Heavy Metals / Metalloids								
Barium (aqua regia extractable) mg/kg 1 MCERTS - - - - 70 Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS - - - 4.9 Boron (water soluble) mg/kg 0.2 MCERTS - - - 1.1 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - - 0.2 <0.2	Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	47	27	110
Beryllium (aqua regia extractable) mg/kg 0.06 MCERTS - - - 4.9 Boron (water soluble) mg/kg 0.2 MCERTS - - - 1.1 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - - - 1.1 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - <	Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	70
Boron (water soluble) mg/kg 0.2 MCERTS - - - - 1.1 Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - - <	Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-	4.9
Cadmium (aqua regia extractable) mg/kg 0.2 MCERTS - - < 0.2 < 0.2 < 0.2 Chromium (hexavalent) mg/kg 4 MCERTS - - < 0.2	Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	1.1
Chromium (nexavalent) mg/kg 4 MCERTS - - - -	Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	< 0.2	< 0.2	< 0.2
Chromium (III) mg/kg I NONE - - - 240 Chromium (aqua regia extractable) mg/kg I MCERTS - - 87 57 240 Copper (aqua regia extractable) mg/kg I MCERTS - - 87 57 240 Copper (aqua regia extractable) mg/kg I MCERTS - - 17 17 Lead (aqua regia extractable) mg/kg 2 MCERTS - 32 15 36 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS - 45 31 94 Selenium (aqua regia extractable) mg/kg 1 MCERTS - 1.0 <1.0	Chromium (hexavalent)	mg/kg	4	MCERTS	-	-	-	-	< 4.0
Component (aqua regia extractable) Ing/kg 1 MCERTS - - 67 57 240 Copper (aqua regia extractable) mg/kg 1 MCERTS - - - 17 Lead (aqua regia extractable) mg/kg 2 MCERTS - 32 15 36 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS - <	Chromium (2012 rogia ovtrastable)	mg/kg	1	NONE	-	-	- 07	-	240
Copper (aqua regia extractable) Ing/kg 1 Interfs - - - 17 Lead (aqua regia extractable) mg/kg 2 MCERTS - 32 15 36 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS - <	Conner (aqua regia extractable)	mg/kg	1	MCEDIC	-	-	0/	5/	<u>240</u> 17
Letter (aqua regia extractable) mg/kg 2 mcLRTS - - J2 15 36 Mercury (aqua regia extractable) mg/kg 0.3 MCERTS - <0.3	Lead (aqua regia extractable)	mg/kg	2	MCEDTC	-	-	- 37	- 15	36
Nickel (aqua regia extractable) mg/kg 2 MCERTS - 45 31 94 Selenium (aqua regia extractable) mg/kg 1 MCERTS - <	Mercury (aqua regia extractable)	mg/kg	03	MCEDIC	_	-	<u>ر</u> ا ۲	< 0.3	< 0.3
Selenium (aqua regia extractable) mg/kg 1 MCERTS - <1.0 <1.0 <1.0 <1.0 Vanadium (aqua regia extractable) mg/kg 1 MCERTS - - - 360 Zinc (aqua regia extractable) mg/kg 2 MCERTS - - - 360 Zinc (aqua regia extractable) mg/kg 2 MCERTS - - - 210	Nickel (aqua regia extractable)	mg/kg	2	MCFRTS	_	_	45	31	94
Vanadium (aqua regia extractable) mg/kg 1 MCERTS - - 360 Zinc (aqua regia extractable) mg/kg 2 MCERTS - - - 360	Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable) mg/kg 2 MCERTS 210	Vanadium (agua regia extractable)	mg/ka	1	MCERTS	-	-	-	-	360
	Zinc (aqua regia extractable)	mg/kg	2	MCERTS	-	-	-	-	210

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Lah Cample Number				220017	220010	220010	220020	220021
Cample Reference				239017	239010	239019	239020	ZJ9021
Sample Number				None Supplied				
Denth (m)								
Depth (iii)				0.30	06/12/2012	0.10	0.30	0.20
Time Taken				None Supplied				
			<u> </u>	None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics				-		-	-	
Benzene	ua/ka	1	MCERTS	-	< 1.0	-	-	-
Toluene	ua/ka	1	MCERTS	-	< 1.0	-	-	-
Ethylbenzene	ua/ka	1	MCERTS	-	< 1.0	-	-	-
p & m-xylene	ua/ka	1	MCERTS	-	< 1.0	-	-	-
o-xvlene	ua/ka	1	MCERTS	-	< 1.0	-	-	-
	F3/3							
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40)	mg/kg	10	NONE	-	< 10	-	-	-
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 52	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 101	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 118	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 138	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 153	mg/kg	0.02	NONE	-	< 0.02	-	-	-
PCB Congener 180	mg/kg	0.02	NONE	-	< 0.02	-	-	-
Total PCBs	mg/kg	0.3	NONE	-	< 0.30	-	-	-
Organochlorine Pesticides (OCP)	0, 0							
Aldrin	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Alpha-BHC(Lindane)	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Beta-BHC(Lindane)	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Chlordane (sum of cis & trans isomers)	mg/kg	0.01	NONE	< 0.01	-	-	-	-
DDD	mg/kg	0.01	NONE	< 0.01	-	-	-	-
DDE	mg/kg	0.01	NONE	< 0.01	-	-	-	-
DDT	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Dieldrin	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Endosulphan I	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Endosulphan II	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Endosulphan Sulphate	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Endrin	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Gamma-BHC	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Heptachlor	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Heptachlor epoxide	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Hexachlorobenzene	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Hexachlorocyclohexane	mg/kg	0.01	NONE	< 0.01	-	-	-	-
pp-Methoxychlor	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Propyzamide	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Organophosphorus Pesticides (OPP)								
Azinphos methyl	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Diazinon	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Dichlorvos	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Dimethoate	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Etion	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Fenitrothion	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Malathion	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Mevinphos	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Parathion	mg/kg	0.01	NONE	< 0.01	-	-	-	-
Pirimiphos methyl	mg/kg	0.01	NONE	< 0.01	-	-	-	-





Project / Site name: Bodicote

Lah Camala Numbar				220022	220022	220024	220025	220026
				239022	239023	Z39024	239023	Z39620
Sample Reference				Nono Supplied	1P114 Nono Supplied	Nono Supplied	Nono Supplied	Nono Supplied
Donth (m)								
Depth (iii)				06/12/2012	06/12/2012	0.13	0.30	06/12/2012
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
		-		None Supplied	None Supplieu	None Supplieu	None Supplieu	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	23	20	22	22	20
Total mass of sample received	kg	0.001	NONE	0.49	0.52	0.49	0.46	0.52
•								
General Inorganics								
pH	pH Units	N/A	MCERTS	-	-	-	-	6.5
Water Soluble Sulphate as SO ₄ (2:1)	g/l	0.0025	MCERTS	-	-	-	-	0.015
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	15
Total Organic Carbon (TOC)	%	0.1	MCERTS	-	-	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthylene	mg/kg	0.2	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.2	MCERTS	-	-	-	-	-
Phenanthrene	mg/kg	0.2	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.1	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.2	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.2	MCERTS	-	-	-	-	-
Benzo(a)anthracene	mg/kg	0.2	MCERTS	-	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(b)fluoranthene	ma/ka	0.1	MCERTS	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.2	MCERTS	-	-	-	-	-
Benzo(a)pyrene	ma/ka	0.1	MCERTS	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ma/ka	0.2	MCERTS	-	-	-	-	-
Dibenz(a,h)anthracene	ma/ka	0.2	MCERTS	-	-	-	-	-
Benzo(ahi)pervlene	ma/ka	0.05	MCERTS	-	-	-	-	-
Coronene	ma/ka	0.05	NONE	-	-	-	-	-
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	-	-	-	-	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	98	73	210	70	46
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	61	-	44	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	3.2	-	3.1	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	1.2	-	0.7	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	-
Chromium (III)	mg/kg	1	NONE	230	180	360	160	-
Chromium (agua regia extractable)	mg/kg	1	MCERTS	230	180	360	160	100
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	15	-	17	-
Lead (aqua regia extractable)	mg/kg	2	MCERTS	39	22	33	27	31
Mercury (agua regia extractable)	mg/ka	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	100	92	150	92	52
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kq	1	MCERTS	-	270	-	250	-
Zinc (aqua regia extractable)	mg/kg	2	MCERTS	-	170	-	210	-

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Lab Canada Number				220022	220022	220024	220025	220026
				239822	239823	239824	239825	239826
Sample Reference				IP115	IP114	IP110	TP107	IP116
Sample Number				None Supplied				
				01.0	0.50	0.15	0.50	0.40
Date Sampled				06/12/2012	06/12/2012	05/12/2012	05/12/2012	06/12/2012
Time Taken	-			None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ua/ka	1	MCERTS	-	-	-	-	-
Toluene	ua/ka	1	MCERTS	-	-	-	_	_
Ethylbenzene	ua/ka	1	MCERTS	-	-	-	_	_
n & m-yylene	µg/kg	1	MCERTS	_	-	-	_	-
	ug/kg	1	MCERTS	_	_	_	_	_
0-xylene	µy/ky	L	PICERTS	_	_	_	_	_
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40)	ma/ka	10	NONE	-	-	-	-	_
PCBs by GC-MS	iiig/kg	10	HUNL					
PCB Congonar 28	malka	0.02	NONE	_	_	_		_
PCB Congener 52	mg/kg	0.02	NONE		-	-	-	-
PCB Congener 101	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 110	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 118	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 138	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 153	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 180	mg/kg	0.02	NONE	-	-	-	-	-
Total PCBs	mg/kg	0.3	NONE	-	-	-	-	-
Organochlorine Pesticides (OCP)								
Aldrin	mg/kg	0.01	NONE	-	-	-	-	-
Alpha-BHC(Lindane)	mg/kg	0.01	NONE	-	-	-	-	-
Beta-BHC(Lindane)	mg/kg	0.01	NONE	-	-	-	-	-
Chlordane (sum of cis & trans isomers)	mg/kg	0.01	NONE	-	-	-	-	-
DDD	mg/kg	0.01	NONE	-	-	-	-	-
DDE	mg/kg	0.01	NONE	-	-	-	-	-
DDT	mg/kg	0.01	NONE	-	-	-	-	-
Dieldrin	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan I	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan II	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan Sulphate	mg/kg	0.01	NONE	-	-	-	-	-
Endrin	mg/kg	0.01	NONE	-	-	-	-	-
Gamma-BHC	mg/kg	0.01	NONE	-	-	-	-	-
Heptachlor	mg/kg	0.01	NONE	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.01	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.01	NONE	-	-	-	-	-
Hexachlorocyclohexane	mg/kg	0.01	NONE	-	-	-	-	-
pp-Methoxychlor	mg/kg	0.01	NONE	-	-	-	-	-
Propyzamide	mg/kg	0.01	NONE	-	-	-	-	-
Organophosphorus Pesticides (OPP)	0, 0							
Azinphos methyl	ma/ka	0.01	NONE	-	-	-	-	-
Diazinon	ma/ka	0.01	NONE	-	-	-	-	-
Dichlorvos	ma/ka	0.01	NONE	-	-	-	-	_
Dimethoate	ma/ka	0.01	NONE	-	-	-	-	-
Etion	ma/ka	0.01	NONE	-	-	-	-	_
Equitrothion	mg/kg	0.01	NONE	_	_	_	_	
Malathion	mg/kg	0.01		-	-	_	-	-
Mavinghas	mg/kg	0.01		-	-	-	-	-
Parathian	mg/Kg	0.01	NONE	-	-	-	-	-
Falauliuli Diriminhas mathul	mg/kg	0.01	NONE	-	-	-	-	-
	mg/кg	0.01	NONE	-	-	-	-	-





I ab Sample Number				239827	239828	239829	239830	239831
Sample Reference				TP106	TD111	TP101	TD114	TP110
Sample Number				None Supplied				
Denth (m)				0.40	0.50	1 20	2.00	1 10
Date Sampled				05/12/2012	06/12/2012	05/12/2012	06/12/2012	05/12/2012
Time Taken				None Supplied				
				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	22	19	19	17	24
Total mass of sample received	ka	0.001	NONE	0.50	0.56	1.2	0.99	0.45
General Inorganics								
H	pH Units	N/A	MCERTS	-	-	6.9	7.0	7.0
Water Soluble Sulphate as SO_4 (2:1)	g/l	0.0025	MCERTS	-	-	0.0079	0.026	0.052
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	-	-	7.9	26	52
Total Organic Carbon (TOC)	%	0.1	MCERTS	-	-	-	-	-
Speciated PAHs								
Naphthalene	ma/ka	0.05	MCERTS	-	-	-	-	-
Acenaphthylene	ma/ka	0.2	MCERTS	-	-	-	-	-
Acenaphthene	ma/ka	0.1	MCERTS	-	-	-	-	-
Fluorene	ma/ka	0.2	MCERTS	-	-	-	-	-
Phenanthrene	ma/ka	0.2	MCERTS	-	-	-	_	_
Anthracene	ma/ka	0.1	MCERTS	-	-	-	_	_
Fluoranthene	mg/kg	0.1	MCERTS	_	-	_	_	_
Durene	mg/kg	0.2	MCEDTC	_	_	_	_	_
Benzo(a)anthracene	mg/kg	0.2	MCEDTS	_		_	_	_
Chrysene	mg/kg	0.2	MCEDTS	_				_
Ronzo(h)fluoranthono	mg/kg	0.05	MCEDTC					
Benzo(k)fluoranthene	mg/kg	0.1	MCEDIC	-	-	-	-	-
Benzo(a)nurene	mg/kg	0.2	MCEDIC	-	-	-	-	-
Delizo(d)pyrelie	mg/kg	0.1	MCEDIC	-	-	-	-	-
Dibert(a,b)anthracene	mg/kg	0.2	MCEDIC	-	-	-	-	-
	тту/ку	0.2	MCEDIC	-	-	-	-	-
Benzo(gni)perviene	mg/kg	0.05	MCERTS	-	-	-	-	-
Coronene	mg/kg	0.05	NONE	-	-	-	-	-
Total DAH								
	ma/ka	16	NONE		_	_		
Total WAC-17 FAIls	ilig/kg	1.0	NONL	_	_	_	_	_
Heavy Metals / Metalloids								
	ma/ka	1	MCEPTS	40	30	_	_	_
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-		_	_	_
Benullium (aqua regia extractable)	mg/kg	0.06	MCEDTC	_	_	_	_	_
Boron (water soluble)	mg/kg	0.00	MCERTS	_	-	_	_	_
Codmium (agua rogia extractable)	mg/kg	0.2	MCEDITC	< 0.2	< 0.2	_	_	_
Chromium (hevavalent)	mg/kg	4	MCEDTC	- 0.2	~ 0.2		-	
Chromium (III)	mg/kg	1	NONE	_		-	_	
Chromium (anua regia extractable)	mg/kg	1	MCEDTO	120	71	-	-	-
Conner (aqua regia extractable)	mg/kg	1	MCEDTO	120	/1	-	-	-
Lood (oguo rogio ovtrostablo)	mg/kg	2	MCEDTC		- 16	-	-	-
	mg/Kg	2	MCEDIC	23	01	-	-	-
Mielculy (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-	-
Nickei (dyud regid extractable)	mg/kg	2	MCERTS	50	39	-	-	-
	mg/Kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Variaulum (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
zinc (aqua regia extractable)	mg/kg	2	MCERTS	-	-	-	-	-





Lab Camula Number			220027	220020	220020	220020	220021	
				239827	239828	239829	239830	239831
Sample Reference				TP106	IP111	IP101	IP114	IP110
Sample Number				None Supplied				
				0.40	0.50	1.20	2.00	1.10
Date Sampled				05/12/2012	06/12/2012	05/12/2012	06/12/2012	05/12/2012
Time Taken	-			None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics								
Benzene	ua/ka	1	MCERTS	-	-	-	-	-
Toluene	ua/ka	1	MCERTS	-	-	-	_	_
Ethylbenzene	ua/ka	1	MCERTS	-	-	-	_	_
n & m-sylene	µg/kg	1	MCERTS	_	-	-	_	-
	ug/kg	1	MCERTS	_	_	_	_	_
0-xylene	µy/ky	L	PICER 13		_	_	_	_
Petroleum Hydrocarbons								
Mineral Oil (C10 - C40)	ma/ka	10	NONE	-	-	-	-	-
PCBs by GC-MS	iiig/kg	10	HUNL					
PCB Congener 28	ma/ka	0.02	NONE	_	_	_	_	_
PCB Congonar 52	mg/kg	0.02	NONE	-				
PCB Congener 101	mg/kg	0.02	NONE		_	_	_	_
PCB Congener 119	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 118	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 152	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 153	mg/kg	0.02	NONE	-	-	-	-	-
PCB Congener 180	mg/кg	0.02	NONE	-	-	-	-	-
Total PCBs	mg/kg	0.3	NONE	-	-	-	-	-
Organochiorine Pesticides (OCP)								
Aldrin	mg/kg	0.01	NONE	-	-	-	-	-
Alpha-BHC(Lindane)	mg/kg	0.01	NONE	-	-	-	-	-
Beta-BHC(Lindane)	mg/kg	0.01	NONE	-	-	-	-	-
Chlordane (sum of cis & trans isomers)	mg/kg	0.01	NONE	-	-	-	-	-
DDD	mg/kg	0.01	NONE	-	-	-	-	-
DDE	mg/kg	0.01	NONE	-	-	-	-	-
DDT	mg/kg	0.01	NONE	-	-	-	-	-
Dieldrin	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan I	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan II	mg/kg	0.01	NONE	-	-	-	-	-
Endosulphan Sulphate	mg/kg	0.01	NONE	-	-	-	-	-
Endrin	mg/kg	0.01	NONE	-	-	-	-	-
Gamma-BHC	mg/kg	0.01	NONE	-	-	-	-	-
Heptachlor	mg/kg	0.01	NONE	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.01	NONE	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.01	NONE	-	-	-	-	-
Hexachlorocyclohexane	mg/kg	0.01	NONE	-	-	-	-	-
pp-Methoxychlor	mg/kg	0.01	NONE	-	-	-	-	-
Propyzamide	mg/kg	0.01	NONE	-	-	-	-	-
Organophosphorus Pesticides (OPP)								
Azinphos methyl	mg/kg	0.01	NONE	-	-	-	-	-
Diazinon	mg/kq	0.01	NONE	-	-	-	-	-
Dichlorvos	ma/ka	0.01	NONE	-	-	-	-	-
Dimethoate	ma/ka	0.01	NONE	-	-	-	-	-
Etion	ma/ka	0.01	NONE	-	-	-	-	-
Fenitrothion	ma/ka	0.01	NONE	-	-	-	-	_
Malathion	ma/ka	0.01	NONE	-	-	-	-	_
Mevinphos	ma/ka	0.01	NONE	-	-	-	-	-
Parathion	ma/ka	0.01	NONE	-	_	_	-	-
Piriminhos methyl	ma/ka	0.01	NONE	-	-	-	-	-
	iiig/kg	0.01	HUNL					





Lab Sample Number	Lab Sample Number						
Sample Reference				TP117			
Sample Number				None Supplied			
Depth (m)				0.60			
Date Sampled				06/12/2012			
Time Taken				None Supplied			
			Þ				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	ccreditatic Status				
			ă				
Stone Content	%	0.1	NONE	< 0.1			
Moisture Content	%	N/A	NONE	25			
Total mass of sample received	kg	0.001	NONE	0.45			
General Inorganics							
pH	nH Units	N/A	MCERTS	7.1			
Water Soluble Sulphate as SO_4 (2:1)	g/l	0.0025	MCERTS	0.024			
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	23			
Total Organic Carbon (TOC)	%	0.1	MCERTS	-			
	-	-			•		
Speciated PAHs					1	1	
Naphthalene	mg/kg	0.05	MCERTS	-			
Acenaphthylene	mg/kg	0.2	MCERTS	-			
Acenaphthene	mg/kg	0.1	MCERTS	-			
Fluorene	mg/kg	0.2	MCERTS	-			
Phenanthrene	mg/kg	0.2	MCERTS	-			
Anthracene	mg/kg	0.1	MCERTS	-			
Fluorantnene	mg/kg	0.2	MCERTS	-			
Pyrene Banga (a) anthus son a	mg/kg	0.2	MCERTS	-			
Benzo(a)antriracene	mg/kg	0.2	MCERTS	-			
Chrysene	mg/kg	0.05	MCEDIC	-			
Benzo(k)fluoranthene	mg/kg	0.1	MCEDTS	_			
Benzo(a)nyrene	mg/kg	0.2	MCEDTS				
Indeno(1,2,3-cd)nyrene	mg/kg	0.1	MCERTS	-			
Dibenz(a h)anthracene	mg/kg	0.2	MCERTS	-			
Benzo(abi)pervlene	mg/kg	0.05	MCERTS	_			
Coronene	mg/kg	0.05	NONE	-			
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE	-			
Heavy Metals / Metalloids		1			1	1	8
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-		ļ	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-		I	1

Barium (aqua regia extractable)	mg/kg	1	MCERTS	-		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-		
Boron (water soluble)	mg/kg	0.2	MCERTS	-		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-		
Chromium (hexavalent)	mg/kg	4	MCERTS	-		
Chromium (III)	mg/kg	1	NONE	-		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-		
Lead (aqua regia extractable)	mg/kg	2	MCERTS	-		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-		
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	-		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-		
Zinc (aqua regia extractable)	mg/kg	2	MCERTS	-		





Lab Sample Number				239832		
Sample Reference				TP117		
Sample Number				None Supplied		
Depth (m)				0.60		
Date Sampled				06/12/2012		
Time Taken			-	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Monoaromatics						
Benzene	ua/ka	1	MCERTS	-		
Toluene	µg/kg	1	MCERTS	_		
Ethylbenzene	µg/kg	1	MCEDTS	_		
	µg/kg	1	MCEDTS			
	µg/kg	1	MCEDITS	_		
0-xylelle	µу/ку	1	PICERTS	-		II
Petroleum Hydrocarbons						
Mineral Oil (C10 - C40)	ma/ka	10	NONE	-		
PCBs by GC-MS	iiig/ky	10	NUNL	-		<u>ا</u> ــــــــــــــــــــــــــــــــــــ
PCB Conceptor 29	ma/lea	0.02	NONE	_		
PCB Congener 28	mg/kg	0.02	NONE	-		
PCB Congener 52	mg/kg	0.02	NONE	-		
PCB Congener 101	mg/kg	0.02	NONE	-		
PCB Congener 118	mg/kg	0.02	NONE	-		
PCB Congener 138	mg/kg	0.02	NONE	-		
PCB Congener 153	mg/kg	0.02	NONE	-		
PCB Congener 180	mg/kg	0.02	NONE	-		
Total PCBs	mg/kg	0.3	NONE	-		
Organochlorine Pesticides (OCP)	-					
Aldrin	mg/kg	0.01	NONE	-		
Alpha-BHC(Lindane)	mg/kg	0.01	NONE	-		
Beta-BHC(Lindane)	mg/kg	0.01	NONE	-		
Chlordane (sum of cis & trans isomers)	mg/kg	0.01	NONE	-		
DDD	mg/kg	0.01	NONE	-		
DDE	mg/kg	0.01	NONE	-		
DDT	mg/kg	0.01	NONE	-		
Dieldrin	mg/kg	0.01	NONE	-		
Endosulphan I	mg/kg	0.01	NONE	-		
Endosulphan II	mg/kg	0.01	NONE	-		
Endosulphan Sulphate	mg/kg	0.01	NONE	-		
Endrin	mg/kg	0.01	NONE	-		
Gamma-BHC	mg/kg	0.01	NONE	-		
Heptachlor	mg/kg	0.01	NONE	-		
Heptachlor epoxide	mg/kg	0.01	NONE	-		
Hexachlorobenzene	mg/kg	0.01	NONE	-		
Hexachlorocyclohexane	mg/kg	0.01	NONE	-		
pp-Methoxychlor	ma/ka	0.01	NONE	-		
Propyzamide	ma/ka	0.01	NONE	-		
Organophosphorus Pesticides (OPP)		0.01	HOHE			
Azinphos methyl	ma/ka	0.01	NONE	-		
Diazinon	ma/ka	0.01	NONE	-		
Dichloryos	ma/kg	0.01	NONE	-		
Dimethoate	mg/kg	0.01	NONE			
Etion	mg/kg	0.01		-		
Equitrothion	mg/Kg	0.01	NONE	-		
Ferriu outilon Malathian	mg/kg	0.01	NONE	-		
Mavianhan	mg/kg	0.01	NONE	-	 	
Presthing	mg/kg 	0.01	NONE	-	 	
Paraunion Divininhas method	mg/kg	0.01	NONE	-	 	
Pirimiphos méthyi	mg/kg	0.01	NONE	-		i





Project / Site name: Bodicote

Lab Sample Number				239833		
Sample Reference			TP112			
Sample Number			None Supplied			
Depth (m)			0.70			
Date Sampled				06/12/2012		
Time Taken				None Supplied		
Analytical Parameter (Two-stage Leachate Analysis)	Units	Limit of detection	Accreditation Status			

General 2:1

Sulphate as SO ₄	mg/l	0.2	NONE	3.7		
Monohydric Phenols	mg/l	0.16	NONE	< 0.16		
Chloride	mg/l	4	NONE	< 4.0		
Fluoride	mg/l	0.05	NONE	0.89		
Dissolved Organic Carbon	mg/l	0.1	NONE	6.9		
Total Dissolved Solids	mg/l	4	NONE	60		
Arsenic	mg/l	0.01	NONE	< 0.010		
Cadmium	mg/l	0.0005	NONE	< 0.0005		
Chromium	mg/l	0.001	NONE	0.0030		
Lead	mg/l	0.005	NONE	< 0.0050		
Mercury	mg/l	0.0015	NONE	< 0.0015		
Selenium	mg/l	0.01	NONE	< 0.010		
Copper	mg/l	0.001	NONE	0.0017		
Nickel	mg/l	0.001	NONE	< 0.0010		
Zinc	mg/l	0.001	NONE	< 0.0010		
Antimony	mg/l	0.005	NONE	< 0.0050		
Molybdenum	mg/l	0.003	NONE	< 0.0030		
Barium	mg/l	0.005	NONE	0.017		

General 2:1						
Sulphate as SO₄	mg/kg	0.5	NONE	7.3		
Monohydric Phenols	mg/kg	0.4	NONE	< 0.40		
Chloride	mg/kg	12	NONE	< 12		
Fluoride	mg/kg	0.05	NONE	1.8		
Dissolved Organic Carbon	mg/kg	0.3	NONE	14		
Total Dissolved Solids	mg/kg	12	NONE	120		
Arsenic	mg/kg	0.03	NONE	< 0.030		
Cadmium	mg/kg	0.0015	NONE	< 0.0015		
Chromium	mg/kg	0.003	NONE	0.0061		
Lead	mg/kg	0.015	NONE	< 0.015		
Mercury	mg/kg	0.005	NONE	< 0.0050		
Selenium	mg/kg	0.03	NONE	< 0.030		
Copper	mg/kg	0.003	NONE	0.0035		
Nickel	mg/kg	0.002	NONE	< 0.0020		
Zinc	mg/kg	0.003	NONE	< 0.0030		
Antimony	mg/kg	0.015	NONE	< 0.015		
Molybdenum	mg/kg	0.01	NONE	< 0.010		
Barium	mg/kg	0.015	NONE	0.033		





I ah Sample Number		239833				
Sample Reference				TP112		
Sample Number				None Supplied		
Denth (m)				0.70		
Date Sampled				06/12/2012		
Time Taken				None Supplied		
			A			
Analytical Parameter (Two-stage Leachate Analysis)	Units	Limit of detection	ccreditation Status			
General 8:1						
Sulphate as SO ₄	mg/l	0.2	NONE	1.1		
Monohydric Phenols	mg/l	0.13	NONE	< 0.13		
Chloride	mg/l	4	NONE	< 4.0		
Fluoride	mg/l	0.05	NONE	0.87		
Dissolved Organic Carbon	mg/l	0.1	NONE	3.6		
Total Dissolved Solids	mg/l	4	NONE	30		
Arsenic	mg/l	0.01	NONE	< 0.010		
Cadmium	mg/l	0.0005	NONE	< 0.0005		
Chromium	mg/l	0.001	NONE	0.0010		
Lead	mg/l	0.005	NONE	< 0.0050		
Mercury	mg/l	0.0015	NONE	< 0.0015		
Selenium	mg/l	0.01	NONE	< 0.010		
Copper	mg/l	0.003	NONE	< 0.0030		
Nickel	mg/l	0.001	NONE	< 0.0010		
Zinc	mg/l	0.001	NONE	< 0.0010		
Antimony	mg/l	0.005	NONE	< 0.0050		
Molybdenum	mg/l	0.003	NONE	< 0.0030		
Barium	mg/l	0.005	NONE	0.0090		
General 10:1						
Sulphate as SO₄	mg/kg	1	NONE	13		
Monohydric Phenols	mg/kg	0.5	NONE	< 0.50		
Chloride	mg/kg	15	NONE	< 15		
Fluoride	mg/kg	0.2	NONE	8.7		
Dissolved Organic Carbon	mg/kg	0.5	NONE	39		
Total Dissolved Solids	mg/kg	15	NONE	330		
Arsenic	mg/kg	0.05	NONE	< 0.050		
Cadmium	mg/kg	0.002	NONE	< 0.0020		
Chromium	mg/kg	0.005	NONE	0.012		
Lead	mg/kg	0.02	NONE	< 0.020		
Mercury	mg/kg	0.01	NONE	< 0.010		
Selenium	mg/kg	0.04	NONE	< 0.040		
Copper	mg/kg	0.002	NONE	0.0062		
Nickel	mg/kg	0.005	NONE	< 0.0050		
Zinc	mg/kg	0.004	NONE	< 0.0040		
Antimony	mg/kg	0.02	NONE	< 0.020		
Molybdenum	mg/kg	0.02	NONE	< 0.020		
Barium	mg/kg	0.02	NONE	0.096		





Project / Site name: Bodicote

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care. Stone content

of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Sample Sample Depth (m) Sample Description * Reference Number Number 239817 TP102 None Supplied 0.50 Light brown sandy clay. 239818 TP112 None Supplied 0.70 Light brown sandy clay. 239819 TP101 None Supplied 0.10 Brown sandy clay. 239820 TP103 None Supplied 0.50 Brown sandy clay. 239821 TP109 None Supplied 0.20 Brown sandy clay with vegetation. 239822 TP115 None Supplied 0.10 Brown sandy clay with vegetation. 239823 TP114 None Supplied 0.50 Brown sandy clay. 239824 TP110 None Supplied 0.15 Brown sandy clay. 239825 TP107 None Supplied 0.50 Brown sandy clay with vegetation. 239826 TP116 0.40 Brown sandy clay. None Supplied 239827 TP106 None Supplied 0.40 Brown sandy clay. 239828 TP111 None Supplied 0.50 Light brown sandy clay with vegetation. 239829 TP101 None Supplied 1.20 Light brown sandy clay. 239830 TP114 2.00 Light brown clay and sand. None Supplied 239831 TP110 None Supplied 1.10 Brown sandy clay. 239832 TP117 0.60 Brown sandy clay. None Supplied





Project / Site name: Bodicote

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX in soil	Determination of BTEX in soil by headspace GC- MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L080-PL	W	NONE
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	D	NONE
Dissolved organic carbon in WAC leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Metals in WAC leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	NONE
Mineral Oil (Soil)		in-house method	L064-PL		NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols (Phenol Index) in WAC leachate	Determination of phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	NONE
Organochlorine pesticides in soil	Determination of organochlorine pesticides in soil by GC-MS	In-house method	L095-UK	W	NONE
Organophosphorous pesticides in soil	Determination of organophosphorous pesticides in soil by GC-MS	In-house method	L095-UK	W	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE

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Project / Site name: Bodicote

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total dissolved solids in WAC leachate	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



Jim Twaddle The Brownfield Consultancy The Cottage Mill Lane Fenny Compton CV47 2YF

t: 01295 770188

e: jim.twaddle@brownfieldconsultancy.co.uk

Analytical Report Number : 13-38683

Project / Site name:	Bodicote	Samples received on:	14/12/2012
Your job number:	12151J	Samples instructed on:	04/01/2013
Your order number:		Analysis completed by:	16/01/2013
Report Issue Number:	1	Report issued on:	16/01/2013
Samples Analysed:	2 soil samples		

Signed: CGState

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.

	0.
	NVV
	N.
Signed:	16aur
<u> </u>	

Rexona Rahman Customer Services Manager For & on behalf of i2 Analytical Ltd.

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting



t: 01923 67 00 20 f: 01923 67 00 30 e: reception@i2analytical.com

WD25 9XX

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Project / Site name: Bodicole

Lab Sample Number				241480	241481	241481D	CRM	
Sample Reference				TP114	TP110			
Sample Number				239823	239824			
Depth (m)				0.50	0.15	Duplicate	-	
Date Sampled				05/12/2012	05/12/2012			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	96	96	96	-	
Moisture Content	%	N/A	NONE	18	22	22	-	
Total mass of sample received	kg	0.001	NONE	0.52	0.49	0.49	-	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	64	220	220	104	
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	-	160	160	80	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	230	-		356	

Bioaccessibility Testing - Unified BARGE Bioaccessibility Method Data

Stomach Phase

Arsenic (Bioaccessible)	mg/kg	1	None	4.2	5.8	5.8	5.0	
Arsenic Bioaccessible Fraction	%	-	None	6.5	2.6	2.6	4.8	
Nickel (Bioaccessible)	mg/kg	1	None	-	4.4	4.7	11.9	
Nickel Bioaccessible Fraction	%	-	None	-	2.8	2.9	14.9	
Vanadium (Bioaccessible)	mg/kg	1	None	10.7	-	-	7.7	
Vanadium Bioaccessible Fraction	%	-	None	4.7	-	-	2.2	

Stomach and Intestine Phase

Arsenic (Bioaccessible)	mg/kg	1	None	3.7	5.7	5.7	4.0	
Arsenic Bioaccessible Fraction	%	-	None	5.8	2.6	2.6	3.9	
Nickel (Bioaccessible)	mg/kg	1	None	-	3.7	3.6	7.3	
Nickel Bioaccessible Fraction	%	-	None	-	2.3	2.3	9.1	
Vanadium (Bioaccessible)	mg/kg	1	None	2.8	-	-	2.9	
Vanadium Bioaccessible Fraction	%	-	None	1.2	-	-	0.8	

Bioaccessibility Summary Data (Maximum value) Stomach Phase (S) or Stomach and Intestine Phase (SI)

Arsenic Bioaccessible Fraction	%	-	None	6.5	2.6	2.6	4.8	
Nickel Bioaccessible Fraction	%	-	None	-	2.8	2.9	14.9	
Vanadium Bioaccessible Fraction	%	1	None	4.7	-	-	2.2	





Project / Site name: Bodicole

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.
Stone content

of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
241480	TP114	239823	0.50	Light brown clay and sand with vegetation and stones.
241481	TP110	239824	0.15	Light brown clay and sand.





Project / Site name: Bodicole

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK	W	NONE
Stones content of soil	Stones not passing through a 250 μ m sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Testing was carried out in accordance with the BARGE UBM protocol. The model used was the fasted model, in accordance with recommended protocol. Each batch of samples comprised one duplicate and one certified reference material, the data for both are reported. Both the the duplicate and certified reference material results meet the method defined criteria.

Bioaccessibile Fraction (%) is calculated as follows: <u>Element (bioaccessible)</u> x 100 Element (total aqua regia extractable)

APPENDIX H

Soakaway Results



Time Elapsed (t) mins	Depth below Ground
	level at time t (m)
0	0.77
1	0.774
2	0.776
3	0.778
4	0.78
5	0.782
10	0.79
15	0.798
30	0.814
75	0.86
120	0.89
150	0.91
240	0.955
300	0.97
360	0.98

Trial Pit No:	TP119	
Date:	07/12/2012	
Test Details		
Length of Trial Pit a (m): Width of Trial Pit b (m): Depth of Trial Pit D (m):		1.3 0.4 2.5
Test Strata:	SILTS	
Maximum Effective Depth (m)		0.77
Volume Outflow between 75% and 25% effective depth ((Vp75-25)m3)	N/A	
Time for water to fall from 75% to 25% effective depth ((Tp75-25)mins)	N/A	
Outflow Area ((Ap50) m2)	N/A	

Soil Infiltration rate ((f)m/s) N/A

Remarks: Soakage rate inst	uffient to allow infiltration rate to be calculated	
Soakaway Test	Project	Contract
•	Oxford Road, Bodicote	12160J
The Brownfield Consulta	ncy	Figure A1



Time Elapsed (t) mins	Depth below Ground
	level at time t (m)
0	0.625
1	0.785
2	0.87
3	0.93
4	0.98
5	1.035
6	1.07
7	1.1
8	1.13
9	1.155
10	1.175
11	1.19
12	1.2
13	1.215
14	1.235
15	1.245
16	1.26
18	1.295
20	1.31
21	1.32

Trial Pit No:	TP120 - Test 1	
Date:	07/12/2012	
Test Details		
Length of Trial Pit a (m): Width of Trial Pit b (m): Depth of Trial Pit D (m):		1.1 0.4 1.35
Test Strata:	IRONSTONE	
Maximum Effective Depth (m)		0.625
Volume Outflow between 75% and 25% effective depth ((Vp75-25)m3) Time for water to fall from		0.1595
75% to 25% effective depth ((Tp75-25)mins)		8.4375
Outflow Area ((Ap50) m2)		1.5275

Soil Infiltration rate ((f)m/s)

2.06E-04

 Remarks:
 Project
 Contract

 Soakaway Test
 Project
 12160J

 The Brownfield Consultancy
 Figure

 A2



Time Elapsed (t) mins	Depth below Ground		
	level at time t (m)		
0	0.555		
1	0.67		
2	0.75		
3	0.82		
4	0.87		
5	0.92		
6	0.97		
7	1		
8	1.035		
9	1.06		
10	1.09		
11	1.11		
12	1.13		
13	1.145		
14	1.155		
15	1.175		
16	1.19		
18	1.21		
20	1.23		
25	1.28		
30	1.3		

Trial Pit No:	TP120 - Test 2
Date:	07/12/2012
Test Details	
Length of Trial Pit a (m): Width of Trial Pit b (m): Depth of Trial Pit D (m):	1.1 0.4 1.35
Test Strata:	IRONSTONE
Maximum Effective Depth (m)	0.555
Volume Outflow between 75% and 25% effective depth ((Vp75-25)m3)	0.1749
Time for water to fall from 75% to 25% effective depth ((Tp75-25)mins)	11.57142857
Outflow Area ((Ap50) m2)	1.6325

Soil Infiltration rate ((f)m/s)

1.54E-04

 Remarks:
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 Figure

 A3



Time Elapsed (t) mins	Depth below Ground
	level at time t (m)
0	0.87
1	0.92
2	0.95
3	0.97
4	0.99
5	1.005
8	1.07
10	1.1
15	1.15
20	1.21
25	1.245
30	1.27
45	1.35
60	1.42
75	1.48
90	1.54
105	1.6
120	1.65
150	1.75
180	1.8
240	1.89

Trial Pit No:	TP121
Date:	07/12/2012
Test Details	
Length of Trial Pit a (m): Width of Trial Pit b (m): Depth of Trial Pit D (m):	1.35 0.4 2.2
Test Strata:	CLAY/LIMESTONE
Maximum Effective Depth (m)	0.87
Volume Outflow between 75% and 25% effective depth ((Vp75-25)m3)	0.3591
Time for water to fall from 75% to 25% effective depth ((Tp75-25)mins)	205.625
Outflow Area ((Ap50) m2)	2.8675

Soil Infiltration rate ((f)m/s)

1.02E-05

 Remarks: Note Infiltration likley to be primarily through base in limestone

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 Figure
 A4

APPENDIX I

CLEA Spreadsheets

STEP 5: RESULTS

Find AC

Print Repo

Ratio of ADE to relevant Health oral HCV inhal HCV (dimensionless) (dimensionless) Number Chemical 0.39 Arsenic 1.00 1 0.00 1.00 2 3 Nickel 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

orts

Back to Guide

	Soil	Assessment Crite	eria	Soil Saturation Limit
Combined	oral HCV	inhal HCV	Combined	
(dimensionless)	mg kg⁻¹	mg kg⁻¹	mg kg⁻¹	mg kg⁻¹
NR	2.20E+02	8.50E+01	NR	NR
NR	1.37E+04	1.27E+02	NR	NR
; 				
j l l				

Pathway Contributions (%)							
direct soil ingestion	sum of consumption of homegrown produce and attached soil	dermal contact (indoor)	dermal contact (outdoor)	inhalation of dust (indoor)	inhalation of dust (outdoor)		
%	%	%	%	%	%		
16.02	0.00	3.00	79.29	1.69	0.00		
24.18	0.00	0.75	19.95	2.56	0.00		

inhalation of vapour (indoor)	inhalation of vapour (outdoor)	oral background	inhalation background	Total
%	%	%	%	%
0.00	0.00	0.00	0.00	100.00
0.00	0.00	47.44	2.56	97.44

ADVANCED SETTINGS

Restore Defaults

Back to Menu

	C				al HCV			Inhala	
				Co	mpare	with			
Chemical Name	Chemical type	Type	µg kg⁻¹ BW day⁻¹	Oral exposure	Dermal exposure	Inhalation exposure	Type	µg kg⁻¹ BW day⁻¹	
Arsenic	inorganic	ID	3.00E-01	Yes	Yes	No	ID	2.00E-03	
Arsenic Nickel			3.00E-01 1.20E+01	Yes Yes	Yes Yes			2.00E-03 6.00E-03	

tion H	CV mpare	with		Oral MDI for adults	Inhalation MDI for adults	Air-water partition coefficient (K _{aw})	Diffusion coefficient in air	Diffusion coefficient in water
Oral exposure	Dermal exposure	Inhalation exposure	Combine oral and inhalation AC	µg daý ¹	µg day ^{_1}	cm³ cm³	m²s-1	m²s¹1
No	No	Yes	No	NR	NR	NR	NR	NR
No	No	Yes	No	1.30E+02	6.00E-02	NR	NR	NR

Relative molecular mass	Vapour pressure	Water solubility	K _{oc}	K _{ow}	K _d	Dermal absorption fraction	Soil - plant availability correction
g mol ⁻¹	Pa	mg L ⁻¹	Log (cm ³ g ⁻¹⁾	Log (dimensionless)	cm³ g ^{_1}	dimensionless	dimensionless
NR	NR	1.25E+06	NR	NR	5.00E+02	3.00E-02	NR
NR	NR	2.50E+06	NR	NR	5.00E+02	5.00E-03	NR

Root - shoot correction factor	Root - root store correction factor	Root - tuber correction factor	Root - fruit correction factor	Soil-to-plant concentration factor (green vegetables)		
dimensionless	dimensionless	dimensionless	dimensionless	mg g ^{_1} plant (DW or FW basis) over mg g ^{_1} DW soil	Type	
NR	NR	NR	NR	4.30E-04	numeric fw	
NR	NR	NR	NR	3.80E-03	numeric fw	

Soil-to-plant concentration factor (root vegetables)		Soil-to-plant concentration factor (tuber vegetables)		Soil-to-plant concentration factor (herbaceous fruit)	
mg g ⁻¹ plant (DW or FW basis) over mg g ⁻¹ DW soil	Type	mg g ^{_1} plant (DW or FW basis) over mg g ^{_1} DW soil	Type	mg g ^{_1} plant (DW or FW basis) over mg g ^{_1} DW soil	Type
4.00E-04	numeric fw	2.30E-04	numeric fw	3.30E-04	numeric fw
4.30E-03	numeric fw	1.90E-03	numeric fw	2.50E-03	numeric fw

Soil-to-plant concentration factor (shrub fruit) Soil-to-plant concentration factor (tree fruit) Image: solid concentration factor (tree fruit) Image: solid concentration factor (tree fruit) MCJ turel for the solid concentration factor (shrub fruit) Image: solid concentration factor (tree fruit) <						
Image: Section 1 Section 1 Image: Section 1 Section	Soil-to-plant concentration factor (shrub fruit)		Soil-to-plant concentration factor (tree fruit)		t factor	ndoor air nensionless)
2.00E-04 numeric fw 1.10E-03 numeric fw 0.50 1.0 2.50E-03 numeric fw 3.40E-03 numeric fw 0.50 1.0	mg g ⁻¹ plant (DW or FW basis) over mg g ⁻¹ DW soil	Type	mg g ⁻¹ plant (DW or FW basis) over mg g ⁻¹ DW soil	Type	Soil-to-dust transpo (g g ⁻¹ DW)	Sub-surface soil to i correction factor (di
2.50E-03 numeric fw 3.40E-03 numeric fw 0.50 1.0	2.00E-04	numeric fw	1.10E-03	numeric fw	0.50	1.0
	2.50E-03	numeric fw	3.40E-03	numeric fw		

Relative bioavailability (RBA _{soil,tox})						
Soil	Airborne dust					
0.03	1.00					
0.03	1.00					

STEP 5: RESULTS

Find AC

Print Repo

Ratio of ADE to relevant Health oral HCV inhal HCV (dimensionless) (dimensionless) Number Chemical 1 Vanadium 0.08 1.00 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

orts

Back to Guide

	Soil	Soil Saturation Limit		
Combined	oral HCV	inhal HCV	Combined	
(dimensionless)	mg kg⁻¹	mg kg⁻¹	mg kg⁻¹	mg kg⁻¹
NR	4.89E+03	6.08E+02	NR	NR

Pathway Contributions (%)					
direct soil ingestion	sum of consumption of homegrown produce and attached soil	dermal contact (indoor)	dermal contact (outdoor)	inhalation of dust (indoor)	inhalation of dust (outdoor)
%	%	%	%	%	%
46.84	0.00	0.00	0.00	3.16	0.00

inhalation of vapour (indoor)	inhalation of vapour (outdoor)	oral background	inhalation background	Total
%	%	%	%	%
0.00	0.00	46.84	3.16	100.00

APPENDIX J

Limitations

The Brownfield Consultancy

LIMITATIONS

This report is confidential and has been prepared solely for the benefit of the client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from The Brownfield Consultancy.

Additional information, improved practice or changes in legislation may necessitate this report having to be reviewed in whole or in part after that date. If necessary, this report should be referred back to The Brownfield Consultancy for re-assessment and, if necessary, re-appraisal.

DESK TOP STUDIES

The work comprised a study of available documented information from a variety of sources. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive. Should additional information become available which may affect the opinions expressed in this report, **The Brownfield Consultancy** reserves the right to review such information and, if warranted, to modify the opinions accordingly.

The evaluation and conclusions do not preclude the existence of contamination, which could not reasonably have been revealed by the current work. Hence this report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions.

INTRUSIVE INVESTIGATIONS

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made.

Where intrusive investigations have been undertaken they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no