ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

BLACKTOWN WORKERS SPORTS CLUB

C/- PAYNTER DIXON CONSTRUCTIONS PTY LTD

ON

STAGE 1 ENVIRONMENTAL SITE ASSESSMENT

FOR

SITE A: PROPOSED OUT DOOR SPORTS FACILITIES – 221 WALTERS ROAD, ARNDELL PARK.

SITE B: RESIDENTIAL AGE CARE FACILITY AND CHILDCARE CENTRE – 170 RESERVOIR ROAD, ARNDELL PARK

AT

BLACKTOWN WORKERS SPORTS CLUB, OFF RESERVOIR ROAD, ARNDELL PARK, NSW

VOLUME 2 OF 2

21 DECEMBER 2015

Project ID: E28870KBrpt rev1

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EIS is a division of Jeffery and Katauskas Pty Ltd • ABN 17 003 550 801

Appendix D: Borehole / Test pit Logs

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **201** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 57.0m

Date: 6-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty clay topsoil, medium plasticity, dark orange brown and dark brown, trace of ash.	MC>PL			GRASS COVER
				■	N = 10 3,5,5			CH	SILTY CLAY: high plasticity, dark orange brown mottled grey, trace of ash.	MC>PL	H	550 500 520	RESIDUAL
	■					1							
								-	SHALE: brown.	XW-DW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
									SHALE: brown and grey.	DW	L		LOW RESISTANCE
				■		2							
						3							
				■		4					L-M		LOW TO MODERATE RESISTANCE
									END OF BOREHOLE AT 4.1m				'TC' BIT REFUSAL
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **202** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 58.2m

Date: 6-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty clay, high plasticity, dark brown and orange red brown, with roots and root fibres, fine to coarse grained igneous gravel, trace of ash	MC>PL			GRASS COVER
				■	N = 7 4,5,2			CH	SILTY CLAY: high plasticity, light orange brown and light grey, trace of fine to coarse grained ironstone gravel, ash and root fibres.	MC>PL	H	>600 >600 >600	RESIDUAL
	■					1							
				■	N = 18 3,7,11				as above, but light grey.			>600 >600 >600	
						2							
				■				-	SHALE: brown, with M strength iron indurated bands.	DW	L		LOW 'TC' BIT RESISTANCE
				■		3					M		MODERATE TO HIGH RESISTANCE
									END OF BOREHOLE AT 3.6m				'TC' BIT REFUSAL
						4							
						5							
						6							
						7							

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BOREHOLE LOG

Borehole No. **203** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 6-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 56.4m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, dark brown, with roots and root fibres, trace of ash.	MC≈PL			GRASS COVER APPEARS POORLY COMPACTED
					N = 16 3,5,11	1		CL	SILTY CLAY: medium plasticity, light orange brown, with fine to coarse grained ironstone gravel, trace of ash.	MC>PL	H	450 420 420	RESIDUAL
					SPT 6/50mm REFUSAL	2		-	SHALE: brown.	XW-DW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
						3			SHALE: grey.	DW	L		LOW RESISTANCE
						4							
						5					L-M		MODERATE RESISTANCE
						6			END OF BOREHOLE AT 5.8m				'TC' BIT REFUSAL
						7							

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BOREHOLE LOG

Borehole No. **204** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 52.3m

Date: 2-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
						0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres.	MC<PL			GRASS COVER
▼ AFTER 24 HRS					N = 8 3,3,5	1		CH	SILTY CLAY: high plasticity, light grey mottled light orange brown.	MC>PL	VSt	200 220 200	RESIDUAL
					N = 7 3,3,4	2						200 220 220	
▼ ON COMPLET-ION					N = 5 2,2,3	3					F	50 75 50	
						4		-	SHALE: light brown.	DW	VL-L		VERY LOW TO LOW 'TC' BIT RESISTANCE
						5			SHALE: grey.	SW	L		LOW RESISTANCE WITH MODERATE BANDS
						6							
						7							

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BOREHOLE LOG

Borehole No. 204
2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 52.3m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■		8			SHALE: grey.	SW	M		MODERATE RESISTANCE
				■		9			END OF BOREHOLE AT 9.0m				
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **205** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 52.7m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
▼ AFTER 24 HRS						0			FILL: Silty clay, high plasticity, dark brown, with fine to coarse grained igneous gravel, trace of ash, roots and root fibres.	MC>PL			GRASS COVER
					N = 5 1,2,3			CH	SILTY CLAY: high plasticity, light grey mottled orange brown.	MC>PL	VSt		RESIDUAL
					N = 10 3,4,6	1						250 250 250	
						2							
					N = 18 4,9,9	3			as above, but with fine to coarse grained ironstone gravel.		St	150 180 150	
						4		-	SHALE: grey, with M-H strength iron indurated bands.	DW	VL-L		VERY LOW TO LOW 'TC' BIT RESISTANCE
						5					L		LOW TO MODERATE RESISTANCE
						6							
▼ ON COMPLET-ION						7					H		HIGH RESISTANCE

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BOREHOLE LOG

Borehole No. **205** 2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 52.7m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■					SHALE: grey, with M-H strength iron indurated bands.	DW	H		'TC' BIT REFUSAL
									END OF BOREHOLE AT 7.1m				
						8							
						9							
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **206** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 56.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
						0			FILL: Silty clay, medium plasticity, dark orange brown, with fine to coarse grained shale gravel and cobble sized shale, fine grained sandstone and igneous gravel, tile and brick fragments.	MC>PL			APPEARS POORLY COMPACTED
					N = 4 2,2,2							250 250 220	
						1							APPEARS WELL COMPACTED
					N = 11 4,5,6							580 550 580	
▼ AFTER 24 HRS						2							
								-	SHALE: grey and brown.	DW	L		LOW 'TC' BIT RESISTANCE
						3							
						4			SHALE: grey.				
						5							
										SW	L-M		LOW TO MODERATE RESISTANCE
						6							
						7							

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BOREHOLE LOG

Borehole No. 206
2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 56.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
▼ ON COMPLET-ION				■		8			SHALE: grey.	SW	M		MODERATE RESISTANCE
				■		9			END OF BOREHOLE AT 9.0m				
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **207** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 59.5m

Date: 2-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	■					0			FILL: Silty sand, fine to medium grained, light brown, with fine to coarse grained sandstone and igneous gravel, trace of tile and brick fragments.	D			GRASS COVER APPEARS WELL COMPACTED
				■	N = 14 4,7,7					MC>PL		580 580 550	
		■				1			FILL: Silty clay, medium plasticity, dark orange brown, with fine to coarse grained sandstone gravel and cobbles, trace of roots and root fibres.				
				■	N > 18 3,8,10/ 100mm							520 500 550	
					REFUSAL	2							
	■								FILL: Silty clay, high plasticity, dark grey, with fine to medium grained shale gravel.				
				■	N = 8 2,3,5	3						250 220 240	APPEARS MODERATELY TO WELL COMPACTED
▼ AFTER 24 HRS						4			FILL: Silty clay, high plasticity, grey.				
				■	N = 8 1,2,6							120 150 150	APPEARS MODERATELY COMPACTED
	■					5							
								CH	SILTY CLAY: high plasticity, dark orange brown mottled grey.	MC>PL	VSt		RESIDUAL
				■	N = 12 3,4,8	6						350 400 320	
▼ ON COMPLET-ION						7							

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BOREHOLE LOG

Borehole No. **207** 2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 59.5m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
								CH	SILTY CLAY: high plasticity, dark orange brown mottled grey.	MC>PL	VSt		
				■	N = 8 2,3,5	8						250 250 240	
								-	SHALE: brown and grey.	DW	VL-L		LOW 'TC' BIT RESISTANCE
				■		9							
						10							
									END OF BOREHOLE AT 10.5m				
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **208** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 60.7m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	■					0			FILL: Gravelly silty sand, fine to coarse grained, light brown, fine to coarse grained igneous and sandstone gravel.	D			GRASS COVER APPEARS WELL COMPACTED
				■	N = 13 10,8,5	1							
	■								FLL: Silty clay, medium plasticity, dark orange brown, with fine to coarse grained sandstone and igneous gravel, trace of ash.	MC≈PL	H	550 520 550	APPEARS POORLY COMPACTED
				■	N = 5 3,2,3	2							
				■	N = 7 4,3,4	3			FILL: Silty clay, high plasticity, dark orange brown and dark grey, trace of ash.	MC>PL	VSt	250 250 250	
	■					4							
				■	N = 13 3,7,6							250 220 200	APPEARS WELL COMPACTED
▼ AFTER 24 HRS						5							
				■	N = 18 4,8,10	6		CH	SILTY CLAY: high plasticity, orange brown mottled grey, trace of iron indurated bands.	MC>PL	VSt	350 350 350	RESIDUAL
						7		-	SHALE: grey and light brown.	DW	L		

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BOREHOLE LOG

Borehole No. **208** 2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 2-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 60.7m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■					SHALE: grey and light brown	DW	L		LOW 'TC' BIT RESISTANCE
						8					L-M		LOW TO MODERATE RESISTANCE
				■		9			END OF BOREHOLE AT 9.0m				
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **209** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 6-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 60.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
						0			ASPHALTIC CONCRETE: 100mm.t				
					N = 19 7,10,9	0		-	FILL: Silty sand, fine to coarse grained, light brown, with fine to coarse grained igneous and sandstone gravel, trace of ash.	D	MD		APPEARS WELL COMPACTED
					N = 7 3,4,3	1					L		APPEARS POORLY COMPACTED
▶					N = 6 3,3,3	2							
						3			FILL: Silty clay, high plasticity, brown, with fine to coarse grained igneous and sandstone gravel, trace of ash.	MC>PL		350 300 300	HP READINGS ON REMOULDED SAMPLE
					N = 9 3,4,5	4		CH	SILTY CLAY: high plasticity, light orange brown, with fine to coarse grained ironstone gravel, trace of ash.	MC>PL	VSt	350 350 380	RESIDUAL
						5							
						6		-	SHALE: brown.	XW-DW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
									SHALE: grey.	DW	L		LOW TO MODERATE RESISTANCE
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **209** 2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 60.2m

Date: 6-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■					SHALE:grey.	DW	L		
											M-H		MODERATE TO HIGH RESISTANCE
						8			END OF BOREHOLE AT 7.8m				'TC' BIT REFUSAL
						9							
						10							
						11							
						12							
						13							
						14							

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BOREHOLE LOG

Borehole No. **210** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 60.7m

Date: 4-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			ASPHALTIC CONCRETE: 100mm.t				
								-	FILL: Silty clay, medium plasticity, dark brown, with fine to coarse grained igneous gravel, ash and slag.	MC>PL	VSt		APPEARS WELL COMPACTED
					N = 18 8,10,8							350 400 380	
						1							
						2							
								CH	SILTY CLAY: high plasticity, red brown.	MC>PL	VSt	350 320 300	RESIDUAL HP TESTING OM REMOULDED SAMPLE
					N > 25 5,15, 11/100mm	3		-	SHALE: brown, with iron indurated bands.	XW-DW	EL-VL		VERY LOW TO LOW 'TC' BIT RESISTANCE
					REFUSAL					DW	M-H		MODERATE TO HIGH RESISTANCE 'TC' BIT REFUSAL
									END OF BOREHOLE AT 3.6m				
						4							
						5							
						6							
						7							

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BOREHOLE LOG

Borehole No. 211
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 3-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 58.0m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, dark red brown, with roots and root fibres.	MC>PL	H		GRASS COVER
					N = 7 5,4,3							410 400 420	APPEARS MODERATELY COMPACTED
						1			FILL: Silty clay, low plasticity, brown, trace of ash.	MC<PL			APPEARS MODERATELY COMPACTED
					N > 12 3,12/ 150mm			CH	SILTY CLAY: high plasticity, orange brown, with iron indurated bands, trace of roots.	MC>PL			
					REFUSAL			-	SANDSTONE: fine to medium grained, brown.	DW	M-H		MODERATE TO HIGH 'TC' BIT RESISTANCE
						2			END OF BOREHOLE AT 2.0m				'TC' BIT REFUSAL
						3							
						4							
						5							
						6							
						7							

JK Geotechnics
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BOREHOLE LOG

Borehole No. 212
1/2

Client: PAYNTER DIXON
Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT
Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 3-11-15
Method: SPIRAL AUGER JK500
Logged/Checked by: L.M./D.S.
R.L. Surface: ≈ 59.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
						0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres, trace of ash.	MC<PL			GRASS COVER
					N = 8 3,3,5				FILL: Silty clay, medium plasticity, red brown, with fine to coarse grained sandstone and igneous gravel, trace of ash.	MC>PL		550 500 500	APPEARS MODERATELY COMPACTED
					N = 15 2,8,7	1						350 380 400	APPEARS WELL COMPACTED
					N = 15 5,7,8	2							
						3		CH	SILTY CLAY: high plasticity, red brown and brown, trace of coarse grained ironstone gravel.	MC>PL	H	500 450 480	RESIDUAL
					N = SPT 16/100mm REFUSAL	4		-	SHALE: brown	XW-DW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
						5			SHALE: brown and grey.	DW	M		MODERATE RESISTANCE
▼ AFTER 30 MINS						6							
						7							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 212
2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 3-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 59.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■					SHALE: grey.	DW	M-H		MODERATE TO HIGH RESISTANCE
									END OF BOREHOLE AT 7.4m				'TC' BIT REFUSAL
						8							
						9							
						10							
						11							
						12							
						13							
						14							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **213** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** N/A

Date: 3-11-15 **Datum:**

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty sand, fine grained, light brown, with roots and root fibres.	MC<PL			GRASS COVER
				■	N = 14 5,7,7				FILL: Silty clay, low plasticity, light brown, with shale gravel, trace of root fibres and ash.			>600 >600 >600	APPEARS WELL COMPACTED
	■					1							
				■	N = 11 2,5,6				FILL; Silty clay, high plasticity, brown.	MC>PL		150 150 150	
	■					2							
								CH	SILTY CLAY: high plasticity, red brown, with fine to coarse grained ironstone gravel.	MC>PL	VSt		RESIDUAL
	■					3							
				■	N = 16 4,8,8							220 250 250	
								-	SANDSTONE: fine to coarse grained, brown.	DW	L		LOW TO MODERATE 'TC' BIT RESISTANCE
				■		4					M-h		MODERATE TO HIGH RESISTANCE
									END OF BOREHOLE AT 4.3m				'TC' BIT REFUSAL
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 214
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 4-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 63.0m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty clay, low plasticity, dark brown.	MC<PL			GRASS COVER
													APPEARS POORLY COMPACTED
				■	N = 8 4,4,4				FILL: Silty clay, medium plasticity, dark brown, with shale gravel, trace of ash and root fibres.			580 580 580	
	■					1							APPEARS MODERATELY TO WELL COMPACTED
				■	N = 13 4,5,8			CH	SILTY CLAY: high plasticity, red and orange brown, with root fibres.	MC>PL	H	450 450 480	RESIDUAL
	■					2							
				■	N = SPT 12/150mm REFUSAL	3		-	SHALE: brown.	XW	EL-VL		VERY LOW 'TC' BIT RESISTANCE
										DW	VL		
				■		4							
									END OF BOREHOLE AT 4.3m				'TC' BIT REFUSAL
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **215** 1/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 59.2m

Date: 3-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION					N = 9 4,4,5	0			FILL: Silty sand, fine grained, light brown, with roots and root fibres, trace of clay nodules and fine to coarse grained igneous gravel and ash.	MC<PL			GRASS COVER APPEARS MODERATELY COMPACTED
					N = 6 2,3,3	1			FILL: Silty clay, medium plasticity, red brown and dark brown, trace of ash.	MC>PL	VSt	250 250 250	
						2			FILL: Silty clay, high plasticity, red brown and dark brown, trace of ash.				
					N = 8 3,4,4	3		CH	SILTY CLAY: high plasticity, orange brown mottled grey.	MC>PL	VSt	250 220 220	
					N = 18 3,6,12	4						400 250 350	
						5		-	SHALE: brown and grey.	DW	VL		VERY LOW 'TC' BIT RESISTANCE
						6							
						7							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 215
2/2

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 3-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 59.2m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■					SHALE: grey.		L-M		LOW TO MODERATE RESISTANCE
						8					M		
									END OF BOREHOLE AT 8.3m				'TC' BIT REFUSAL
						9							
						10							
						11							
						12							
						13							
						14							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 216
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 3-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 59.8m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty sand, fine grained, light brown, with roots and root fibres.	D			GRASS COVER
					N = 9 4,4,5				FILL: Silty clay, high plasticity, brown, with fine to coarse grained ironstone gravel, trace of ash, roots and root fibres.	MC>PL		350 350 300	APPEARS MODERATELY COMPACTED
						1							
					N = 9 2,4,5			CH	SILTY CLAY: high plasticity, red brown, trace of root fibres.	MC>PL	VSt	300 320 300	RESIDUAL
						2		-	SANDSTONE: fine to coarse grained, light brown.	DW	M-H		MODERATE TO HIGH 'TC' BIT RESISTANCE
									END OF BOREHOLE AT 2.7m				'TC' BIT REFUSAL
						3							
						4							
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 217
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 4-11-15

Method: SPIRAL AUGER
JK500

R.L. Surface: ≈ 62.3m
Datum: AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres.	D			GRASS COVER
				■	N = 8 5,5,3				FILL: Silty clay, medium plasticity, dark red brown, with fine to coarse grained sandstone gravel, trace of ash.	MC≈PL		600 580 570	APPEARS MOODERATELY COMPACTED
	■					1		CH	SILTY CLAY: high plasticity, orange brown mottled grey, with root fibres.	MC>PL	St-VSt		RESIDUAL
				■	N = 6 2,3,3							200 150 180	
	■					2							
				■		3		-	SANDSTONE: fine to medium grained, brown.	DW	L-M		LOW TO MODERATE 'TC' BIT RESISTANCE
				■		4			END OF BOREHOLE AT 4.0m				'TC' BIT REFUSAL
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **218** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 62.0m

Date: 4-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty sand, fine grained, dark brown.	MC<PL			GRASS COVER
				■	N = 8 3,4,4	1			FILL: Silty clay, medium plasticity, dark brown, with ironstone gravel, trace of ash.	MC>PL	VSt	350 350 350	APPEARS MODERATELY COMPACTED
				■	N = 11 5,4,7	2			FILL: Silty clay, high plasticity, red brown, trace of ash.		H	>600 >600 >600	APPEARS WELL COMPACTED
	■			■	N = 18 5,7,11	3		CL	SILTY CLAY: medium plasticity, red brown mottled grey, trace of ironstone gravel.	MC>PL	VSt	450 450 400	RESIDUAL
				■		4		-	SHALE: grey, with iron indurated bands.	DW	L		LOW 'TC' BIT RESISTANCE
									END OF BOREHOLE AT 4.0m				'TC' BIT REFUSAL
						5							
						6							
						7							

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BOREHOLE LOG

Borehole No. 219
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD
Date: 4-11-15

Method: SPIRAL AUGER
JK500

Logged/Checked by: L.M./D.S.

R.L. Surface: ≈ 63.4m
Datum: AHD

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres.	D			GRASS COVER
				■	N = 12 3,5,7			CL	SILTY CLAY: medium plasticity, orange brown.	MC<PL	H	500 520 480	RESIDUAL
	■					1							
				■	N > 8 5,8/100mm							450 550	
					REFUSAL			-	SHALE: brown and grey.	DW	L	550	LOW 'TC' BIT RESISTANCE
				■		2							
						3							
				■					SHALE: grey.				
						4							
									END OF BOREHOLE AT 4.3m				'TC' BIT REFUSAL
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No. **220** **1/1**

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 63.4m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres, trace of ash.	D			GRASS COVER
	■			■					FILL: Silty clay, low plasticity, light brown, with shale gravel, trace of root fibres.	MC>PL		350	
												350	
	■			■		1			FILL: Silty clay, high plasticity, light grey and orange brown, with root fibres, trace of ash.			300	
												350	
									FILL: Silty clay, high plasticity, dark orange brown, trace of ironstone gravel and ash.			350	
	■											380	
									END OF TEST PIT AT 1.7m				LIMIT OF BACKHOE REACH
						2							
						3							
						4							
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

TEST PIT LOG

Test Pit No.
221
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 57.5m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty clay, medium plasticity, dark brown, with roots and root fibres,	MC≈PL			GRASS COVER
	■			■				CH	fine to coarse grained igneous gravel, trace of ash.	MC>PL	H	500 480 510	RESIDUAL
									SILTY CLAY: high plasticity, light orange brown, trace of root fibres and ash.		VSt	350 320	
				■		1			as above, but light grey mottled orange brown.			300	
									END OF TEST PIT AT 1.1m				
						2							
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No. **222** **1/1**

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 55.3m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty clay, medium plasticity, dark brown, with roots and root fibres, trace of ash.	MC≈PL			GRASS COVER
	■							CH	SILTY CLAY: high plasticity, dark orange brown mottled grey, trace of organic material and ash.	MC>PL	H	>600 >600	RESIDUAL
									as above,		VSt	350	
				■		1		-	but light brown.	DW	VL	320 300	
									SANDSTONE: fine to medium grained, brown.				
									END OF TEST PIT AT 1.0m				
						2							
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No.
223
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 53.5m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty clay, medium plasticity, dark brown, with roots and root fibres, trace of ash.	MC>PL			GRASS COVER
	■			■				CH	SILTY CLAY: high plasticity, light orange brown, trace of ash.	MC>PL	H	400 420 450	
											VSt	350 350 350	
						1			END OF TEST PIT AT 1.0m				
						2							
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No.
224
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 52.6m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty clay, low plasticity, dark brown, with roots and root fibres.	MC<PL			GRASS COVER
	■			■				CH	SILTY CLAY: high plasticity, dark orange brown, trace of root fibres and ash.	MC>PL	VSt	250 300 300	
						1			END OF TEST PIT AT 1.0m			250 300 250	
						2							
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No.
225
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 58.7m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty clay, high plasticity, dark orange brown, with igneous and shale gravel, trace of ash and slag.	MC>PL			GRASS COVER
									FILL: Silty sand, fine grained, light brown, with fine to medium grained shale and sandstone gravel, trace of ash and slag.	MC<PL			
						1			FILL: Silty clay, high plasticity, dark brown, with fine to coarse grained sandstone, shale and igneous gravel and cobbles, trace of ash and slag.	MC>PL	VSt	350 320 350	
									END OF TEST PIT AT 1.5m				
						2							
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No.
226
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 60.2m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: SiltY sand, fine grained, dark brown, trace of roots and root fibres and ash.	D			GRASS COVER
	■			■					FILL: Silty sand, fine to coarse grained, with fine to coarse grained sandstone and shale gravel, trace of ash, root fibres and fibro cement fragments.		VSt	250 250 280	HP TESTING ON REMOULDED SAMPLE
	■			■		1				MC>PL		350 300 300	
									FILL: Silty clay, low plasticity, dark brown, with fine to coarse grained igneous, sandstone and shale gravel, trace of ash, slag, tile, plastic and concrete fragments.				
									as above, but high plasticity.				
						2			END OF TEST PIT AT 1.5m				
						3							
						4							
						5							
						6							
						7							

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TEST PIT LOG

Test Pit No.
227
1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 61.4m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty clay, high plasticity, dark brown, with roots and root fibres, trace of glass, fibro cement fragments, ash, slag and fragments.	MC>PL			GRASS COVER
				■				CL	SILTY CLAY: medium plasticity, light brown, trace of organic material and ash.	MC>PL	St	100 120 120	
						1			END OF TEST PIT AT 1.0m				
						2							
						3							
						4							
						5							
						6							
						7							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

TEST PIT LOG

Test Pit No. **228** 1/1

Client: PAYNTER DIXON

Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT

Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 59.1m

Date: 5-11-15 **Datum:** AHD

Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres, trace of ash.	D			GRASS COVER
	■			■					FILL: Silty sand, fine to coarse grained, light brown, with clay nodules, shale gravel, trace of ash, slag and brick fragments.				
	■			■		1			FILL: Silty clay, high plasticity, light grey and red.	MC>PL	VSt	350 300 280	
									END OF TEST PIT AT 1.3m				LIMIT REACH OF BACKHOE
						2							
						3							
						4							
						5							
						6							
						7							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

TEST PIT LOG

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229
1/1

Client: PAYNTER DIXON
Project: PROPOSED SPORTS FACILITY & RESIDENTIAL DEVELOPMENT
Location: RESERVOIR ROAD, ARNDELL PARK, NSW

Job No. 28870AD **Method:** BACKHOE **R.L. Surface:** ≈ 59.8m
Date: 5-11-15 **Datum:** AHD
Logged/Checked by: L.M./D.S.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine grained, dark brown, with roots and root fibres, trace of ash.	D		>600	GRASS COVER
	■									MC>PL		>600	
	■								FILL: Silty clay, high plasticity, light brown, trace of ash.			>600	
									FILL: Silty clay, high plasticity, light grey and orange brown, with shale gravel and cobbles, trace of ash.				
▶						1						350	
	■			■					FILL: Silty clay, medium plasticity, dark brown, trace of ash and organic material.			300	
												350	
									END OF TEST PIT AT 1.3m				
						2							
						3							
						4							
						5							
						6							
						7							

EXPLANATORY NOTES – ENVIRONMENTAL LOGS

INTRODUCTION

These notes have been provided to supplement the environmental report with regards to drilling and field logging. Not all notes are necessarily relevant to all reports. Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and manmade processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies involve gathering and assimilating limited facts about these characteristics and properties in order to understand the ground on a particular site under certain conditions. These conditions are directly relevant only to the ground at the place where, and time when, the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726, the SAA Site Investigation Code. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geotechnical practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the grading of other particles present (e.g. sandy clay) as set out below (note that unless stated in the report, the soil classification is based on a qualitative field assessment, not laboratory testing):

Soil Classification	Particle Size
Clay	less than 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose	less than 4
Loose	4 – 10
Medium dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) either by use of hand penetrometer, laboratory testing or engineering examination. The strength terms are defined as shown in the following table:

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 – 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 – 400
Hard	Greater than 400
Friable	Strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'Shale' is used to describe thinly bedded to laminated siltstone.

DRILLING OR EXCAVATION METHODS

The following is a brief summary of drilling and excavation methods currently adopted by the Company, and some comments on their use and application. All except test pits and hand auger drilling require the use of a mechanical drilling rig.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the in-situ soils if it is safe to descend into the pit. The depth of penetration is limited to approximately 3m for a backhoe and up to 6m for an excavator. Limitations of test pits include problems associated with disturbance and difficulty of reinstatement; and the consequent effects on nearby structures. Care must be taken if construction is to be carried out near test pit locations to either properly re-compact the backfill during construction, or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as fill, hard clay, gravel or ironstone, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and in-situ testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively lower reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock fragments. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (e.g. from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel, which gives a core of about 50mm diameter, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS. The locations of losses are determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the top end of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposes" – Test F3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of, say, 4, 6 and 7 blows, as: N = 13 (4, 6, 7)
- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as: N>30 (15, 30/40mm)

The results of the test can be related empirically to the engineering properties of the soil. Occasionally, the drop hammer is used to drive 50mm diameter thin walled sample tubes (U50) in clays. In such circumstances, the test results are shown on the borehole logs in brackets.

A modification to the SPT test is where the same driving system is used with a solid 60 tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as "Nc" on the borehole logs, together with the number of blows per 150mm penetration.

LOGS

The borehole or test pit logs presented herein are an interpretation of the subsurface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will enable the most reliable assessment, but is not always practicable or possible to justify on economic grounds. In any case, the boreholes or test pits represent only a very small sample of the total subsurface conditions.

The attached explanatory notes define the terms and symbols used in preparation of the logs.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than "straight line"

variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open;
- A localised perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must be washed out of the hole or 'reverted' chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after stabilising at intervals ranging from several days to perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (e.g. bricks, concrete, plastic, slag/ash, steel etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably determine the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density, strength and material type is much greater than with natural soil deposits. If the volume and quality of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes

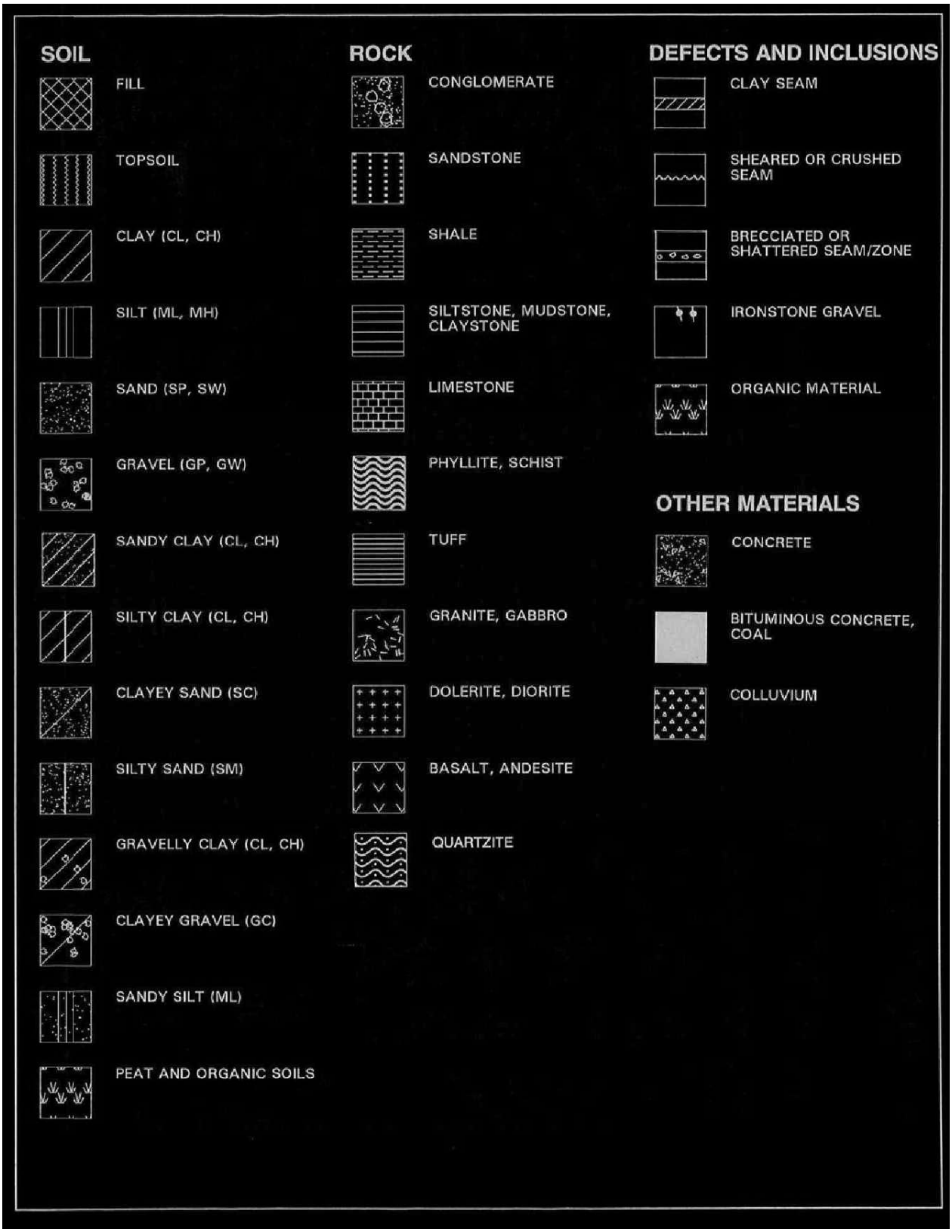
LABORATORY TESTING

Laboratory testing has not been undertaken to confirm the soil classifications and rocks strengths indicated on the environmental logs unless noted in the report.

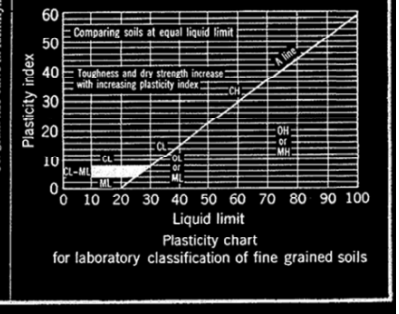
SITE ANOMALIES

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, EIS should be notified immediately.

GRAPHIC LOG SYMBOLS FOR SOIL AND ROCKS



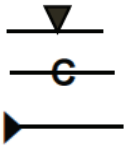
Field Identification Procedures (Excluding particles larger than 75 μm and basing fractions on estimated weights)						Group Symbols [a]	Typical Names	Information Required for Describing Soils	Laboratory Classification Criteria
Coarse-grained soils More than half of material is larger than 75 μm sieve size[b]	Gravels More than half of coarse fraction is larger than 4 mm sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes			*GW*	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics Example: *Silty sand*, gravelly; about 20% hard, angular gravel particles 12 mm maximum size; rounded and subangular sand grains coarse to fine, about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (*SM*)	Determine percentages of gravel and sand from grain size curve. Depending on percentage of fines (fraction smaller than 75 μm sieve size) coarse grained soils are classified as follows: Less than 5% *GW, GP, SW, SP* More than 12% *GM, GC, SM, SC* 5% to 12% *Borderline* cases requiring use of dual symbols Use grain size curve in identifying the fractions as given under field identification $C_U = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *GW* Atterberg limits below "A" line, or *PI* less than 4 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits above "A" line, with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing			*GP*	Poorly graded gravels, gravel-sand mixtures, little or no fines		
		Gravels with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures see *ML* below)			*GM*	Silty gravels, poorly graded gravel-sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)			*GC*	Clayey gravels, poorly graded gravel-sand-clay mixtures		
	Sands More than half of coarse fraction is smaller than 4 mm sieve size	Clean sands (little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate particle sizes			*SW*	Well graded sands, gravelly sands, little or no fines		$C_U = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for *SW* Atterberg limits below "A" line or *PI* less than 5 — Above "A" line with *PI* between 4 and 7 are *borderline* cases requiring use of dual symbols Atterberg limits below "A" line with *PI* greater than 7
			Predominantly one size or a range of sizes with some intermediate sizes missing			*SP*	Poorly graded sands, gravelly sands, little or no fines		
		Sands with fines (appreciable amount of fines)	Nonplastic fines (for identification procedures, see *ML* below)			*SM*	Silty sands, poorly graded sand-silt mixtures		
			Plastic fines (for identification procedures, see *CL* below)			*SC*	Clayey sands, poorly graded sand-clay mixtures		
Fine-grained soils More than half of material is smaller than 75 μm sieve size (The 75 μm sieve size is about the smallest particle visible to naked eye)	Identification Procedures on Fraction Smaller than 380 μm Sieve Size		Dry Strength (crushing characteristics)	Dilatancy (reaction to shaking)	Toughness (consistency near plastic limit)				
	Silts and clays Liquid limit less than 50		None to slight	Quick to slow	None	*ML*	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions Example: *Clayey silt*, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (*ML*)	
			Medium to high	None to very slow	Medium	*CL*	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			Slight to medium	Slow	Slight	*OL*	Organic silts and organic silt clays of low plasticity		
	Silts and clays liquid limit greater than 50		Slight to medium	Slow to none	Slight to medium	*MH*	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			High to very high	None	High	*CH*	Inorganic clays of high plasticity, fat clays		
			Medium to high	None to very slow	Slight to medium	*OH*	Organic clays of medium to high plasticity		
Highly Organic Soils			Readily identified by colour, odour, spongy feel and frequently by fibrous texture			*Pt*	Peat and other highly organic soils		



Plasticity chart
for laboratory classification of fine grained soils

Note: 1 Soils possessing characteristics of two groups are designated by combinations of group symbols (eg. GW-GC, well graded gravel-sand mixture with clay fines).
2 Soils with liquid limits of the order of 35 to 50 may be visually classified as being of medium plasticity.

LOG SYMBOLS

LOG COLUMN	SYMBOL	DEFINITION
Groundwater Record		Standing water level. Time delay following completion of drilling may be shown. Extent of borehole collapse shortly after drilling. Groundwater seepage into borehole or excavation noted during drilling or excavation.
Samples	ES U50 DB DS ASB ASS SAL	Soil sample taken over depth indicated, for environmental analysis. Undisturbed 50mm diameter tube sample taken over depth indicated. Bulk disturbed sample taken over depth indicated. Small disturbed bag sample taken over depth indicated. Soil sample taken over depth indicated, for asbestos screening. Soil sample taken over depth indicated, for acid sulfate soil analysis. Soil sample taken over depth indicated, for salinity analysis.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual show blows per 150mm penetration. 'R' as noted below.
	N_c = 5 7 3 R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60 degree solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25 PID = 100	Vane shear reading in kPa of Undrained Shear Strength. Photoionisation detector reading in ppm (Soil sample heads pace test).
Moisture (Cohesive Soils) (Cohesionless)	MC > PL MC ≈ PL MC < PL D M W	Moisture content estimated to be greater than plastic limit. Moisture content estimated to be approximately equal to plastic limit. Moisture content estimated to be less than plastic limit. DRY – Runs freely through fingers. MOIST – Does not run freely but no free water visible on soil surface. WET – Free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS S F St VSt H ( )	VERY SOFT – Unconfined compressive strength less than 25kPa SOFT – Unconfined compressive strength 25-5 0kPa FIRM – Unconfined compressive strength 50-1 00kPa STIFF – Unconfined compressive strength 100- 200kPa VERY STIFF – Unconfined compressive strength 200- 400kPa HARD – Unconfined compressive strength greater than 400kPa Bracketed symbol indicates estimated consistency based o n tactile examination or other tests.
Density Index/ Relative Density (Cohesionless Soils)	VL L MD D VD ( )	**Density Index (ID) Range (%)** / **SPT ' N' Value Range (Blows/300mm)** Very Loose <15 / 0-4 Loose 15-35 / 4-10 Medium Dense 35-65 / 10-30 Dense 65-85 / 30-50 Very Dense >85 / >50 Bracketed symbol indicates estimated density based on ease of drilling or other tests.
Hand Penetrometer Readings	300 250	Numbers indicate individual test results in kPa on representative undisturbed material unless noted otherwise
Remarks	'V' bit 'TC' bit T_{60}	Hardened steel 'V' shaped bit. Tungsten carbide wing bit. Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.

LOG SYMBOLS CONTINUED

ROCK STRENGTH

Rock strength is defined by the Point Load Strength Index (Is 50) and refers to the strength of the rock substance in the bedding. The test procedure is described by the International Journal of Rock Mechanics, Mining and Geomechanics Abstract Volume 22, No 2, 1985.

TERM	SYMBOL	Is (50) MPa	FIELD GUIDE
Extremely Low:	EL	0.03	Easily remoulded by hand to a material with soil properties.
Very Low:	VL	0.1	May be crumbled in the hand. Sandstone is "sugary" and friable.
Low:	L	0.3	A piece of core 150 mm long x 50mm dia. may be broken by hand and easily scored with a knife. Sharp edges of core may be friable and break during handling.
Medium Strength:	M	1	A piece of core 150 mm long x 50mm dia. can be broken by hand with difficulty. Readily scored with knife.
High:	H	3	A piece of core 150 mm long x 50mm dia. core cannot be broken by hand, can be slightly scratched or scored with knife; rock rings under hammer.
Very High:	VH	10	A piece of core 150 mm long x 50mm dia. may be broken with hand-held pick after more than one blow. Cannot be scratched with pen knife; rock rings under hammer.
Extremely High:	EH		A piece of core 150 mm long x 50mm dia. is very difficult to break with h and-held hammer . Rings when struck with a hammer.

ROCK STRENGTH

ABBREVIATION	DESCRIPTION	NOTES
Be	Bedding Plane Parting	Defect orientations measured relative to the normal to (i.e. relative to horizontal for vertical holes)
CS	Clay Seam	
J	Joint	
P	Planar	
Un	Undulating	
S	Smooth	
R	Rough	
IS	Iron stained	
XWS	Extremely Weathered Seam	
Cr	Crushed Seam	
60t	Thickness of defect in millimetres	

Appendix E: Laboratory Report/s & COC Documents

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Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS 137123

Client:
Environmental Investigation Services
PO Box 976
North Ryde BC
NSW 1670

Attention: Vittal Boggaram

Sample log in details:

Your Reference:	**E28870KB, Arndell Park**
No. of samples:	102soils, 2materials and 2waters
Date samples received / completed instructions received	09/11/2015 / 09/11/2015

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	16/11/15 / 16/11/15
Date of Preliminary Report:	Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	106	108	107	108

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-11	137123-12	137123-13	137123-14	137123-15
Your Reference	----------	BH206	BH206	BH207	BH207	BH207
Depth	----------	0.2-0.4	2.0-2.2	0.2-0.4	1.2-1.4	2.8-3.0
Date Sampled		2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	104	112	106	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-17	137123-18	137123-19	137123-21	137123-22
Your Reference	----------	BH208	BH208	BH208	BH209	BH209
Depth	----------	0.2-0.4	1.6-2.0	3.6-4.0	0.1-0.2	1.0-1.2
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	108	111	108	112	105

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-23	137123-25	137123-26	137123-27	137123-29
Your Reference	----------	BH209	BH210	BH210	BH210	BH211
Depth	----------	3.6-3.8	0.1-0.4	1.0-1.3	1.9-2.1	0-0.2
Date Sampled		6/11/2015	4/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	109	112	113	121	113

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-30	137123-32	137123-33	137123-34	137123-37
Your Reference	----------	BH211	BH212	BH212	BH212	BH213
Depth	----------	0.9-1.2	0-0.2	1.0-1.2	2.0-2.2	0-0.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	111	111	111	116	117

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-38	137123-39	137123-41	137123-42	137123-44
Your Reference	----------	BH213	BH213	BH214	BH214	BH215
Depth	----------	1.0-1.2	2.0-2.2	0-0.4	1.0-1.3	0-0.2
Date Sampled		3/11/2015	3/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	112	116	118	113	113

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-45	137123-46	137123-47	137123-49	137123-50
Your Reference	----------	BH215	BH215	BH215	BH216	BH216
Depth	----------	1.0-1.2	2.0-2.2	2.8-3.0	0-0.2	1.0-1.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	118	117	116	118	109

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-52	137123-53	137123-55	137123-56	137123-57
Your Reference	----------	BH217	BH217	BH218	BH218	BH218
Depth	----------	0-0.3	0.9-1.2	0-0.3	1.9-1.2	1.8-2.1
Date Sampled		4/11/2015	4/11/2015	4/11/2015	4/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	12/11/2015	12/11/2015	12/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	116	113	113	114	109

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-59	137123-61	137123-63	137123-65	137123-66
Your Reference	----------	BH219	BH220	BH220	BH220	BH221
Depth	----------	0-0.2	0-0.1	0.4-0.5	1.5-1.7	0.1-0.2
Date Sampled		4/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPH C6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	115	116	116	114	114

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-68	137123-70	137123-72	137123-74	137123-76
Your Reference	----------	BH222	BH223	BH224	BH225	BH225
Depth	----------	0-0.2	0-0.2	0-0.2	0-0.2	0.7-0.8
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
TRHC6 - C9	mg/kg	<25	<25	<25	<25	<25
TRHC6 - C10	mg/kg	<25	<25	<25	<25	<25
vTPH C6 - C10 less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	117	116	109	109	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-77	137123-78	137123-80	137123-82	137123-83
Your Reference	----------	BH225	BH226	BH226	BH226	BH227
Depth	----------	1.1-1.3	0-0.2	0.4-0.5	1.3-1.5	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	112	116	116	117	115

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-85	137123-89	137123-93	137123-94	137123-95
Your Reference	----------	BH228	BH229	DupJS1	DupJS2	DupJS3
Depth	----------	0.1-0.2	0-0.1	-	-	-
Date Sampled		5/11/2015	5/11/2015	2/11/2015	3/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	119	116	111	116	117

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	137123-100	137123-101	137123-102	137123-103	137123-104
Your Reference	----------	TB1	TB2	TB3	TB4	TB5
Depth	----------	-	-	-	-	-
Date Sampled		2/11/2015	3/11/2015	4/11/2015	5/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	121	123	122	121	123

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	79	78	78	81	81

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-11	137123-12	137123-13	137123-14	137123-15
Your Reference	----------	BH206	BH206	BH207	BH207	BH207
Depth	----------	0.2-0.4	2.0-2.2	0.2-0.4	1.2-1.4	2.8-3.0
Date Sampled		2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	11/11/2015	10/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	160
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	290
Surrogate o-Terphenyl	%	75	76	78	75	79

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-17	137123-18	137123-19	137123-21	137123-22
Your Reference	----------	BH208	BH208	BH208	BH209	BH209
Depth	----------	0.2-0.4	1.6-2.0	3.6-4.0	0.1-0.2	1.0-1.2
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	79	77	75	75	78

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-23	137123-25	137123-26	137123-27	137123-29
Your Reference	----------	BH209	BH210	BH210	BH210	BH211
Depth	----------	3.6-3.8	0.1-0.4	1.0-1.3	1.9-2.1	0-0.2
Date Sampled		6/11/2015	4/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	74	76	82	76	79

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-30	137123-32	137123-33	137123-34	137123-37
Your Reference	----------	BH211	BH212	BH212	BH212	BH213
Depth	----------	0.9-1.2	0-0.2	1.0-1.2	2.0-2.2	0-0.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	77	80	78	75	76

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-38	137123-39	137123-41	137123-42	137123-44
Your Reference	----------	BH213	BH213	BH214	BH214	BH215
Depth	----------	1.0-1.2	2.0-2.2	0-0.4	1.0-1.3	0-0.2
Date Sampled		3/11/2015	3/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	76	78	79	75	76

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-45	137123-46	137123-47	137123-49	137123-50
Your Reference	----------	BH215	BH215	BH215	BH216	BH216
Depth	----------	1.0-1.2	2.0-2.2	2.8-3.0	0-0.2	1.0-1.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	78	77	77	78	75

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-52	137123-53	137123-55	137123-56	137123-57
Your Reference	----------	BH217	BH217	BH218	BH218	BH218
Depth	----------	0-0.3	0.9-1.2	0-0.3	1.9-1.2	1.8-2.1
Date Sampled		4/11/2015	4/11/2015	4/11/2015	4/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	77	75	78	75	78

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-59	137123-61	137123-63	137123-65	137123-66
Your Reference	----------	BH219	BH220	BH220	BH220	BH221
Depth	----------	0-0.2	0-0.1	0.4-0.5	1.5-1.7	0.1-0.2
Date Sampled		4/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	76	78	84	80	84

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-68	137123-70	137123-72	137123-74	137123-76
Your Reference	----------	BH222	BH223	BH224	BH225	BH225
Depth	----------	0-0.2	0-0.2	0-0.2	0-0.2	0.7-0.8
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	80	79	80	80	79

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-77	137123-78	137123-80	137123-82	137123-83
Your Reference	----------	BH225	BH226	BH226	BH226	BH227
Depth	----------	1.1-1.3	0-0.2	0.4-0.5	1.3-1.5	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	110	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	600	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	220	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	640	<100	<100	<100
Surrogate o-Terphenyl	%	78	82	83	81	85

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	137123-85	137123-89	137123-93	137123-94	137123-95
Your Reference	----------	BH228	BH229	DupJS1	DupJS2	DupJS3
Depth	----------	0.1-0.2	0-0.1	-	-	-
Date Sampled		5/11/2015	5/11/2015	2/11/2015	3/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	82	79	81	80	81

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-1 BH201 0.1-0.2 6/11/2015 soil	137123-3 BH202 0.1-0.2 6/11/2015 soil	137123-5 BH203 0.1-0.2 6/11/2015 soil	137123-7 BH204 0-0.1 2/11/2015 soil	137123-9 BH205 0-0.2 2/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	109	88	101	95	100

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-11 BH206 0.2-0.4 2/11/2015 soil	137123-12 BH206 2.0-2.2 2/11/2015 soil	137123-13 BH207 0.2-0.4 2/11/2015 soil	137123-14 BH207 1.2-1.4 2/11/2015 soil	137123-15 BH207 2.8-3.0 2/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.4	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	1.5	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	101	99	103	95	95

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-17 BH208 0.2-0.4 2/11/2015 soil	137123-18 BH208 1.6-2.0 2/11/2015 soil	137123-19 BH208 3.6-4.0 2/11/2015 soil	137123-21 BH209 0.1-0.2 6/11/2015 soil	137123-22 BH209 1.0-1.2 6/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	1.7	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	1.8	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.7	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.9	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.7	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.60	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.9	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	8.1	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	100	99	98	101	100

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-23 BH209 3.6-3.8 6/11/2015 soil	137123-25 BH210 0.1-0.4 4/11/2015 soil	137123-26 BH210 1.0-1.3 4/11/2015 soil	137123-27 BH210 1.9-2.1 4/11/2015 soil	137123-29 BH211 0-0.2 3/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.07	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	0.070	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	93	100	95	101	95

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-30 BH211 0.9-1.2 3/11/2015 soil	137123-32 BH212 0-0.2 3/11/2015 soil	137123-33 BH212 1.0-1.2 3/11/2015 soil	137123-34 BH212 2.0-2.2 3/11/2015 soil	137123-37 BH213 0-0.3 3/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	92	91	92	90	94

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-38 BH213 1.0-1.2 3/11/2015 soil	137123-39 BH213 2.0-2.2 3/11/2015 soil	137123-41 BH214 0-0.4 4/11/2015 soil	137123-42 BH214 1.0-1.3 4/11/2015 soil	137123-44 BH215 0-0.2 3/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	93	96	94	88	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-45 BH215 1.0-1.2 3/11/2015 soil	137123-46 BH215 2.0-2.2 3/11/2015 soil	137123-47 BH215 2.8-3.0 3/11/2015 soil	137123-49 BH216 0-0.2 3/11/2015 soil	137123-50 BH216 1.0-1.3 3/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	92	87	84	92	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-52 BH217 0-0.3 4/11/2015 soil	137123-53 BH217 0.9-1.2 4/11/2015 soil	137123-55 BH218 0-0.3 4/11/2015 soil	137123-56 BH218 1.9-1.2 4/11/2015 soil	137123-57 BH218 1.8-2.1 4/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	85	89	90	92	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-59 BH219 0-0.2 4/11/2015 soil	137123-61 BH220 0-0.1 5/11/2015 soil	137123-63 BH220 0.4-0.5 5/11/2015 soil	137123-65 BH220 1.5-1.7 5/11/2015 soil	137123-66 BH221 0.1-0.2 5/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	89	90	90	90	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-68 BH222 0-0.2 5/11/2015 soil	137123-70 BH223 0-0.2 5/11/2015 soil	137123-72 BH224 0-0.2 5/11/2015 soil	137123-74 BH225 0-0.2 5/11/2015 soil	137123-76 BH225 0.7-0.8 5/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.5
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	2.9
Surrogate p-Terphenyl-d14	%	87	87	89	91	91

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-77 BH225 1.1-1.3 5/11/2015 soil	137123-78 BH226 0-0.2 5/11/2015 soil	137123-80 BH226 0.4-0.5 5/11/2015 soil	137123-82 BH226 1.3-1.5 5/11/2015 soil	137123-83 BH227 0-0.2 5/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	0.25	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	89	83	88	90	92

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-85 BH228 0.1-0.2 5/11/2015 soil	137123-89 BH229 0-0.1 5/11/2015 soil	137123-93 DupJS1 - 2/11/2015 soil	137123-94 DupJS2 - 3/11/2015 soil	137123-95 DupJS3 - 5/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	88	89	90	88	87

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	94	93	90	92

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-11	137123-13	137123-17	137123-21	137123-25
Your Reference	----------	BH206	BH207	BH208	BH209	BH210
Depth	----------	0.2-0.4	0.2-0.4	0.2-0.4	0.1-0.2	0.1-0.4
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	95	92	94	95

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-29	137123-32	137123-37	137123-41	137123-44
Your Reference	----------	BH211	BH212	BH213	BH214	BH215
Depth	----------	0-0.2	0-0.2	0-0.3	0-0.4	0-0.2
Date Sampled		3/11/2015	3/11/2015	3/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	89	92	103

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-49	137123-52	137123-55	137123-59	137123-61
Your Reference	----------	BH216	BH217	BH218	BH219	BH220
Depth	----------	0-0.2	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		3/11/2015	4/11/2015	4/11/2015	4/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	12/11/2015	12/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	91	93	91	95

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-66	137123-68	137123-70	137123-72	137123-74
Your Reference	----------	BH221	BH222	BH223	BH224	BH225
Depth	----------	0.1-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	94	92	96	94

Organochlorine Pesticides in soil						
Our Reference:	UNITS	137123-78	137123-83	137123-85	137123-89	137123-93
Your Reference	----------	BH226	BH227	BH228	BH229	DupJS1
Depth	----------	0-0.2	0-0.2	0.1-0.2	0-0.1	-
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	97	92	99	94

Organochlorine Pesticides in soil			
Our Reference:	UNITS	137123-94	137123-95
Your Reference	----------	DupJS2	DupJS3
Depth	----------	-	-
Date Sampled		3/11/2015	5/11/2015
Type of sample		soil	soil
Date extracted	-	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	90	94

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	94	93	90	92

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-11	137123-13	137123-17	137123-21	137123-25
Your Reference	----------	BH206	BH207	BH208	BH209	BH210
Depth	----------	0.2-0.4	0.2-0.4	0.2-0.4	0.1-0.2	0.1-0.4
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	95	92	94	95

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-29	137123-32	137123-37	137123-41	137123-44
Your Reference	----------	BH211	BH212	BH213	BH214	BH215
Depth	----------	0-0.2	0-0.2	0-0.3	0-0.4	0-0.2
Date Sampled		3/11/2015	3/11/2015	3/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	89	92	103

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-49	137123-52	137123-55	137123-59	137123-61
Your Reference	----------	BH216	BH217	BH218	BH219	BH220
Depth	----------	0-0.2	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		3/11/2015	4/11/2015	4/11/2015	4/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	12/11/2015	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	91	93	91	95

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-66	137123-68	137123-70	137123-72	137123-74
Your Reference	----------	BH221	BH222	BH223	BH224	BH225
Depth	----------	0.1-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	94	92	96	94

Organophosphorus Pesticides						
Our Reference:	UNITS	137123-78	137123-83	137123-85	137123-89	137123-93
Your Reference	----------	BH226	BH227	BH228	BH229	DupJS1
Depth	----------	0-0.2	0-0.2	0.1-0.2	0-0.1	-
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	97	92	99	94

Organophosphorus Pesticides Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	137123-94 DupJS2 - 3/11/2015 soil	137123-95 DupJS3 - 5/11/2015 soil
Date extracted	-	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Surrogate TCMX	%	90	94

PCBs in Soil						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	95	94	93	90	92

PCBs in Soil						
Our Reference:	UNITS	137123-11	137123-13	137123-17	137123-21	137123-25
Your Reference	----------	BH206	BH207	BH208	BH209	BH210
Depth	----------	0.2-0.4	0.2-0.4	0.2-0.4	0.1-0.2	0.1-0.4
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	95	92	94	95

PCBs in Soil						
Our Reference:	UNITS	137123-29	137123-32	137123-37	137123-41	137123-44
Your Reference	----------	BH211	BH212	BH213	BH214	BH215
Depth	----------	0-0.2	0-0.2	0-0.3	0-0.4	0-0.2
Date Sampled		3/11/2015	3/11/2015	3/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	94	89	92	103

PCBs in Soil						
Our Reference:	UNITS	137123-49	137123-52	137123-55	137123-59	137123-61
Your Reference	----------	BH216	BH217	BH218	BH219	BH220
Depth	----------	0-0.2	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		3/11/2015	4/11/2015	4/11/2015	4/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	12/11/2015	12/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	90	91	93	91	95

PCBs in Soil						
Our Reference:	UNITS	137123-66	137123-68	137123-70	137123-72	137123-74
Your Reference	----------	BH221	BH222	BH223	BH224	BH225
Depth	----------	0.1-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	92	94	92	96	94

PCBs in Soil						
Our Reference:	UNITS	137123-78	137123-83	137123-85	137123-89	137123-93
Your Reference	----------	BH226	BH227	BH228	BH229	DupJS1
Depth	----------	0-0.2	0-0.2	0.1-0.2	0-0.1	-
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015	12/11/2015	12/11/2015	12/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	85	97	92	99	94

PCBs in Soil			
Our Reference:	UNITS	137123-94	137123-95
Your Reference	----------	DupJS2	DupJS3
Depth	----------	-	-
Date Sampled		3/11/2015	5/11/2015
Type of sample		soil	soil
Date extracted	-	10/11/2015	10/11/2015
Date analysed	-	12/11/2015	12/11/2015
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	90	94

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	6	11	18	6	6
Cadmium	mg/kg	<0.4	<0.4	0.5	<0.4	<0.4
Chromium	mg/kg	18	25	20	14	13
Copper	mg/kg	20	11	30	13	20
Lead	mg/kg	17	17	92	29	28
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	16	6	10
Zinc	mg/kg	25	14	400	59	58

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-11	137123-12	137123-13	137123-14	137123-15
Your Reference	----------	BH206	BH206	BH207	BH207	BH207
Depth	----------	0.2-0.4	2.0-2.2	0.2-0.4	1.2-1.4	2.8-3.0
Date Sampled		2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	6	<4	5	9	9
Cadmium	mg/kg	0.5	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	15	16	20	19
Copper	mg/kg	29	31	31	23	37
Lead	mg/kg	24	13	14	18	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	13	29	12	21
Zinc	mg/kg	99	46	46	52	64

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-17	137123-18	137123-19	137123-21	137123-22
Your Reference	----------	BH208	BH208	BH208	BH209	BH209
Depth	----------	0.2-0.4	1.6-2.0	3.6-4.0	0.1-0.2	1.0-1.2
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	35	9	9	9	20
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	19	18	13	8
Copper	mg/kg	41	39	21	40	52
Lead	mg/kg	19	26	25	15	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	21	21	10	19	22
Zinc	mg/kg	71	62	29	69	81

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-23	137123-25	137123-26	137123-27	137123-29
Your Reference	----------	BH209	BH210	BH210	BH210	BH211
Depth	----------	3.6-3.8	0.1-0.4	1.0-1.3	1.9-2.1	0-0.2
Date Sampled		6/11/2015	4/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	8	6	18	17	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	14	10	8	17
Copper	mg/kg	18	26	42	42	25
Lead	mg/kg	22	13	13	15	31
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	14	26	20	12
Zinc	mg/kg	20	38	69	70	69

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-30	137123-32	137123-33	137123-34	137123-37
Your Reference	----------	BH211	BH212	BH212	BH212	BH213
Depth	----------	0.9-1.2	0-0.2	1.0-1.2	2.0-2.2	0-0.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	12	7	7	8	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	11	16	14	13
Copper	mg/kg	30	18	38	39	19
Lead	mg/kg	15	20	20	13	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	33	9	29	20	11
Zinc	mg/kg	61	89	85	93	83

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-38	137123-39	137123-41	137123-42	137123-44
Your Reference	----------	BH213	BH213	BH214	BH214	BH215
Depth	----------	1.0-1.2	2.0-2.2	0-0.4	1.0-1.3	0-0.2
Date Sampled		3/11/2015	3/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	13	5	6	13	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	13	19	12	11
Copper	mg/kg	38	17	110	37	24
Lead	mg/kg	13	14	26	18	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	22	8	10	17	13
Zinc	mg/kg	80	25	94	84	86

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-45	137123-46	137123-47	137123-49	137123-50
Your Reference	----------	BH215	BH215	BH215	BH216	BH216
Depth	----------	1.0-1.2	2.0-2.2	2.8-3.0	0-0.2	1.0-1.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	10	6	12	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	10	18	10	18
Copper	mg/kg	39	16	19	12	14
Lead	mg/kg	16	10	13	16	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	25	3	9	6	9
Zinc	mg/kg	79	19	28	51	22

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-52	137123-53	137123-55	137123-56	137123-57
Your Reference	----------	BH217	BH217	BH218	BH218	BH218
Depth	----------	0-0.3	0.9-1.2	0-0.3	1.9-1.2	1.8-2.1
Date Sampled		4/11/2015	4/11/2015	4/11/2015	4/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	10	8	11	9	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	23	22	9	20	19
Copper	mg/kg	17	17	46	21	20
Lead	mg/kg	30	16	18	17	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	10	25	9	11
Zinc	mg/kg	36	26	98	33	34

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-59	137123-61	137123-63	137123-65	137123-66
Your Reference	----------	BH219	BH220	BH220	BH220	BH221
Depth	----------	0-0.2	0-0.1	0.4-0.5	1.5-1.7	0.1-0.2
Date Sampled		4/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	<4	4	5	10	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	11	12	26	22
Copper	mg/kg	11	13	15	12	11
Lead	mg/kg	12	26	12	21	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	7	4	6	4
Zinc	mg/kg	35	56	18	19	27

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-68	137123-70	137123-72	137123-74	137123-76
Your Reference	----------	BH222	BH223	BH224	BH225	BH225
Depth	----------	0-0.2	0-0.2	0-0.2	0-0.2	0.7-0.8
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	13	10	5	10	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	19	15	17	14
Copper	mg/kg	23	18	13	29	36
Lead	mg/kg	39	36	19	48	23
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	8	6	17	20
Zinc	mg/kg	89	60	25	91	67

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-77	137123-78	137123-80	137123-82	137123-83
Your Reference	----------	BH225	BH226	BH226	BH226	BH227
Depth	----------	1.1-1.3	0-0.2	0.4-0.5	1.3-1.5	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	5	<4	6	7	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	9	19	12	13
Copper	mg/kg	33	15	30	16	20
Lead	mg/kg	28	29	29	10	35
Mercury	mg/kg	<0.1	0.1	0.3	<0.1	<0.1
Nickel	mg/kg	22	6	22	5	10
Zinc	mg/kg	77	76	68	24	160

Acid Extractable metals in soil						
Our Reference:	UNITS	137123-85	137123-89	137123-93	137123-94	137123-95
Your Reference	----------	BH228	BH229	DupJS1	DupJS2	DupJS3
Depth	----------	0.1-0.2	0-0.1	-	-	-
Date Sampled		5/11/2015	5/11/2015	2/11/2015	3/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Arsenic	mg/kg	11	7	6	8	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	13	13	11	21
Copper	mg/kg	23	15	15	24	11
Lead	mg/kg	22	20	20	28	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	15	9	8	13	5
Zinc	mg/kg	67	53	33	87	29

Moisture						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	15	11	18	18	26

Moisture						
Our Reference:	UNITS	137123-11	137123-12	137123-13	137123-14	137123-15
Your Reference	----------	BH206	BH206	BH207	BH207	BH207
Depth	----------	0.2-0.4	2.0-2.2	0.2-0.4	1.2-1.4	2.8-3.0
Date Sampled		2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	16	15	7.6	15	13

Moisture						
Our Reference:	UNITS	137123-17	137123-18	137123-19	137123-21	137123-22
Your Reference	----------	BH208	BH208	BH208	BH209	BH209
Depth	----------	0.2-0.4	1.6-2.0	3.6-4.0	0.1-0.2	1.0-1.2
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	12	15	19	16	9.4

Moisture						
Our Reference:	UNITS	137123-23	137123-25	137123-26	137123-27	137123-29
Your Reference	----------	BH209	BH210	BH210	BH210	BH211
Depth	----------	3.6-3.8	0.1-0.4	1.0-1.3	1.9-2.1	0-0.2
Date Sampled		6/11/2015	4/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	19	14	6.8	10	21

Moisture						
Our Reference:	UNITS	137123-30	137123-32	137123-33	137123-34	137123-37
Your Reference	----------	BH211	BH212	BH212	BH212	BH213
Depth	----------	0.9-1.2	0-0.2	1.0-1.2	2.0-2.2	0-0.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	23	18	14	17	12

Moisture						
Our Reference:	UNITS	137123-38	137123-39	137123-41	137123-42	137123-44
Your Reference	----------	BH213	BH213	BH214	BH214	BH215
Depth	----------	1.0-1.2	2.0-2.2	0-0.4	1.0-1.3	0-0.2
Date Sampled		3/11/2015	3/11/2015	4/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	9.6	15	12	16	16

Moisture						
Our Reference:	UNITS	137123-45	137123-46	137123-47	137123-49	137123-50
Your Reference	----------	BH215	BH215	BH215	BH216	BH216
Depth	----------	1.0-1.2	2.0-2.2	2.8-3.0	0-0.2	1.0-1.3
Date Sampled		3/11/2015	3/11/2015	3/11/2015	3/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	12	19	15	19	18

Moisture						
Our Reference:	UNITS	137123-52	137123-53	137123-55	137123-56	137123-57
Your Reference	----------	BH217	BH217	BH218	BH218	BH218
Depth	----------	0-0.3	0.9-1.2	0-0.3	1.9-1.2	1.8-2.1
Date Sampled		4/11/2015	4/11/2015	4/11/2015	4/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	14	21	11	17	17

Moisture						
Our Reference:	UNITS	137123-59	137123-61	137123-63	137123-65	137123-66
Your Reference	----------	BH219	BH220	BH220	BH220	BH221
Depth	----------	0-0.2	0-0.1	0.4-0.5	1.5-1.7	0.1-0.2
Date Sampled		4/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	12	16	16	18	14

Moisture						
Our Reference:	UNITS	137123-68	137123-70	137123-72	137123-74	137123-76
Your Reference	----------	BH222	BH223	BH224	BH225	BH225
Depth	----------	0-0.2	0-0.2	0-0.2	0-0.2	0.7-0.8
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	14	17	12	19	13

Moisture						
Our Reference:	UNITS	137123-77	137123-78	137123-80	137123-82	137123-83
Your Reference	----------	BH225	BH226	BH226	BH226	BH227
Depth	----------	1.1-1.3	0-0.2	0.4-0.5	1.3-1.5	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	12	15	9.7	19	26

Moisture						
Our Reference:	UNITS	137123-85	137123-89	137123-93	137123-94	137123-95
Your Reference	----------	BH228	BH229	DupJS1	DupJS2	DupJS3
Depth	----------	0.1-0.2	0-0.1	-	-	-
Date Sampled		5/11/2015	5/11/2015	2/11/2015	3/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	17	18	27	17	15

Moisture						
Our Reference:	UNITS	137123-100	137123-101	137123-102	137123-103	137123-104
Your Reference	----------	TB1	TB2	TB3	TB4	TB5
Depth	----------	-	-	-	-	-
Date Sampled		2/11/2015	3/11/2015	4/11/2015	5/11/2015	6/11/2015
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/11/2015	10/11/2015	10/11/2015	10/11/2015	10/11/2015
Date analysed	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Moisture	%	0.1	0.2	0.5	1.8	0.2

Asbestos ID - soils						
Our Reference:	UNITS	137123-1	137123-3	137123-5	137123-7	137123-9
Your Reference	----------	BH201	BH202	BH203	BH204	BH205
Depth	----------	0.1-0.2	0.1-0.2	0.1-0.2	0-0.1	0-0.2
Date Sampled		6/11/2015	6/11/2015	6/11/2015	2/11/2015	2/11/2015
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 30g	Approx. 20g	Approx. 30g	Approx. 35g	Approx. 25g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	137123-11	137123-13	137123-17	137123-21	137123-25
Your Reference	----------	BH206	BH207	BH208	BH209	BH210
Depth	----------	0.2-0.4	0.2-0.4	0.2-0.4	0.1-0.2	0.1-0.4
Date Sampled		2/11/2015	2/11/2015	2/11/2015	6/11/2015	4/11/2015
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	137123-29	137123-32	137123-37	137123-41	137123-44
Your Reference	----------	BH211	BH212	BH213	BH214	BH215
Depth	----------	0-0.2	0-0.2	0-0.3	0-0.4	0-0.2
Date Sampled		3/11/2015	3/11/2015	3/11/2015	4/11/2015	3/11/2015
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	137123-49	137123-52	137123-55	137123-59	137123-61
Your Reference	----------	BH216	BH217	BH218	BH219	BH220
Depth	----------	0-0.2	0-0.3	0-0.3	0-0.2	0-0.1
Date Sampled		3/11/2015	4/11/2015	4/11/2015	4/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 30g	Approx. 40g	Approx. 35g	Approx. 25g	Approx. 30g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference:	UNITS	137123-66	137123-68	137123-70	137123-72	137123-74
Your Reference	----------	BH221	BH222	BH223	BH224	BH225
Depth	----------	0.1-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 40g	Approx. 25g	Approx. 30g	Approx. 40g	Approx. 35g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference:	UNITS	137123-78	137123-83	137123-85	137123-89
Your Reference	----------	BH226	BH227	BH228	BH229
Depth	----------	0-0.2	0-0.2	0.1-0.2	0-0.1
Date Sampled		5/11/2015	5/11/2015	5/11/2015	5/11/2015
Type of sample		soil	soil	soil	soil
Date analysed	-	16/11/2015	16/11/2015	16/11/2015	16/11/2015
Sample mass tested	g	Approx. 35g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks	Brown coarse grain soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - materials			
Our Reference:	UNITS	137123-98	137123-99
Your Reference	----------	FTP226	FTP227
Depth	----------	0.2	0.1
Date Sampled		5/11/2015	5/11/2015
Type of sample		material	material
Date analysed	-	13/11/2015	13/11/2015
Mass / Dimension of Sample	-	60x30x4mm	62x40x6mm
Sample Description	-	Grey compressed fibre cement material	Grey compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected

BTEX in Water			
Our Reference:	UNITS	137123-105	137123-106
Your Reference	----------	FR1	FR2
Depth	----------	-	-
Date Sampled		3/11/2015	4/11/2015
Type of sample		water	water
Date extracted	-	11/11/2015	11/11/2015
Date analysed	-	12/11/2015	12/11/2015
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	102	102
Surrogate toluene-d8	%	101	101
Surrogate 4-BFB	%	102	102

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			12/11/2015	137123-1	11/11/2015 || 11/11/2015	LCS-4	12/11/2015
$TRHC_6$ - C_9	mg/kg	25	Org-016	<25	137123-1	<25 || <25	LCS-4	97%
$TRHC_6$ - C_{10}	mg/kg	25	Org-016	<25	137123-1	<25 || <25	LCS-4	97%
Benzene	mg/kg	0.2	Org-016	<0.2	137123-1	<0.2 || <0.2	LCS-4	92%
Toluene	mg/kg	0.5	Org-016	<0.5	137123-1	<0.5 || <0.5	LCS-4	96%
Ethylbenzene	mg/kg	1	Org-016	<1	137123-1	<1 || <1	LCS-4	99%
m+p-xylene	mg/kg	2	Org-016	<2	137123-1	<2 || <2	LCS-4	99%
o-Xylene	mg/kg	1	Org-016	<1	137123-1	<1 || <1	LCS-4	99%
naphthalene	mg/kg	1	Org-014	<1	137123-1	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	118	137123-1	104 || 105 || RPD: 1	LCS-4	107%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
$TRHC_{10}$ - C_{14}	mg/kg	50	Org-003	<50	137123-1	<50 || <50	LCS-4	107%
$TRHC_{15}$ - C_{28}	mg/kg	100	Org-003	<100	137123-1	<100 || <100	LCS-4	94%
$TRHC_{29}$ - C_{36}	mg/kg	100	Org-003	<100	137123-1	<100 || <100	LCS-4	93%
$TRH>C_{10}$-C_{16}	mg/kg	50	Org-003	<50	137123-1	<50 || <50	LCS-4	107%
$TRH>C_{16}$-C_{34}	mg/kg	100	Org-003	<100	137123-1	<100 || <100	LCS-4	94%
$TRH>C_{34}$-C_{40}	mg/kg	100	Org-003	<100	137123-1	<100 || <100	LCS-4	93%
Surrogate o-Terphenyl	%		Org-003	82	137123-1	79 || 77 || RPD: 3	LCS-4	92%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			11/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Naphthalene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	114%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	117%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	105%
Anthracene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	105%
Pyrene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	112%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	LCS-4	119%
Benzo(b,j+k) fluoranthene	mg/kg	0.2	Org-012	<0.2	137123-1	<0.2 || <0.2	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	137123-1	<0.05 || <0.05	LCS-4	75%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	96	137123-1	109 || 96 || RPD: 13	LCS-4	91%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			12/11/2015	137123-1	11/11/2015 || 11/11/2015	LCS-4	11/11/2015
HCB	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	96%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	94%
Heptachlor	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	97%
delta-BHC	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	94%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	94%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	98%
Dieldrin	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	98%
Endrin	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	105%
pp-DDD	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	117%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	LCS-4	105%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	96	137123-1	95 || 96 || RPD: 1	LCS-4	112%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			12/11/2015	137123-1	11/11/2015 || 11/11/2015	LCS-4	11/11/2015
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	111%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	101%
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Diazinon	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	97%
Dimethoate	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	100%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	114%
Malathion	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	105%
Parathion	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	LCS-4	109%
Ronnel	mg/kg	0.1	Org-008	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-008	96	137123-1	95 || 96 || RPD: 1	LCS-4	112%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-			12/11/2015	137123-1	11/11/2015 || 11/11/2015	LCS-4	11/11/2015
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	LCS-4	96%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	137123-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	96	137123-1	95 || 96 || RPD: 1	LCS-4	112%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-3	10/11/2015
Date analysed	-			10/11/2015	137123-1	10/11/2015 || 10/11/2015	LCS-3	10/11/2015
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	137123-1	6 || 6 || RPD: 0	LCS-3	112%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	137123-1	<0.4 || <0.4	LCS-3	105%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	137123-1	18 || 17 || RPD: 6	LCS-3	109%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	137123-1	20 || 25 || RPD: 22	LCS-3	108%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	137123-1	17 || 16 || RPD: 6	LCS-3	104%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	137123-1	<0.1 || <0.1	LCS-3	97%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	137123-1	5 || 4 || RPD: 22	LCS-3	104%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	137123-1	25 || 26 || RPD: 4	LCS-3	108%

QUALITY CONTROL BTEX in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			11/11/2015	[NT]	[NT]	LCS-W1	11/11/2015
Date analysed	-			12/11/2015	[NT]	[NT]	LCS-W1	12/11/2015
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	92%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	96%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	99%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	99%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	99%
Surrogate Dibromofluoromethane	%		Org-016	101	[NT]	[NT]	LCS-W1	101%
Surrogate toluene-d8	%		Org-016	101	[NT]	[NT]	LCS-W1	100%
Surrogate 4-BFB	%		Org-016	104	[NT]	[NT]	LCS-W1	101%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	11/11/2015 || 11/11/2015	LCS-5	11/11/2015
$TRHC_6$ - C_9	mg/kg	137123-17	<25 || <25	LCS-5	108%
$TRHC_6$ - C_{10}	mg/kg	137123-17	<25 || <25	LCS-5	108%
Benzene	mg/kg	137123-17	<0.2 || <0.2	LCS-5	101%
Toluene	mg/kg	137123-17	<0.5 || <0.5	LCS-5	109%
Ethylbenzene	mg/kg	137123-17	<1 || <1	LCS-5	107%
m+p-xylene	mg/kg	137123-17	<2 || <2	LCS-5	111%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
o-Xylene	mg/kg	137123-17	<1 || <1	LCS-5	115%
naphthalene	mg/kg	137123-17	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	137123-17	108 || 108 || RPD: 0	LCS-5	117%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	11/11/2015
$TRHC_{10}$ - C_{14}	mg/kg	137123-17	<50 || <50	LCS-5	107%
$TRHC_{15}$ - C_{28}	mg/kg	137123-17	<100 || <100	LCS-5	101%
$TRHC_{29}$ - C_{36}	mg/kg	137123-17	<100 || <100	LCS-5	93%
$TRH>C_{10}$-C_{16}	mg/kg	137123-17	<50 || <50	LCS-5	107%
$TRH>C_{16}$-C_{34}	mg/kg	137123-17	<100 || <100	LCS-5	101%
$TRH>C_{34}$-C_{40}	mg/kg	137123-17	<100 || <100	LCS-5	93%
Surrogate o-Terphenyl	%	137123-17	79 || 77 || RPD: 3	LCS-5	91%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Naphthalene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	114%
Acenaphthylene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	117%
Phenanthrene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	105%
Anthracene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	105%
Pyrene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	112%
Benzo(a)anthracene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	137123-17	<0.1 || <0.1	LCS-5	119%
Benzo(b,j+k)fluoranthene	mg/kg	137123-17	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	137123-17	<0.05 || <0.05	LCS-5	75%
Indeno(1,2,3-c,d)pyrene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	137123-17	100 || 106 || RPD: 6	LCS-5	91%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	11/11/2015 || 11/11/2015	LCS-5	12/11/2015
HCB	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	137123-17	<0.1 || <0.1	LCS-5	93%
gamma-BHC	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	137123-17	<0.1 || <0.1	LCS-5	93%
Heptachlor	mg/kg	137123-17	<0.1 || <0.1	LCS-5	97%
delta-BHC	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	137123-17	<0.1 || <0.1	LCS-5	93%
Heptachlor Epoxide	mg/kg	137123-17	<0.1 || <0.1	LCS-5	93%
gamma-Chlordane	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	137123-17	<0.1 || <0.1	LCS-5	98%
Dieldrin	mg/kg	137123-17	<0.1 || <0.1	LCS-5	98%
Endrin	mg/kg	137123-17	<0.1 || <0.1	LCS-5	109%
pp-DDD	mg/kg	137123-17	<0.1 || <0.1	LCS-5	117%
Endosulfan II	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	137123-17	<0.1 || <0.1	LCS-5	97%
Methoxychlor	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	137123-17	92 || 90 || RPD: 2	LCS-5	111%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	11/11/2015 || 11/11/2015	LCS-5	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	137123-17	<0.1 || <0.1	LCS-5	91%
Bromophos-ethyl	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	137123-17	<0.1 || <0.1	LCS-5	101%
Chlorpyriphos-methyl	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Diazinon	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Dichlorvos	mg/kg	137123-17	<0.1 || <0.1	LCS-5	103%
Dimethoate	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	137123-17	<0.1 || <0.1	LCS-5	101%
Fenitrothion	mg/kg	137123-17	<0.1 || <0.1	LCS-5	114%
Malathion	mg/kg	137123-17	<0.1 || <0.1	LCS-5	88%
Parathion	mg/kg	137123-17	<0.1 || <0.1	LCS-5	109%
Ronnel	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	137123-17	92 || 90 || RPD: 2	LCS-5	111%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-17	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-17	11/11/2015 || 11/11/2015	LCS-5	12/11/2015
Aroclor 1016	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aroclor 1221	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aroclor 1232	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aroclor 1242	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aroclor 1248	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Aroclor 1254	mg/kg	137123-17	<0.1 || <0.1	LCS-5	99%
Aroclor 1260	mg/kg	137123-17	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	137123-17	92 || 90 || RPD: 2	LCS-5	111%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	137123-17	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Date analysed	-	137123-17	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Arsenic	mg/kg	137123-17	35 || 41 || RPD: 16	137123-3	89%
Cadmium	mg/kg	137123-17	<0.4 || <0.4	137123-3	90%
Chromium	mg/kg	137123-17	15 || 13 || RPD: 14	137123-3	83%
Copper	mg/kg	137123-17	41 || 38 || RPD: 8	137123-3	103%
Lead	mg/kg	137123-17	19 || 21 || RPD: 10	137123-3	81%
Mercury	mg/kg	137123-17	<0.1 || <0.1	137123-3	92%
Nickel	mg/kg	137123-17	21 || 21 || RPD: 0	137123-3	88%
Zinc	mg/kg	137123-17	71 || 67 || RPD: 6	137123-3	100%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-33	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Date analysed	-	137123-33	11/11/2015 || 11/11/2015	LCS-6	12/11/2015
$TRHC_6$ - C_9	mg/kg	137123-33	<25 || <25	LCS-6	117%
$TRHC_6$ - C_{10}	mg/kg	137123-33	<25 || <25	LCS-6	117%
Benzene	mg/kg	137123-33	<0.2 || <0.2	LCS-6	111%
Toluene	mg/kg	137123-33	<0.5 || <0.5	LCS-6	120%
Ethylbenzene	mg/kg	137123-33	<1 || <1	LCS-6	116%
m+p-xylene	mg/kg	137123-33	<2 || <2	LCS-6	118%
o-Xylene	mg/kg	137123-33	<1 || <1	LCS-6	123%
naphthalene	mg/kg	137123-33	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	137123-33	111 || 113 || RPD: 2	LCS-6	117%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-33	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Date analysed	-	137123-33	11/11/2015 || 11/11/2015	LCS-6	11/11/2015
$TRHC_{10}$ - C_{14}	mg/kg	137123-33	<50 || <50	LCS-6	116%
$TRHC_{15}$ - C_{28}	mg/kg	137123-33	<100 || <100	LCS-6	112%
$TRHC_{29}$ - C_{36}	mg/kg	137123-33	<100 || <100	LCS-6	107%
$TRH>C_{10}$-C_{16}	mg/kg	137123-33	<50 || <50	LCS-6	116%
$TRH>C_{16}$-C_{34}	mg/kg	137123-33	<100 || <100	LCS-6	112%
$TRH>C_{34}$-C_{40}	mg/kg	137123-33	<100 || <100	LCS-6	107%
Surrogate o-Terphenyl	%	137123-33	78 || 76 || RPD: 3	LCS-6	103%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-33	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Date analysed	-	137123-33	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Naphthalene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	118%
Acenaphthylene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	117%
Phenanthrene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	100%
Anthracene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	104%
Pyrene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	110%
Benzo(a)anthracene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	137123-33	<0.1 || <0.1	LCS-6	123%
Benzo(b,j+k)fluoranthene	mg/kg	137123-33	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	137123-33	<0.05 || <0.05	LCS-6	104%
Indeno(1,2,3-c,d)pyrene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	137123-33	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	137123-33	92 || 90 || RPD: 2	LCS-6	89%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	137123-33	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Date analysed	-	137123-33	10/11/2015 || 10/11/2015	LCS-4	10/11/2015
Arsenic	mg/kg	137123-33	7 || 6 || RPD: 15	LCS-4	109%
Cadmium	mg/kg	137123-33	<0.4 || <0.4	LCS-4	105%
Chromium	mg/kg	137123-33	16 || 16 || RPD: 0	LCS-4	108%
Copper	mg/kg	137123-33	38 || 39 || RPD: 3	LCS-4	109%
Lead	mg/kg	137123-33	20 || 20 || RPD: 0	LCS-4	103%
Mercury	mg/kg	137123-33	<0.1 || <0.1	LCS-4	93%
Nickel	mg/kg	137123-33	29 || 31 || RPD: 7	LCS-4	102%
Zinc	mg/kg	137123-33	85 || 89 || RPD: 5	LCS-4	106%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-45	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Date analysed	-	137123-45	11/11/2015 || 11/11/2015	137123-3	11/11/2015
$TRHC_6$ - C_9	mg/kg	137123-45	<25 || <25	137123-3	109%
$TRHC_6$ - C_{10}	mg/kg	137123-45	<25 || <25	137123-3	109%
Benzene	mg/kg	137123-45	<0.2 || <0.2	137123-3	100%
Toluene	mg/kg	137123-45	<0.5 || <0.5	137123-3	108%
Ethylbenzene	mg/kg	137123-45	<1 || <1	137123-3	110%
m+p-xylene	mg/kg	137123-45	<2 || <2	137123-3	113%
o-Xylene	mg/kg	137123-45	<1 || <1	137123-3	118%
naphthalene	mg/kg	137123-45	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	137123-45	118 || 116 || RPD: 2	137123-3	113%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-45	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Date analysed	-	137123-45	11/11/2015 || 11/11/2015	137123-3	10/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	137123-45	<50 || <50	137123-3	105%
TRHC$_{15}$ - C$_{28}$	mg/kg	137123-45	<100 || <100	137123-3	98%
TRHC$_{29}$ - C$_{36}$	mg/kg	137123-45	<100 || <100	137123-3	73%
TRH>C$_{10}$-C$_{16}$	mg/kg	137123-45	<50 || <50	137123-3	105%
TRH>C$_{16}$-C$_{34}$	mg/kg	137123-45	<100 || <100	137123-3	98%
TRH>C$_{34}$-C$_{40}$	mg/kg	137123-45	<100 || <100	137123-3	73%
Surrogate o-Terphenyl	%	137123-45	78 || 77 || RPD: 1	137123-3	78%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-45	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Date analysed	-	137123-45	10/11/2015 || 10/11/2015	137123-3	10/11/2015
Naphthalene	mg/kg	137123-45	<0.1 || <0.1	137123-3	106%
Acenaphthylene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	137123-45	<0.1 || <0.1	137123-3	107%
Phenanthrene	mg/kg	137123-45	<0.1 || <0.1	137123-3	95%
Anthracene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	137123-45	<0.1 || <0.1	137123-3	95%
Pyrene	mg/kg	137123-45	<0.1 || <0.1	137123-3	102%
Benzo(a)anthracene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	137123-45	<0.1 || <0.1	137123-3	108%
Benzo(b,j+k)fluoranthene	mg/kg	137123-45	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	137123-45	<0.05 || <0.05	137123-3	76%
Indeno(1,2,3-c,d)pyrene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	137123-45	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	137123-45	92 || 91 || RPD: 1	137123-3	83%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-3	10/11/2015
Date analysed	-	[NT]	[NT]	137123-3	11/11/2015
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	137123-3	89%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	137123-3	87%
Heptachlor	mg/kg	[NT]	[NT]	137123-3	91%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	137123-3	87%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	137123-3	87%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	137123-3	90%
Dieldrin	mg/kg	[NT]	[NT]	137123-3	90%
Endrin	mg/kg	[NT]	[NT]	137123-3	98%
pp-DDD	mg/kg	[NT]	[NT]	137123-3	111%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	137123-3	88%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	137123-3	94%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-3	10/11/2015
Date analysed	-	[NT]	[NT]	137123-3	11/11/2015
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	137123-3	108%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	137123-3	99%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	137123-3	105%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	137123-3	99%
Fenitrothion	mg/kg	[NT]	[NT]	137123-3	97%
Malathion	mg/kg	[NT]	[NT]	137123-3	80%
Parathion	mg/kg	[NT]	[NT]	137123-3	103%
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	137123-3	94%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-3	10/11/2015
Date analysed	-	[NT]	[NT]	137123-3	11/11/2015
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	137123-3	95%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	137123-3	94%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	137123-45	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Date analysed	-	137123-45	10/11/2015 || 10/11/2015	LCS-5	10/11/2015
Arsenic	mg/kg	137123-45	10 || 11 || RPD: 10	LCS-5	110%
Cadmium	mg/kg	137123-45	<0.4 || <0.4	LCS-5	102%
Chromium	mg/kg	137123-45	13 || 12 || RPD: 8	LCS-5	107%
Copper	mg/kg	137123-45	39 || 41 || RPD: 5	LCS-5	106%
Lead	mg/kg	137123-45	16 || 16 || RPD: 0	LCS-5	103%
Mercury	mg/kg	137123-45	<0.1 || <0.1	LCS-5	90%
Nickel	mg/kg	137123-45	25 || 24 || RPD: 4	LCS-5	102%
Zinc	mg/kg	137123-45	79 || 81 || RPD: 2	LCS-5	106%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Date analysed	-	137123-59	12/11/2015 || 12/11/2015	137123-34	11/11/2015
TRHC$_6$ - C$_9$	mg/kg	137123-59	<25 || <25	137123-34	108%
TRHC$_6$ - C$_{10}$	mg/kg	137123-59	<25 || <25	137123-34	108%
Benzene	mg/kg	137123-59	<0.2 || <0.2	137123-34	103%
Toluene	mg/kg	137123-59	<0.5 || <0.5	137123-34	111%
Ethylbenzene	mg/kg	137123-59	<1 || <1	137123-34	108%
m+p-xylene	mg/kg	137123-59	<2 || <2	137123-34	109%
o-Xylene	mg/kg	137123-59	<1 || <1	137123-34	114%
naphthalene	mg/kg	137123-59	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	137123-59	115 || 112 || RPD: 3	137123-34	118%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Date analysed	-	137123-59	11/11/2015 || 11/11/2015	137123-34	11/11/2015
TRHC$_{10}$ - C$_{14}$	mg/kg	137123-59	<50 || <50	137123-34	103%
TRHC$_{15}$ - C$_{28}$	mg/kg	137123-59	<100 || <100	137123-34	93%
TRHC$_{29}$ - C$_{36}$	mg/kg	137123-59	<100 || <100	137123-34	75%
TRH>C$_{10}$-C$_{16}$	mg/kg	137123-59	<50 || <50	137123-34	103%
TRH>C$_{16}$-C$_{34}$	mg/kg	137123-59	<100 || <100	137123-34	93%
TRH>C$_{34}$-C$_{40}$	mg/kg	137123-59	<100 || <100	137123-34	75%
Surrogate o-Terphenyl	%	137123-59	76 || 77 || RPD: 1	137123-34	75%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Date analysed	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Naphthalene	mg/kg	137123-59	<0.1 || <0.1	137123-34	107%
Acenaphthylene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	137123-59	<0.1 || <0.1	137123-34	107%
Phenanthrene	mg/kg	137123-59	<0.1 || <0.1	137123-34	93%
Anthracene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	137123-59	<0.1 || <0.1	137123-34	94%
Pyrene	mg/kg	137123-59	<0.1 || <0.1	137123-34	99%
Benzo(a)anthracene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	137123-59	<0.1 || <0.1	137123-34	110%
Benzo(b,j+k)fluoranthene	mg/kg	137123-59	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	137123-59	<0.05 || <0.05	137123-34	77%
Indeno(1,2,3-c,d)pyrene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	137123-59	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	137123-59	89 || 89 || RPD: 0	137123-34	91%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-59	10/11/2015 || 10/11/2015
Date analysed	-	137123-59	12/11/2015 || 12/11/2015
HCB	mg/kg	137123-59	<0.1 || <0.1
alpha-BHC	mg/kg	137123-59	<0.1 || <0.1
gamma-BHC	mg/kg	137123-59	<0.1 || <0.1
beta-BHC	mg/kg	137123-59	<0.1 || <0.1
Heptachlor	mg/kg	137123-59	<0.1 || <0.1
delta-BHC	mg/kg	137123-59	<0.1 || <0.1
Aldrin	mg/kg	137123-59	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	137123-59	<0.1 || <0.1
gamma-Chlordane	mg/kg	137123-59	<0.1 || <0.1
alpha-chlordane	mg/kg	137123-59	<0.1 || <0.1
Endosulfan I	mg/kg	137123-59	<0.1 || <0.1
pp-DDE	mg/kg	137123-59	<0.1 || <0.1
Dieldrin	mg/kg	137123-59	<0.1 || <0.1
Endrin	mg/kg	137123-59	<0.1 || <0.1
pp-DDD	mg/kg	137123-59	<0.1 || <0.1
Endosulfan II	mg/kg	137123-59	<0.1 || <0.1
pp-DDT	mg/kg	137123-59	<0.1 || <0.1
Endrin Aldehyde	mg/kg	137123-59	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	137123-59	<0.1 || <0.1
Methoxychlor	mg/kg	137123-59	<0.1 || <0.1
Surrogate TCMX	%	137123-59	91 || 93 || RPD: 2

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-59	10/11/2015 || 10/11/2015
Date analysed	-	137123-59	12/11/2015 || 12/11/2015
Azinphos-methyl (Guthion)	mg/kg	137123-59	<0.1 || <0.1
Bromophos-ethyl	mg/kg	137123-59	<0.1 || <0.1
Chlorpyriphos	mg/kg	137123-59	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	137123-59	<0.1 || <0.1
Diazinon	mg/kg	137123-59	<0.1 || <0.1
Dichlorvos	mg/kg	137123-59	<0.1 || <0.1
Dimethoate	mg/kg	137123-59	<0.1 || <0.1
Ethion	mg/kg	137123-59	<0.1 || <0.1
Fenitrothion	mg/kg	137123-59	<0.1 || <0.1
Malathion	mg/kg	137123-59	<0.1 || <0.1
Parathion	mg/kg	137123-59	<0.1 || <0.1
Ronnel	mg/kg	137123-59	<0.1 || <0.1
Surrogate TCMX	%	137123-59	91 || 93 || RPD: 2

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-59	10/11/2015 || 10/11/2015
Date analysed	-	137123-59	12/11/2015 || 12/11/2015
Aroclor 1016	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1221	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1232	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1242	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1248	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1254	mg/kg	137123-59	<0.1 || <0.1
Aroclor 1260	mg/kg	137123-59	<0.1 || <0.1
Surrogate TCLMX	%	137123-59	91 || 93 || RPD: 2

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Date analysed	-	137123-59	10/11/2015 || 10/11/2015	137123-34	10/11/2015
Arsenic	mg/kg	137123-59	<4 || <4	137123-34	87%
Cadmium	mg/kg	137123-59	<0.4 || <0.4	137123-34	89%
Chromium	mg/kg	137123-59	8 || 9 || RPD: 12	137123-34	91%
Copper	mg/kg	137123-59	11 || 11 || RPD: 0	137123-34	97%
Lead	mg/kg	137123-59	12 || 12 || RPD: 0	137123-34	82%
Mercury	mg/kg	137123-59	<0.1 || <0.1	137123-34	102%
Nickel	mg/kg	137123-59	5 || 5 || RPD: 0	137123-34	83%
Zinc	mg/kg	137123-59	35 || 37 || RPD: 6	137123-34	78%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-77	10/11/2015 || 10/11/2015	137123-61	10/11/2015
Date analysed	-	137123-77	12/11/2015 || 12/11/2015	137123-61	12/11/2015
$TRHC_6$ - C_9	mg/kg	137123-77	<25 || <25	137123-61	103%
$TRHC_6$ - C_{10}	mg/kg	137123-77	<25 || <25	137123-61	103%
Benzene	mg/kg	137123-77	<0.2 || <0.2	137123-61	99%
Toluene	mg/kg	137123-77	<0.5 || <0.5	137123-61	107%
Ethylbenzene	mg/kg	137123-77	<1 || <1	137123-61	103%
m+p-xylene	mg/kg	137123-77	<2 || <2	137123-61	104%
o-Xylene	mg/kg	137123-77	<1 || <1	137123-61	109%
naphthalene	mg/kg	137123-77	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	137123-77	112 || 113 || RPD: 1	137123-61	114%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-77	10/11/2015 || 10/11/2015	137123-61	10/11/2015
Date analysed	-	137123-77	11/11/2015 || 11/11/2015	137123-61	11/11/2015
$TRHC_{10}$ - C_{14}	mg/kg	137123-77	<50 || <50	137123-61	108%
$TRHC_{15}$ - C_{28}	mg/kg	137123-77	<100 || <100	137123-61	99%
$TRHC_{29}$ - C_{36}	mg/kg	137123-77	<100 || <100	137123-61	#
$TRH>C_{10}$-C_{16}	mg/kg	137123-77	<50 || <50	137123-61	108%
$TRH>C_{16}$-C_{34}	mg/kg	137123-77	<100 || <100	137123-61	99%
$TRH>C_{34}$-C_{40}	mg/kg	137123-77	<100 || <100	137123-61	#
Surrogate o-Terphenyl	%	137123-77	78 || 77 || RPD: 1	137123-61	78%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	137123-77	10/11/2015 || 10/11/2015	137123-61	10/11/2015
Date analysed	-	137123-77	11/11/2015 || 11/11/2015	137123-61	10/11/2015
Naphthalene	mg/kg	137123-77	<0.1 || <0.1	137123-61	110%
Acenaphthylene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	137123-77	<0.1 || <0.1	137123-61	112%
Phenanthrene	mg/kg	137123-77	<0.1 || <0.1	137123-61	95%
Anthracene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	137123-77	0.1 || <0.1	137123-61	96%
Pyrene	mg/kg	137123-77	0.1 || <0.1	137123-61	101%
Benzo(a)anthracene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	137123-77	<0.1 || <0.1	137123-61	111%
Benzo(b,j+k)fluoranthene	mg/kg	137123-77	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	137123-77	0.05 || 0.06 || RPD: 18	137123-61	96%
Indeno(1,2,3-c,d)pyrene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	137123-77	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	137123-77	89 || 89 || RPD: 0	137123-61	88%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-61	10/11/2015
Date analysed	-	[NT]	[NT]	137123-61	12/11/2015
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	137123-61	106%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	137123-61	101%
Heptachlor	mg/kg	[NT]	[NT]	137123-61	107%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	137123-61	101%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	137123-61	102%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	137123-61	107%
Dieldrin	mg/kg	[NT]	[NT]	137123-61	108%
Endrin	mg/kg	[NT]	[NT]	137123-61	119%
pp-DDD	mg/kg	[NT]	[NT]	137123-61	117%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	137123-61	111%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	137123-61	92%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-61	10/11/2015
Date analysed	-	[NT]	[NT]	137123-61	12/11/2015
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	137123-61	105%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	137123-61	97%
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	137123-61	100%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	137123-61	93%
Fenitrothion	mg/kg	[NT]	[NT]	137123-61	104%
Malathion	mg/kg	[NT]	[NT]	137123-61	79%
Parathion	mg/kg	[NT]	[NT]	137123-61	104%
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	137123-61	92%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	137123-61	10/11/2015
Date analysed	-	[NT]	[NT]	137123-61	12/11/2015
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	137123-61	91%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	137123-61	92%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	137123-77	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Date analysed	-	137123-77	10/11/2015 || 10/11/2015	LCS-6	10/11/2015
Arsenic	mg/kg	137123-77	5 || 6 || RPD: 18	LCS-6	108%
Cadmium	mg/kg	137123-77	<0.4 || <0.4	LCS-6	103%
Chromium	mg/kg	137123-77	14 || 15 || RPD: 7	LCS-6	106%
Copper	mg/kg	137123-77	33 || 33 || RPD: 0	LCS-6	107%
Lead	mg/kg	137123-77	28 || 22 || RPD: 24	LCS-6	106%
Mercury	mg/kg	137123-77	<0.1 || <0.1	LCS-6	89%
Nickel	mg/kg	137123-77	22 || 19 || RPD: 15	LCS-6	101%
Zinc	mg/kg	137123-77	77 || 60 || RPD: 25	LCS-6	105%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-95	10/11/2015 || 10/11/2015
Date analysed	-	137123-95	12/11/2015 || 12/11/2015
$TRHC_6$ - C_9	mg/kg	137123-95	<25 || <25
$TRHC_6$ - C_{10}	mg/kg	137123-95	<25 || <25
Benzene	mg/kg	137123-95	<0.2 || <0.2
Toluene	mg/kg	137123-95	<0.5 || <0.5
Ethylbenzene	mg/kg	137123-95	<1 || <1
m+p-xylene	mg/kg	137123-95	<2 || <2
o-Xylene	mg/kg	137123-95	<1 || <1
naphthalene	mg/kg	137123-95	<1 || <1
Surrogate aaa-Trifluorotoluene	%	137123-95	117 || 114 || RPD: 3

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-95	10/11/2015 || 10/11/2015
Date analysed	-	137123-95	12/11/2015 || 12/11/2015
HCB	mg/kg	137123-95	<0.1 || <0.1
alpha-BHC	mg/kg	137123-95	<0.1 || <0.1
gamma-BHC	mg/kg	137123-95	<0.1 || <0.1
beta-BHC	mg/kg	137123-95	<0.1 || <0.1
Heptachlor	mg/kg	137123-95	<0.1 || <0.1
delta-BHC	mg/kg	137123-95	<0.1 || <0.1
Aldrin	mg/kg	137123-95	<0.1 || <0.1
Heptachlor Epoxide	mg/kg	137123-95	<0.1 || <0.1
gamma-Chlordane	mg/kg	137123-95	<0.1 || <0.1
alpha-chlordane	mg/kg	137123-95	<0.1 || <0.1
Endosulfan I	mg/kg	137123-95	<0.1 || <0.1
pp-DDE	mg/kg	137123-95	<0.1 || <0.1
Dieldrin	mg/kg	137123-95	<0.1 || <0.1
Endrin	mg/kg	137123-95	<0.1 || <0.1
pp-DDD	mg/kg	137123-95	<0.1 || <0.1
Endosulfan II	mg/kg	137123-95	<0.1 || <0.1
pp-DDT	mg/kg	137123-95	<0.1 || <0.1
Endrin Aldehyde	mg/kg	137123-95	<0.1 || <0.1
Endosulfan Sulphate	mg/kg	137123-95	<0.1 || <0.1
Methoxychlor	mg/kg	137123-95	<0.1 || <0.1
Surrogate TCMX	%	137123-95	94 || 96 || RPD: 2

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-95	10/11/2015 || 10/11/2015
Date analysed	-	137123-95	12/11/2015 || 12/11/2015
Azinphos-methyl (Guthion)	mg/kg	137123-95	<0.1 || <0.1
Bromophos-ethyl	mg/kg	137123-95	<0.1 || <0.1
Chlorpyriphos	mg/kg	137123-95	<0.1 || <0.1
Chlorpyriphos-methyl	mg/kg	137123-95	<0.1 || <0.1
Diazinon	mg/kg	137123-95	<0.1 || <0.1
Dichlorvos	mg/kg	137123-95	<0.1 || <0.1
Dimethoate	mg/kg	137123-95	<0.1 || <0.1
Ethion	mg/kg	137123-95	<0.1 || <0.1
Fenitrothion	mg/kg	137123-95	<0.1 || <0.1
Malathion	mg/kg	137123-95	<0.1 || <0.1
Parathion	mg/kg	137123-95	<0.1 || <0.1
Ronnel	mg/kg	137123-95	<0.1 || <0.1
Surrogate TCMX	%	137123-95	94 || 96 || RPD: 2

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	-	137123-95	10/11/2015 || 10/11/2015
Date analysed	-	137123-95	12/11/2015 || 12/11/2015
Aroclor 1016	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1221	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1232	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1242	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1248	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1254	mg/kg	137123-95	<0.1 || <0.1
Aroclor 1260	mg/kg	137123-95	<0.1 || <0.1
Surrogate TCLMX	%	137123-95	94 || 96 || RPD: 2

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	137123-61	10/11/2015
Date analysed	-	[NT]	[NT]	137123-61	10/11/2015
Arsenic	mg/kg	[NT]	[NT]	137123-61	96%
Cadmium	mg/kg	[NT]	[NT]	137123-61	97%
Chromium	mg/kg	[NT]	[NT]	137123-61	101%
Copper	mg/kg	[NT]	[NT]	137123-61	106%
Lead	mg/kg	[NT]	[NT]	137123-61	96%
Mercury	mg/kg	[NT]	[NT]	137123-61	85%
Nickel	mg/kg	[NT]	[NT]	137123-61	95%
Zinc	mg/kg	[NT]	[NT]	137123-61	97%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	LCS-7	10/11/2015
Date analysed	-	[NT]	[NT]	LCS-7	10/11/2015
Arsenic	mg/kg	[NT]	[NT]	LCS-7	109%
Cadmium	mg/kg	[NT]	[NT]	LCS-7	102%
Chromium	mg/kg	[NT]	[NT]	LCS-7	105%
Copper	mg/kg	[NT]	[NT]	LCS-7	107%
Lead	mg/kg	[NT]	[NT]	LCS-7	101%
Mercury	mg/kg	[NT]	[NT]	LCS-7	88%
Nickel	mg/kg	[NT]	[NT]	LCS-7	102%
Zinc	mg/kg	[NT]	[NT]	LCS-7	105%

Report Comments:

TRHs in soil (semi-vol):
Percent recovery is not possible to report due to interference from analytes (other than those being tested) in the sample/s.

Asbestos ID was analysed by Approved Identifier: Lulu Scott, Paul Ching
Asbestos ID was authorised by Approved Signatory: Lulu Scott

INS: Insufficient sample for this test
NR: Test not required
<: Less than
PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than
NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

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SAMPLE RECEIPT ADVICE

Client Details	
Client	Environmental Investigation Services
Attention	Vittal Boggaram

Sample Login Details	
Your Reference	E28870KB, Arndell Park
Envirolab Reference	**137123**
Date Sample Received	09/11/2015
Date Instructions Received	09/11/2015
Date Results Expected to be Reported	**16/11/2015**

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	102soils, 2materials and 2waters
Turnaround Time Requested	Standard
Temperature on receipt (°C)	
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments
Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au

Sample and Testing Details on following page

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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Sample Id	*vTRH(C6-C10)/BTEXN in Soil*	*svTRH (C10-C40) in Soil*	*PAHs in Soil*	*Organochlorine Pesticides in soil*	*Organophosphorus Pesticides*	*PCBs in Soil*	*Acid Extractable metals in soil*	*Asbestos ID - soils*	*Asbestos ID - materials*	*BTEX in Water*	*On Hold*
BH201-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH201-1.0-1.2											✓
BH202-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH202-1.0-1.2											✓
BH203-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH203-1.0-1.2											✓
BH204-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓			
BH204-1.0-1.2											✓
BH205-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH205-1.0-1.2											✓
BH206-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓			
BH206-2.0-2.2	✓	✓	✓				✓				
BH207-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓			
BH207-1.2-1.4	✓	✓	✓				✓				
BH207-2.8-3.0	✓	✓	✓				✓				
BH207-5.5-6.0											✓
BH208-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓			
BH208-1.6-2.0	✓	✓	✓				✓				
BH208-3.6-4.0	✓	✓	✓				✓				
BH208-6.0-6.45											✓
BH209-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH209-1.0-1.2	✓	✓	✓				✓				
BH209-3.6-3.8	✓	✓	✓				✓				
BH209-5.2-5.4											✓
BH210-0.1-0.4	✓	✓	✓	✓	✓	✓	✓	✓			
BH210-1.0-1.3	✓	✓	✓				✓				
BH210-1.9-2.1	✓	✓	✓				✓				
BH210-2.8-3.0											✓
BH211-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH211-0.9-1.2	✓	✓	✓				✓				
BH211-1.5-1.7											✓
BH212-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH212-1.0-1.2	✓	✓	✓				✓				
BH212-2.0-2.2	✓	✓	✓				✓				
BH212-2.8-3.0											✓
BH212-4.0-4.2											✓
BH213-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓			
BH213-1.0-1.2	✓	✓	✓				✓				

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

Sample Id	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils	Asbestos ID - materials	BTEX in Water	On Hold
BH213-2.0-2.2	✓	✓	✓				✓				
BH213-2.8-3.0											✓
BH214-0-0.4	✓	✓	✓	✓	✓	✓	✓	✓			
BH214-1.0-1.3	✓	✓	✓				✓				
BH214-1.9-2.1											✓
BH215-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH215-1.0-1.2	✓	✓	✓				✓				
BH215-2.0-2.2	✓	✓	✓				✓				
BH215-2.8-3.0	✓	✓	✓				✓				
BH215-4.0-4.2											✓
BH216-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH216-1.0-1.3	✓	✓	✓				✓				
BH216-2.0-2.3											✓
BH217-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓			
BH217-0.9-1.2	✓	✓	✓				✓				
BH217-1.8-2.1											✓
BH218-0-0.3	✓	✓	✓	✓	✓	✓	✓	✓			
BH218-1.9-1.2	✓	✓	✓				✓				
BH218-1.8-2.1	✓	✓	✓				✓				
BH218-2.7-3.0											✓
BH219-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH219-1.0-1.3											✓
BH220-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓			
BH220-0.1-0.3											✓
BH220-0.4-0.5	✓	✓	✓				✓				
BH220-0.7-0.9											✓
BH220-1.5-1.7	✓	✓	✓				✓				
BH221-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH221-0.4-0.5											✓
BH222-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH222-0.4-0.5											✓
BH223-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH223-0.3-0.5											✓
BH224-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH224-0.3-0.5											✓
BH225-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH225-0.4-0.5											✓
BH225-0.7-0.8	✓	✓	✓				✓				

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Sample Id	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils	Asbestos ID - materials	BTEX in Water	On Hold
BH225-1.1-1.3	✓	✓	✓				✓				
BH226-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH226-0.2-0.4											✓
BH226-0.4-0.5	✓	✓	✓				✓				
BH226-0.8-1.0											✓
BH226-1.3-1.5	✓	✓	✓				✓				
BH227-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH227-0.4-0.5											✓
BH228-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓			
BH228-0.3-0.4											✓
BH228-0.8-1.0											✓
BH228-1.2-1.3											✓
BH229-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓			
BH229-0.1-0.2											✓
BH229-0.3-0.5											✓
BH229-1.1-1.3											✓
DupJS1	✓	✓	✓	✓	✓	✓	✓				
DupJS2	✓	✓	✓	✓	✓	✓	✓				
DupJS3	✓	✓	✓	✓	✓	✓	✓				
DupJS4											✓
DupJS5											✓
FTP226-0.2									✓		
FTP227-0.1									✓		
TB1	✓										
TB2	✓										
TB3	✓										
TB4	✓										
TB5	✓										
FR1										✓	
FR2										✓	

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E28870KB	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067		MACQUARIE PARK, NSW 2113
P: (02) 99106200	Date Results Required: STANDARD	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Vittal Boggaram
Attention: Aileen	Page: 1 / 5	vboggaram@jkgroup.net.au

Location: Arndell Park, NSW

Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos
6/11/15	1	BH201	0.1-0.2	G, A	0	F:11				X					
	2	↓	1.0-1.2			Natural									
	3	BH202	0.1-0.2			F:11				X					
	4	↓	1.0-1.2			Natural									
	5	BH203	0.1-0.2			F:11				X					
	6	↓	1.0-1.2			Natural									
2/11/15	7	BH204	0.0-0.1			F:11				X					
	8	↓	1.0-1.2			Natural									
	9	BH205	0.0-0.2			F:11				X					
	10	↓	1.0-1.2			Natural									
	11	BH206	0.2-0.4			F:11				X					
	12	↓	2.0-2.2			F:11		X							
	13	BH207	0.2-0.4			F:11				X					
	14		1.2-1.4					X							
	15		2.8-3.0			↓		X							
	16	↓	5.5-6.0			Natural									
	17	BH208	0.2-0.4			F:11				X					
	18		1.6-2.0					X							
	19		3.6-4.0			↓		X							
	20	↓	6.0-6.45			Natural									
6/11/15	21	BH209	0.1-0.2			F:11				X					
	22		1.0-1.2					X							
	23		3.6-3.8			↓		X							
	24	↓	5.2-5.4	↓	↓	Natural									

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 137123

Date Received: 9/11/2015

Time Received: 17.15

Received by: PR

Temp: Cool/Ambient 14.2

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal. B.S	9/11/15	17.15	P.Ray	9/11/2015

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E28870KB	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201	Page: 2/5	Attention: Vittal Boggaram
Attention: Aileen		vboggaram@jkgroup.net.au

Location: Arndell Park, NSW

Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
4/11/15	25	BH210	0.1-0.4	G, A	0	Fill				X								
	26		1.0-1.3					X										
	27		1.9-2.1					X										
	28		2.8-3.0			Natural												
3/11/15	29	BH214	0-0.2			Fill				X								
	30		0.9-1.2					X										
	31		1.5-1.7			Natural												
	32	BH212	0-0.2			Fill				X								
	33		1.0-1.2					X										
	34		2.0-2.2					X										
	35		2.8-3.0															
	36		4.0-4.2			Natural												
	37	BH213	0.0-0.3			Fill				X								
	38		1.0-1.2					X										
	39		2.0-2.2					X										
	40		2.8-3.0			Natural												
4/11/15	41	BH214	0.0-0.4			Fill				X								
	42		1.0-1.3					X										
	43		1.9-2.1			Natural												
3/11/15	44	BH215	0.0-0.2			Fill				X								
	45		1.0-1.2					X										
	46		2.0-2.2					X										
	47		2.8-3.0					X										
	48		4.0-4.2			Natural												

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	9/11/15	17.15	PR	9/11/2015

137123

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E28870KB	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Vittal Boggaram
Attention: Aileen	Page: 3/5	vboggaram@jkgroup.net.au

Location: Arndell Park, NSW

Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
3/11/15	49	BH216	0.0-0.2	G, A	0	Fill				X								
↓	50	↓	1.0-1.3	-	↓	↓		X										
↓	51	↓	2.0-2.3			Natural												
4/11/15	52	BH217	0.0-0.3			Fill				X								
	53	↓	0.9-1.2			↓		X										
	54	↓	1.8-2.1			Natural												
	55	BH218	0.0-0.3			Fill				X								
	56	↓	0.9-1.2			↓		X										
	57	↓	1.8-2.1			↓		X										
	58	↓	2.7-3.0			Natural												
	59	BH219	0.0-0.2			Fill				X								
↓	60	↓	1.0-1.3			Natural												
5/11/15	61	TP220	0.0-0.1			Fill				X								
↓	62	↓	0.1-0.3			↓												
	63	↓	0.4-0.5			↓		X										
	64	↓	0.7-0.9			↓												
	65	↓	1.5-1.7			↓		X										
	66	TP221	0.1-0.2			↓				X								
	67	↓	0.4-0.5			Natural												
	68	TP222	0.0-0.2			Fill				X								
	69	↓	0.4-0.5			Natural												
	70	TP223	0.0-0.2			Fill				X								
	71	↓	0.3-0.5			Natural												
	72	TP224	0.0-0.2			Fill				X								
↓	73	↓	0.3-0.5	↓	↓	Natural												

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	9/11/15	17.15	P.R	9/11/2015

137123

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E28870KB	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Vittal Boggaram
Attention: Aileen	Page: 4 / 5	vboggaram@jkgroup.net.au

Location:	Arndell Park, NSW	Sample Preserved in Esky on Ice
Sampler:	JS	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
5/11/15	74	TP225	0.0-0.2	G, A	0	Fill				X								
	75		0.4-0.5															
	76		0.7-0.8					X										
	78		1.1-1.3					X										
	78	TP226	0.0-0.2							X								
	79		0.2-0.4															
	80		0.4-0.5					X										
	81		0.8-1.0															
	82		1.3-1.5					X										
	83	TP227	0.0-0.2							X								
	84		0.4-0.5			Natural												
	85	TP228	0.1-0.2			Fill				X								
	86		0.3-0.4															
	87		0.8-1.0															
	88		1.2-1.3															
	89	TP229	0.0-0.1							X								
	90		0.1-0.2															
	91		0.3-0.5															
	92		1.1-1.3															
2/11/15	93	Dup JS1	-	G	-	Soil			X									
3/11/15	94	Dup JS2	-		-				X									
5/11/15	95	Dup JS3	-		-				X									
5/11/15	96	Dup JS4	-		-													
6/11/15	97	Dup JS5	-		-													
5/11/15	98	FTP226	0.2	A	-	Material									X			

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	9/11/15	17:15	P.R	9/11/2015

137123

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E28870KB	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067	Date Results Required: STANDARD	MACQUARIE PARK, NSW 2113
P: (02) 99106200		P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Vittal Boggaram
Attention: Aileen	Page: 5/5	vboggaram@jkgroup.net.au

Location:	Arndell Park, NSW	Sample Preserved in Esky on Ice
Sampler:	JS	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos			
5/11/15	99	FTP227	0.1	G A	-	Material									X			
2/11/15	100	TB1	-	G	-	Soil								X				
3/11/15	101	TB2	-	↓	-	↓								X				
4/11/15	102	TB3	-	↓	-	↓								X				
5/11/15	103	TB4	-	↓	-	↓								X				
6/11/15	104	TB5	-	↓	-	↓								X				
3/11/15	105	FR1	-	V	-	Water								X				
4/11/15	106	FR2	-	↓	-	↓								X				

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	9/11/15	17.15	P.Ray	9/11/2015

137123

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Viittal Boggaram
Client	Jeffery & Katauskas Pty Ltd
Address	Rear 115 Wicks Road MACQUARIE PARK MACQUARIE PARK NSW 2113
Telephone	(02) 9888 5000
Facsimile	(02) 9888 5004
Email	vboggaram@jkgroup.net.au
Project	**E28870KB Arndell Park**
Order Number	(Not specified)
Samples	60

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE145929 R0**
Date Received	12 Nov 2015
Date Reported	20 Nov 2015

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

SIGNATORIES

Andy Sutton
Senior Organic Chemist

Dong Liang
Metals/Inorganics Team Leader

Huong Crawford
Production Manager

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.001 Soil 06 Nov 2015 BH201_0.5-0.95	SE145929.002 Soil 06 Nov 2015 BH201_3.5-4.0	SE145929.003 Soil 06 Nov 2015 BH202_1.5-1.95	SE145929.004 Soil 06 Nov 2015 BH202_2.5-3.0
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**490**	-	**580**	-
Exchangeable Sodium, Na	meq/100g	0.01	**2.1**	-	**2.5**	-
Exchangeable Sodium Percentage*	%	0.1	**16.0**	-	**17.9**	-
Exchangeable Potassium, K	mg/kg	2	**140**	-	**170**	-
Exchangeable Potassium, K	meq/100g	0.01	**0.35**	-	**0.44**	-
Exchangeable Potassium Percentage*	%	0.1	**2.7**	-	**3.1**	-
Exchangeable Calcium, Ca	mg/kg	2	**270**	-	**30**	-
Exchangeable Calcium, Ca	meq/100g	0.01	**1.3**	-	**0.15**	-
Exchangeable Calcium Percentage*	%	0.1	**10.1**	-	**1.0**	-
Exchangeable Magnesium, Mg	mg/kg	2	**1100**	-	**1300**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	**9.4**	-	**11**	-
Exchangeable Magnesium Percentage*	%	0.1	**71.2**	-	**77.9**	-
Cation Exchange Capacity	meq/100g	0.02	**13**	-	**14**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**4.3**	**7.4**	**4.6**	**5.0**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**240**	**610**	**1300**	**560**
Resistivity (1:2)*	ohm cm	-	**4200**	**1700**	**770**	**1800**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**83**	**230**	**920**	**280**
Sulphate	mg/kg	0.5	**110**	**110**	**220**	**120**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	MEDIUM CLAY	SILTY LOAM	SILTY CLAY	SANDY LOAM
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**22.0**	**15.2**	**13.6**	**13.5**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.005 Soil 06 Nov 2015 BH203_0.5-0.95	SE145929.006 Soil 06 Nov 2015 BH203_1.5-1.95	SE145929.007 Soil 02 Nov 2015 BH204_1.5-1.95	SE145929.008 Soil 02 Nov 2015 BH204_7.0-7.5
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**600**	-	**680**	-
Exchangeable Sodium, Na	meq/100g	0.01	**2.6**	-	**2.9**	-
Exchangeable Sodium Percentage*	%	0.1	**25.4**	-	**26.9**	-
Exchangeable Potassium, K	mg/kg	2	**55**	-	**110**	-
Exchangeable Potassium, K	meq/100g	0.01	**0.14**	-	**0.27**	-
Exchangeable Potassium Percentage*	%	0.1	**1.4**	-	**2.4**	-
Exchangeable Calcium, Ca	mg/kg	2	**300**	-	**130**	-
Exchangeable Calcium, Ca	meq/100g	0.01	**1.5**	-	**0.66**	-
Exchangeable Calcium Percentage*	%	0.1	**14.7**	-	**6.0**	-
Exchangeable Magnesium, Mg	mg/kg	2	**740**	-	**870**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	**6.1**	-	**7.1**	-
Exchangeable Magnesium Percentage*	%	0.1	**58.6**	-	**64.6**	-
Cation Exchange Capacity	meq/100g	0.02	**10**	-	**11**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**4.9**	**7.3**	**7.5**	**8.1**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**320**	**210**	**1700**	**1000**
Resistivity (1:2)*	ohm cm	-	**3100**	**4800**	**570**	**970**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**53**	**4.4**	**1300**	**560**
Sulphate	mg/kg	0.5	**410**	**51**	**160**	**77**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SILTY CLAY	SILTY SLAY LOAM	LIGHT CLAY	SILTY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**15.4**	**11.2**	**16.9**	**12.0**

Parameter	Units	LOR	Sample Number: SE145929.009 Sample Matrix: Soil Sample Date: 02 Nov 2015 Sample Name: BH204_8.5-9.0	SE145929.010 Soil 02 Nov 2015 BH205_0.5-0.95	SE145929.011 Soil 02 Nov 2015 BH205_3.0-3.45	SE145929.012 Soil 02 Nov 2015 BH206_1.5-1.95
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	-	**630**	-	**410**
Exchangeable Sodium, Na	meq/100g	0.01	-	**2.7**	-	**1.8**
Exchangeable Sodium Percentage*	%	0.1	-	**24.7**	-	**16.4**
Exchangeable Potassium, K	mg/kg	2	-	**83**	-	**90**
Exchangeable Potassium, K	meq/100g	0.01	-	**0.21**	-	**0.23**
Exchangeable Potassium Percentage*	%	0.1	-	**1.9**	-	**2.1**
Exchangeable Calcium, Ca	mg/kg	2	-	**540**	-	**410**
Exchangeable Calcium, Ca	meq/100g	0.01	-	**2.7**	-	**2.1**
Exchangeable Calcium Percentage*	%	0.1	-	**24.3**	-	**19.2**
Exchangeable Magnesium, Mg	mg/kg	2	-	**670**	-	**820**
Exchangeable Magnesium, Mg	meq/100g	0.02	-	**5.5**	-	**6.7**
Exchangeable Magnesium Percentage*	%	0.1	-	**49.1**	-	**62.3**
Cation Exchange Capacity	meq/100g	0.02	-	**11**	-	**11**
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**8.2**	**7.5**	**7.9**	**5.5**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**1700**	**1900**	**1100**	**370**
Resistivity (1:2)*	ohm cm	-	**600**	**530**	**910**	**2700**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**1300**	**1100**	**570**	**250**
Sulphate	mg/kg	0.5	**130**	**200**	**210**	**10**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SILTY CLAY	SILTY CLAY	LIGHT CLAY	LIGHT CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**19.3**	**19.2**	**17.1**	**14.5**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.013 Soil 02 Nov 2015 BH206_4.0-4.5	SE145929.014 Soil 02 Nov 2015 BH206_7.0-7.5	SE145929.015 Soil 02 Nov 2015 BH207_0.5-0.95	SE145929.016 Soil 02 Nov 2015 BH207_3.0-3.45
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	-	-	**570**	-
Exchangeable Sodium, Na	meq/100g	0.01	-	-	**2.5**	-
Exchangeable Sodium Percentage*	%	0.1	-	-	**13.5**	-
Exchangeable Potassium, K	mg/kg	2	-	-	**160**	-
Exchangeable Potassium, K	meq/100g	0.01	-	-	**0.41**	-
Exchangeable Potassium Percentage*	%	0.1	-	-	**2.2**	-
Exchangeable Calcium, Ca	mg/kg	2	-	-	**1200**	-
Exchangeable Calcium, Ca	meq/100g	0.01	-	-	**6.1**	-
Exchangeable Calcium Percentage*	%	0.1	-	-	**33.5**	-
Exchangeable Magnesium, Mg	mg/kg	2	-	-	**1100**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	-	-	**9.3**	-
Exchangeable Magnesium Percentage*	%	0.1	-	-	**50.7**	-
Cation Exchange Capacity	meq/100g	0.02	-	-	**18**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**8.1**	**8.6**	**5.1**	**7.0**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**900**	**680**	**470**	**420**
Resistivity (1:2)*	ohm cm	-	**1100**	**1500**	**2100**	**2400**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**400**	**260**	**85**	**63**
Sulphate	mg/kg	0.5	**66**	**54**	**330**	**160**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SILTY CLAY LOAM	SILTY CLAY LOAM	SILTY CLAY	LIGHT CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**7.8**	**9.2**	**14.5**	**18.2**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.017 Soil 02 Nov 2015 BH207_6.0-6.45	SE145929.018 Soil 02 Nov 2015 BH207_10-10.5	SE145929.019 Soil 02 Nov 2015 BH208_0.5-0.95	SE145929.020 Soil 02 Nov 2015 BH208_4.5-4.95
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	-	-	**410**	-
Exchangeable Sodium, Na	meq/100g	0.01	-	-	**1.8**	-
Exchangeable Sodium Percentage*	%	0.1	-	-	**7.5**	-
Exchangeable Potassium, K	mg/kg	2	-	-	**160**	-
Exchangeable Potassium, K	meq/100g	0.01	-	-	**0.42**	-
Exchangeable Potassium Percentage*	%	0.1	-	-	**1.8**	-
Exchangeable Calcium, Ca	mg/kg	2	-	-	**2800**	-
Exchangeable Calcium, Ca	meq/100g	0.01	-	-	**14**	-
Exchangeable Calcium Percentage*	%	0.1	-	-	**59.2**	-
Exchangeable Magnesium, Mg	mg/kg	2	-	-	**920**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	-	-	**7.6**	-
Exchangeable Magnesium Percentage*	%	0.1	-	-	**31.6**	-
Cation Exchange Capacity	meq/100g	0.02	-	-	**24**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**6.6**	**7.8**	**8.1**	**6.5**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**480**	**650**	**1200**	**540**
Resistivity (1:2)*	ohm cm	-	**2100**	**1500**	**820**	**1800**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**180**	**340**	**280**	**230**
Sulphate	mg/kg	0.5	**110**	**98**	**810**	**48**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	LIGHT CLAY	SILTY CLAY	LIGHT CLAY	MEDIUM CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**17.2**	**26.9**	**10.4**	**19.2**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE145929.021 Soil 06 Nov 2015 BH209_0.5-0.95	SE145929.022 Soil 06 Nov 2015 BH209_3.0-3.45	SE145929.023 Soil 06 Nov 2015 BH209_7.0-7.5	SE145929.024 Soil 04 Nov 2015 BH210_0.5-0.95
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015							
Exchangeable Sodium, Na	mg/kg	2		**470**	-	-	**190**
Exchangeable Sodium, Na	meq/100g	0.01		**2.0**	-	-	**0.81**
Exchangeable Sodium Percentage*	%	0.1		**5.9**	-	-	**3.6**
Exchangeable Potassium, K	mg/kg	2		**170**	-	-	**93**
Exchangeable Potassium, K	meq/100g	0.01		**0.43**	-	-	**0.24**
Exchangeable Potassium Percentage*	%	0.1		**1.2**	-	-	**1.1**
Exchangeable Calcium, Ca	mg/kg	2		**5600**	-	-	**3200**
Exchangeable Calcium, Ca	meq/100g	0.01		**28**	-	-	**16**
Exchangeable Calcium Percentage*	%	0.1		**81.5**	-	-	**72.5**
Exchangeable Magnesium, Mg	mg/kg	2		**480**	-	-	**620**
Exchangeable Magnesium, Mg	meq/100g	0.02		**4.0**	-	-	**5.1**
Exchangeable Magnesium Percentage*	%	0.1		**11.4**	-	-	**22.8**
Cation Exchange Capacity	meq/100g	0.02		**35**	-	-	**22**
pH in soil (1:2) Method: AN101 Tested: 17/11/2015							
pH (1:2)	pH Units	-		**7.8**	**8.1**	**8.0**	**7.5**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015							
Conductivity (1:2) @25 C*	µS/cm	1		**380**	**310**	**530**	**1200**
Resistivity (1:2)*	ohm cm	-		**2600**	**3300**	**1900**	**820**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015							
Chloride	mg/kg	0.25		**29**	**23**	**240**	**50**
Sulphate	mg/kg	0.5		**130**	**37**	**40**	**1200**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015							
Texture Classification*	No unit	1		LIGHT CLAY	SANDY CLAY LOA	SILTY CLAY	FINE SANDY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015							
% Moisture	%w/w	0.5		**22.4**	**16.6**	**10.2**	**9.5**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.025 Soil 04 Nov 2015 BH210_3.0-3.45	SE145929.026 Soil 03 Nov 2015 BH211_0.5-0.95	SE145929.027 Soil 03 Nov 2015 BH212_0.5-0.95	SE145929.028 Soil 03 Nov 2015 BH212_3.0-3.45
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	-	**130**	**88**	-
Exchangeable Sodium, Na	meq/100g	0.01	-	**0.58**	**0.38**	-
Exchangeable Sodium Percentage*	%	0.1	-	**6.6**	**1.2**	-
Exchangeable Potassium, K	mg/kg	2	-	**31**	**210**	-
Exchangeable Potassium, K	meq/100g	0.01	-	**0.08**	**0.55**	-
Exchangeable Potassium Percentage*	%	0.1	-	**0.9**	**1.7**	-
Exchangeable Calcium, Ca	mg/kg	2	-	**900**	**5300**	-
Exchangeable Calcium, Ca	meq/100g	0.01	-	**4.5**	**27**	-
Exchangeable Calcium Percentage*	%	0.1	-	**51.4**	**82.1**	-
Exchangeable Magnesium, Mg	mg/kg	2	-	**440**	**590**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	-	**3.6**	**4.9**	-
Exchangeable Magnesium Percentage*	%	0.1	-	**41.1**	**15.0**	-
Cation Exchange Capacity	meq/100g	0.02	-	**8.8**	**32**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**7.4**	**6.6**	**7.2**	**6.1**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**320**	**86**	**270**	**220**
Resistivity (1:2)*	ohm cm	-	**3100**	**12000**	**3700**	**4500**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**46**	**7.4**	**8.6**	**71**
Sulphate	mg/kg	0.5	**29**	**32**	**38**	**58**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SILTY CLAY	FINE SANDY CLAY	HEAVY CLAY	HEAVY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**14.2**	**12.8**	**17.0**	**14.4**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE145929.029 Soil 03 Nov 2015 BH212_5.5-6.0	SE145929.030 Soil 03 Nov 2015 BH213_1.5-1.95	SE145929.031 Soil 03 Nov 2015 BH213_4.0-4.3	SE145929.032 Soil 04 Nov 2015 BH214_0.5-0.95
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015							
Exchangeable Sodium, Na	mg/kg	2		-	**640**	-	**530**
Exchangeable Sodium, Na	meq/100g	0.01		-	**2.8**	-	**2.3**
Exchangeable Sodium Percentage*	%	0.1		-	**19.1**	-	**14.7**
Exchangeable Potassium, K	mg/kg	2		-	**64**	-	**180**
Exchangeable Potassium, K	meq/100g	0.01		-	**0.16**	-	**0.47**
Exchangeable Potassium Percentage*	%	0.1		-	**1.1**	-	**3.0**
Exchangeable Calcium, Ca	mg/kg	2		-	**1800**	-	**950**
Exchangeable Calcium, Ca	meq/100g	0.01		-	**8.9**	-	**4.7**
Exchangeable Calcium Percentage*	%	0.1		-	**60.6**	-	**30.4**
Exchangeable Magnesium, Mg	mg/kg	2		-	**340**	-	**990**
Exchangeable Magnesium, Mg	meq/100g	0.02		-	**2.8**	-	**8.1**
Exchangeable Magnesium Percentage*	%	0.1		-	**19.2**	-	**51.9**
Cation Exchange Capacity	meq/100g	0.02		-	**15**	-	**16**
pH in soil (1:2) Method: AN101 Tested: 17/11/2015							
pH (1:2)	pH Units	-		**7.1**	**7.3**	**7.9**	**7.2**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015							
Conductivity (1:2) @25 C*	µS/cm	1		**290**	**590**	**220**	**640**
Resistivity (1:2)*	ohm cm	-		**3400**	**1700**	**4500**	**1600**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015							
Chloride	mg/kg	0.25		**120**	**44**	**34**	**200**
Sulphate	mg/kg	0.5		**35**	**150**	**29**	**200**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015							
Texture Classification*	No unit	1		SILTY CLAY	SILTY CLAY	SANDY CLAY LOA	MEDIUM CLAY
Moisture Content Method: AN002 Tested: 17/11/2015							
% Moisture	%w/w	0.5		**11.8**	**15.1**	**10.0**	**17.8**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE145929.033 Soil 04 Nov 2015 BH214_3.0-3.15	SE145929.034 Soil 03 Nov 2015 BH215_0.5-0.95	SE145929.035 Soil 03 Nov 2015 BH215_4.5-4.95	SE145929.036 Soil 03 Nov 2015 BH215_5.5-6.0
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015							
Exchangeable Sodium, Na	mg/kg	2		-	**130**	-	-
Exchangeable Sodium, Na	meq/100g	0.01		-	**0.55**	-	-
Exchangeable Sodium Percentage*	%	0.1		-	**1.5**	-	-
Exchangeable Potassium, K	mg/kg	2		-	**150**	-	-
Exchangeable Potassium, K	meq/100g	0.01		-	**0.39**	-	-
Exchangeable Potassium Percentage*	%	0.1		-	**1.0**	-	-
Exchangeable Calcium, Ca	mg/kg	2		-	**6400**	-	-
Exchangeable Calcium, Ca	meq/100g	0.01		-	**32**	-	-
Exchangeable Calcium Percentage*	%	0.1		-	**86.9**	-	-
Exchangeable Magnesium, Mg	mg/kg	2		-	**480**	-	-
Exchangeable Magnesium, Mg	meq/100g	0.02		-	**3.9**	-	-
Exchangeable Magnesium Percentage*	%	0.1		-	**10.6**	-	-
Cation Exchange Capacity	meq/100g	0.02		-	**37**	-	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015							
pH (1:2)	pH Units	-		**6.3**	**7.3**	**7.2**	**7.9**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015							
Conductivity (1:2) @25 C*	µS/cm	1		**860**	**260**	**740**	**710**
Resistivity (1:2)*	ohm cm	-		**1200**	**3800**	**1300**	**1400**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015							
Chloride	mg/kg	0.25		**510**	**5.5**	**450**	**280**
Sulphate	mg/kg	0.5		**140**	**22**	**91**	**84**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015							
Texture Classification*	No unit	1		SILTY CLAY	SILTY CLAY	HEAVY CLAY	SILTY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015							
% Moisture	%w/w	0.5		**10.2**	**12.3**	**17.3**	**11.2**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE145929.037 Soil 03 Nov 2015 BH215_8.0-8.3	SE145929.038 Soil 03 Nov 2015 BH216_0.5-0.95	SE145929.039 Soil 04 Nov 2015 BH217_0.5-0.95	SE145929.040 Soil 04 Nov 2015 BH217_1.5-1.95
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015							
Exchangeable Sodium, Na	mg/kg	2		-	160	180	-
Exchangeable Sodium, Na	meq/100g	0.01		-	0.70	0.79	-
Exchangeable Sodium Percentage*	%	0.1		-	1.8	6.0	-
Exchangeable Potassium, K	mg/kg	2		-	170	130	-
Exchangeable Potassium, K	meq/100g	0.01		-	0.43	0.34	-
Exchangeable Potassium Percentage*	%	0.1		-	1.1	2.6	-
Exchangeable Calcium, Ca	mg/kg	2		-	6500	1200	-
Exchangeable Calcium, Ca	meq/100g	0.01		-	32	6.1	-
Exchangeable Calcium Percentage*	%	0.1		-	83.9	46.4	-
Exchangeable Magnesium, Mg	mg/kg	2		-	610	720	-
Exchangeable Magnesium, Mg	meq/100g	0.02		-	5.0	5.9	-
Exchangeable Magnesium Percentage*	%	0.1		-	13.1	45.0	-
Cation Exchange Capacity	meq/100g	0.02		-	38	13	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015							
pH (1:2)	pH Units	-		7.8	7.2	6.7	5.0
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015							
Conductivity (1:2) @25 C*	µS/cm	1		570	280	180	580
Resistivity (1:2)*	ohm cm	-		1700	3600	5600	1700
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015							
Chloride	mg/kg	0.25		230	6.2	18	430
Sulphate	mg/kg	0.5		60	38	58	220
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015							
Texture Classification*	No unit	1		SILTY CLAY	SILTY CLAY	LIGHT CLAY	HEAVY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015							
% Moisture	%w/w	0.5		11.3	15.4	12.1	21.2

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.041 Soil 04 Nov 2015 BH218_0.5-0.95	SE145929.042 Soil 04 Nov 2015 BH218_3.0-3.45	SE145929.043 Soil 04 Nov 2015 BH219_0.5-0.95	SE145929.044 Soil 04 Nov 2015 BH219_2.5-3.0
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**450**	-	**450**	-
Exchangeable Sodium, Na	meq/100g	0.01	**2.0**	-	**2.0**	-
Exchangeable Sodium Percentage*	%	0.1	**13.9**	-	**13.3**	-
Exchangeable Potassium, K	mg/kg	2	**95**	-	**160**	-
Exchangeable Potassium, K	meq/100g	0.01	**0.24**	-	**0.40**	-
Exchangeable Potassium Percentage*	%	0.1	**1.7**	-	**2.7**	-
Exchangeable Calcium, Ca	mg/kg	2	**1200**	-	**170**	-
Exchangeable Calcium, Ca	meq/100g	0.01	**6.1**	-	**0.83**	-
Exchangeable Calcium Percentage*	%	0.1	**43.0**	-	**5.6**	-
Exchangeable Magnesium, Mg	mg/kg	2	**720**	-	**1400**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	**5.9**	-	**12**	-
Exchangeable Magnesium Percentage*	%	0.1	**41.3**	-	**78.4**	-
Cation Exchange Capacity	meq/100g	0.02	**14**	-	**15**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**6.4**	**6.2**	**4.3**	**6.4**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**1000**	**850**	**1900**	**880**
Resistivity (1:2)*	ohm cm	-	**990**	**1200**	**530**	**1100**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**390**	**510**	**1200**	**440**
Sulphate	mg/kg	0.5	**380**	**130**	**290**	**110**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	LIGHT CLAY	HEAVY CLAY	HEAVY CLAY	SILTY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**12.6**	**16.6**	**16.9**	**8.4**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.045 Soil 05 Nov 2015 TP220_0.4-0.5	SE145929.046 Soil 05 Nov 2015 TP221_0.1-0.2	SE145929.047 Soil 05 Nov 2015 TP221_0.9-1.0	SE145929.048 Soil 05 Nov 2015 TP222_0.1-0.2
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**280**	**130**	-	**46**
Exchangeable Sodium, Na	meq/100g	0.01	**1.2**	**0.56**	-	**0.20**
Exchangeable Sodium Percentage*	%	0.1	**7.5**	**6.5**	-	**1.9**
Exchangeable Potassium, K	mg/kg	2	**130**	**100**	-	**51**
Exchangeable Potassium, K	meq/100g	0.01	**0.34**	**0.27**	-	**0.13**
Exchangeable Potassium Percentage*	%	0.1	**2.1**	**3.1**	-	**1.2**
Exchangeable Calcium, Ca	mg/kg	2	**1400**	**660**	-	**1500**
Exchangeable Calcium, Ca	meq/100g	0.01	**7.0**	**3.3**	-	**7.6**
Exchangeable Calcium Percentage*	%	0.1	**43.8**	**38.0**	-	**72.3**
Exchangeable Magnesium, Mg	mg/kg	2	**910**	**560**	-	**310**
Exchangeable Magnesium, Mg	meq/100g	0.02	**7.4**	**4.5**	-	**2.6**
Exchangeable Magnesium Percentage*	%	0.1	**46.6**	**52.5**	-	**24.6**
Cation Exchange Capacity	meq/100g	0.02	**16**	**8.7**	-	**10**
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**6.4**	**5.8**	**4.6**	**5.4**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**240**	**63**	**1100**	**51**
Resistivity (1:2)*	ohm cm	-	**4100**	**16000**	**940**	**20000**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**28**	**15**	**580**	**2.6**
Sulphate	mg/kg	0.5	**78**	**7.5**	**190**	**2.9**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	HEAVY CLAY	SANDY CLAY LOA	HEAVY CLAY	SANDY LOAM
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**15.0**	**11.3**	**21.9**	**13.9**

Parameter	Units	LOR	Sample Number: SE145929.049 Sample Matrix: Soil Sample Date: 05 Nov 2015 Sample Name: TP222_0.9-1.0	SE145929.050 Soil 05 Nov 2015 TP223_0.1-0.2	SE145929.051 Soil 05 Nov 2015 TP224_0.0-0.2	SE145929.052 Soil 05 Nov 2015 TP225_1.1-1.3
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	-	170	81	-
Exchangeable Sodium, Na	meq/100g	0.01	-	0.73	0.35	-
Exchangeable Sodium Percentage*	%	0.1	-	4.6	5.4	-
Exchangeable Potassium, K	mg/kg	2	-	120	69	-
Exchangeable Potassium, K	meq/100g	0.01	-	0.30	0.18	-
Exchangeable Potassium Percentage*	%	0.1	-	1.9	2.7	-
Exchangeable Calcium, Ca	mg/kg	2	-	1600	410	-
Exchangeable Calcium, Ca	meq/100g	0.01	-	8.1	2.1	-
Exchangeable Calcium Percentage*	%	0.1	-	50.5	31.3	-
Exchangeable Magnesium, Mg	mg/kg	2	-	840	490	-
Exchangeable Magnesium, Mg	meq/100g	0.02	-	6.9	4.0	-
Exchangeable Magnesium Percentage*	%	0.1	-	43.1	60.6	-
Cation Exchange Capacity	meq/100g	0.02	-	16	6.6	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	5.5	6.1	4.4	7.2
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	86	110	660	1000
Resistivity (1:2)*	ohm cm	-	12000	9000	1500	1000
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	6.5	9.3	560	180
Sulphate	mg/kg	0.5	31	10	20	740
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SILTY CLAY	SILTY CLAY	SILTY CLAY LOAM	LIGHT CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	7.2	16.3	11.3	18.1

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE145929.053 Soil 05 Nov 2015 TP226_0.4-0.5	SE145929.054 Soil 05 Nov 2015 TP227_0.3-0.5	SE145929.055 Soil 05 Nov 2015 TP228_0.1-0.2	SE145929.056 Soil 05 Nov 2015 TP228_0.9-1.0
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**39**	**670**	**45**	-
Exchangeable Sodium, Na	meq/100g	0.01	**0.17**	**2.9**	**0.20**	-
Exchangeable Sodium Percentage*	%	0.1	**1.1**	**32.3**	**1.5**	-
Exchangeable Potassium, K	mg/kg	2	**140**	**34**	**230**	-
Exchangeable Potassium, K	meq/100g	0.01	**0.37**	**0.09**	**0.60**	-
Exchangeable Potassium Percentage*	%	0.1	**2.3**	**1.0**	**4.7**	-
Exchangeable Calcium, Ca	mg/kg	2	**2500**	**230**	**2000**	-
Exchangeable Calcium, Ca	meq/100g	0.01	**13**	**1.1**	**9.9**	-
Exchangeable Calcium Percentage*	%	0.1	**79.7**	**12.7**	**77.9**	-
Exchangeable Magnesium, Mg	mg/kg	2	**330**	**590**	**240**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	**2.7**	**4.9**	**2.0**	-
Exchangeable Magnesium Percentage*	%	0.1	**16.9**	**54.1**	**15.8**	-
Cation Exchange Capacity	meq/100g	0.02	**16**	**9.0**	**13**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**6.8**	**7.4**	**6.1**	**7.4**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**160**	**1900**	**150**	**350**
Resistivity (1:2)*	ohm cm	-	**6100**	**520**	**6500**	**2900**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**0.43**	**1200**	**8.4**	**14**
Sulphate	mg/kg	0.5	**6.0**	**170**	**13**	**44**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	SANDY CLAY LOA	MEDIUM CLAY	SILTY LOAM	SILTY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**11.9**	**17.3**	**16.5**	**14.1**

Parameter	Units	LOR	Sample Number: SE145929.057 Sample Matrix: Soil Sample Date: 05 Nov 2015 Sample Name: TP229_0.0-0.1	SE145929.058 Soil 05 Nov 2015 TP229_1.1-1.3	SE145929.059 Soil 05 Nov 2015 TP225_0.4-0.5	SE145929.060 Soil 05 Nov 2015 TP226_0.8-1.0
Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) Method: AN122 Tested: 18/11/2015						
Exchangeable Sodium, Na	mg/kg	2	**71**	-	**470**	-
Exchangeable Sodium, Na	meq/100g	0.01	**0.31**	-	**2.0**	-
Exchangeable Sodium Percentage*	%	0.1	**3.3**	-	**11.7**	-
Exchangeable Potassium, K	mg/kg	2	**230**	-	**140**	-
Exchangeable Potassium, K	meq/100g	0.01	**0.58**	-	**0.37**	-
Exchangeable Potassium Percentage*	%	0.1	**6.2**	-	**2.1**	-
Exchangeable Calcium, Ca	mg/kg	2	**1100**	-	**1700**	-
Exchangeable Calcium, Ca	meq/100g	0.01	**5.6**	-	**8.7**	-
Exchangeable Calcium Percentage*	%	0.1	**59.8**	-	**50.2**	-
Exchangeable Magnesium, Mg	mg/kg	2	**350**	-	**760**	-
Exchangeable Magnesium, Mg	meq/100g	0.02	**2.9**	-	**6.2**	-
Exchangeable Magnesium Percentage*	%	0.1	**30.7**	-	**35.9**	-
Cation Exchange Capacity	meq/100g	0.02	**9.4**	-	**17**	-
pH in soil (1:2) Method: AN101 Tested: 17/11/2015						
pH (1:2)	pH Units	-	**5.9**	**6.2**	**7.6**	**7.1**
Conductivity (1:2) in soil Method: AN106 Tested: 17/11/2015						
Conductivity (1:2) @25 C*	µS/cm	1	**110**	**1300**	**390**	**220**
Resistivity (1:2)*	ohm cm	-	**8800**	**740**	**2600**	**4500**
Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: AN245 Tested: 17/11/2015						
Chloride	mg/kg	0.25	**22**	**860**	**12**	**3.7**
Sulphate	mg/kg	0.5	**11**	**220**	**87**	**54**
Soil Texture (AS4419) Method: AN051/SP100.1 Tested: 16/11/2015						
Texture Classification*	No unit	1	FINE SANDY LOAM	SILTY CLAY LOAM	SILTY CLAY	HEAVY CLAY
Moisture Content Method: AN002 Tested: 17/11/2015						
% Moisture	%w/w	0.5	**17.5**	**16.7**	**11.5**	**17.6**

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Conductivity (1:2) in soil **Method: ME-(AU)-[ENV]AN106**

Parameter	QC Reference	Units	LOR	DUP %RPD
Conductivity (1:2) @25 C*	LB089842	µS/cm	1	1%
	LB089843	µS/cm	1	1 - 5%
	LB089844	µS/cm	1	7%
Resistivity (1:2)*	LB089842	ohm cm	-	1%
	LB089843	ohm cm	-	1 - 5%
	LB089844	ohm cm	-	7%

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) **Method: ME-(AU)-[ENV]AN122**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Exchangeable Sodium, Na	LB089901	mg/kg	2		97%
	LB089902	mg/kg	2		95%
Exchangeable Sodium, Na	LB089901	meq/100g	0.01	<0.01	NA
	LB089902	meq/100g	0.01	<0.01	NA
Exchangeable Sodium Percentage*	LB089901	%	0.1		NA
	LB089902	%	0.1		NA
Exchangeable Potassium, K	LB089901	mg/kg	2		90%
	LB089902	mg/kg	2		88%
Exchangeable Potassium, K	LB089901	meq/100g	0.01	<0.01	NA
	LB089902	meq/100g	0.01	<0.01	NA
Exchangeable Potassium Percentage*	LB089901	%	0.1		NA
	LB089902	%	0.1		NA
Exchangeable Calcium, Ca	LB089901	mg/kg	2		85%
	LB089902	mg/kg	2		84%
Exchangeable Calcium, Ca	LB089901	meq/100g	0.01	<0.01	NA
	LB089902	meq/100g	0.01	<0.01	NA
Exchangeable Calcium Percentage*	LB089901	%	0.1		NA
	LB089902	%	0.1		NA
Exchangeable Magnesium, Mg	LB089901	mg/kg	2		88%
	LB089902	mg/kg	2		88%
Exchangeable Magnesium, Mg	LB089901	meq/100g	0.02	<0.02	NA
	LB089902	meq/100g	0.02	<0.02	NA
Exchangeable Magnesium Percentage*	LB089901	%	0.1		NA
	LB089902	%	0.1		NA
Cation Exchange Capacity	LB089901	meq/100g	0.02	<0.02	NA
	LB089902	meq/100g	0.02	<0.02	NA

Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB089787	%w/w	0.5	0 - 6%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

pH in soil (1:2) Method: ME-(AU)-[ENV]AN101

Parameter	QC Reference	Units	LOR	DUP %RPD
pH (1:2)	LB089832	pH Units	-	1 - 2%
	LB089834	pH Units	-	1 - 7%
	LB089836	pH Units	-	0 - 3%

Soluble Anions in Soil from 1:2 DI Extract by Ion Chromatography Method: ME-(AU)-[ENV]AN245

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Chloride	LB089773	mg/kg	0.25	<0.25	0 - 6%	116%
	LB089774	mg/kg	0.25	<0.25	2%	110%
	LB089775	mg/kg	0.25	<0.25	10 - 12%	110%
Sulphate	LB089773	mg/kg	0.5	<0.5	4%	106%
	LB089774	mg/kg	0.5	<0.5	5%	106%
	LB089775	mg/kg	0.5	<0.5	1 - 10%	106%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN051/SP100.1	A small sample of soil is kneaded with water and then pressed out into a ribbon . The behaviour of this ribbon is used to classify the soil into one of the texture classes in AS 4419.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, an extract with water is made at a ratio of 1:2 and the pH determined and reported on the extract after 1 hour extraction (pH 1:2) or after 1 hour extraction and overnight aging (pH (1:2) aged). Reference APHA 4500-H+.
AN106	Conductivity : Conductivity is measured by meter with temperature compensation and is calibrated against a standard solution of potassium chloride. Conductivity is generally reported as µmhos/cm or µS/cm @ 25°C. For soils, an extract with water is made at a ratio of 1:2 and the EC determined and reported on the extract basis after the 1 hour extraction (EC(1:2)) or after the 1 hour extraction and overnight aging (EC(1:2) aged). Reference APHA 2510 B.
AN106	Resistivity of the extract is reported on the extract basis and is the reciprocal of conductivity. Salinity and TDS can be calculated from the extract conductivity and is reported back to the soil basis.
AN122	Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1 M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
AN122	The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100. ESP can be used to categorise the sodicity of the soil as below: ESP < 6% non-sodic ESP 6-15% sodic ESP >15% strongly sodic Method is refernced to Rayment and Higginson, 1992, sections 15D3 and 15N1.-
AN245	Anions by Ion Chromatography: A water sample or extract is injected into an eluent stream that passes through the ion chromatographic system where the anions of interest ie Br, Cl, NO2, NO3 and SO4 are separated on their relative affinities for the active sites on the column packing material . Changes to the conductivity and the UV-visible absorbance of the eluent enable identification and quantitation of the anions based on their retention time and peak height or area. APHA 4110 B

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.sgs.com.au/~/media/Local/Australia/Documents/ Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

SAMPLE RECEIPT ADVICE

SE145929

CLIENT DETAILS

Contact	Viittal Boggaram
Client	Jeffery & Katauskas Pty Ltd
Address	Rear 115 Wicks Road MACQUARIE PARK MACQUARIE PARK NSW 2113
Telephone	(02) 9888 5000
Facsimile	(02) 9888 5004
Email	vboggaram@jkgroup.net.au
Project	**E28870KB Arndell Park**
Order Number	(Not specified)
Samples	60

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Thu 12/11/2015
Report Due	Thu 19/11/2015
SGS Reference	**SE145929**

SUBMISSION DETAILS

This is to confirm that 60 samples were received on Thursday 12/11/2015. Results are expected to be ready by Thursday 19/11/2015. Please quote SGS reference SE145929 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	60 Soils	Type of documentation received	COC
Date documentation received	12/11/2015	Samples received in good order	Yes
Samples received without headspace	N/A	Sample temperature upon receipt	24°C
Sample container provider	Client	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	

Samples will be held for one month for water samples and two months for soil samples from date of report, unless otherwise instructed.

COMMENTS

54 soil samples unmarked for analyses on the COC have been placed on hold.
Samples analysed outside of their recommended holding time.
Samples BH209 4.5/4.95, TP225 0.0/0.2 and TO226 1.3/1.5 not received.
7 Extra samples received; samples logged on hold as per client email request.

SAMPLE RECEIPT ADVICE

SE145929

CLIENT DETAILS

Client Jeffery & Katauskas Pty Ltd

Project E28870KB Arndell Park

SUMMARY OF ANALYSIS

No.	Sample ID	Conductivity (1:2) in soil	Exchangeable Cations and Cation Exchange Capacity	Moisture Content	pH in soil (1:2)	Soil Texture (AS4419)	Soluble Anions in Soil from 1:2 DI Extract by Ion
001	BH201_0.5-0.95	2	13	1	1	1	2
002	BH201_3.5-4.0	2	-	1	1	1	2
003	BH202_1.5-1.95	2	13	1	1	1	2
004	BH202_2.5-3.0	2	-	1	1	1	2
005	BH203_0.5-0.95	2	13	1	1	1	2
006	BH203_1.5-1.95	2	-	1	1	1	2
007	BH204_1.5-1.95	2	13	1	1	1	2
008	BH204_7.0-7.5	2	-	1	1	1	2
009	BH204_8.5-9.0	2	-	1	1	1	2
010	BH205_0.5-0.95	2	13	1	1	1	2
011	BH205_3.0-3.45	2	-	1	1	1	2
012	BH206_1.5-1.95	2	13	1	1	1	2
013	BH206_4.0-4.5	2	-	1	1	1	2
014	BH206_7.0-7.5	2	-	1	1	1	2
015	BH207_0.5-0.95	2	13	1	1	1	2
016	BH207_3.0-3.45	2	-	1	1	1	2
017	BH207_6.0-6.45	2	-	1	1	1	2
018	BH207_10-10.5	2	-	1	1	1	2
019	BH208_0.5-0.95	2	13	1	1	1	2
020	BH208_4.5-4.95	2	-	1	1	1	2
021	BH209_0.5-0.95	2	13	1	1	1	2
022	BH209_3.0-3.45	2	-	1	1	1	2
023	BH209_7.0-7.5	2	-	1	1	1	2
024	BH210_0.5-0.95	2	13	1	1	1	2

CONTINUED OVERLEAF

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE145929

CLIENT DETAILS

Client Jeffery & Katauskas Pty Ltd

Project E28870KB Arndell Park

SUMMARY OF ANALYSIS

No.	Sample ID	Conductivity (1:2) in soil	Exchangeable Cations and Cation Exchange Capacity	Moisture Content	pH in soil (1:2)	Soil Texture (AS4419)	Soluble Anions in Soil from 1:2 DI Extract by Ion
025	BH210_3.0-3.45	2	-	1	1	1	2
026	BH211_0.5-0.95	2	13	1	1	1	2
027	BH212_0.5-0.95	2	13	1	1	1	2
028	BH212_3.0-3.45	2	-	1	1	1	2
029	BH212_5.5-6.0	2	-	1	1	1	2
030	BH213_1.5-1.95	2	13	1	1	1	2
031	BH213_4.0-4.3	2	-	1	1	1	2
032	BH214_0.5-0.95	2	13	1	1	1	2
033	BH214_3.0-3.15	2	-	1	1	1	2
034	BH215_0.5-0.95	2	13	1	1	1	2
035	BH215_4.5-4.95	2	-	1	1	1	2
036	BH215_5.5-6.0	2	-	1	1	1	2
037	BH215_8.0-8.3	2	-	1	1	1	2
038	BH216_0.5-0.95	2	13	1	1	1	2
039	BH217_0.5-0.95	2	13	1	1	1	2
040	BH217_1.5-1.95	2	-	1	1	1	2
041	BH218_0.5-0.95	2	13	1	1	1	2
042	BH218_3.0-3.45	2	-	1	1	1	2
043	BH219_0.5-0.95	2	13	1	1	1	2
044	BH219_2.5-3.0	2	-	1	1	1	2
045	TP220_0.4-0.5	2	13	1	1	1	2
046	TP221_0.1-0.2	2	13	1	1	1	2
047	TP221_0.9-1.0	2	-	1	1	1	2
048	TP222_0.1-0.2	2	13	1	1	1	2

CONTINUED OVERLEAF

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE145929

CLIENT DETAILS

Client Jeffery & Katauskas Pty Ltd

Project E28870KB Arndell Park

SUMMARY OF ANALYSIS

No.	Sample ID	Conductivity (1:2) in soil	Exchangeable Cations and Cation Exchange Capacity	Moisture Content	pH in soil (1:2)	Soil Texture (AS4419)	Soluble Anions in Soil from 1:2 DI Extract by Ion
049	TP222_0.9-1.0	2	-	1	1	1	2
050	TP223_0.1-0.2	2	13	1	1	1	2
051	TP224_0.0-0.2	2	13	1	1	1	2
052	TP225_1.1-1.3	2	-	1	1	1	2
053	TP226_0.4-0.5	2	13	1	1	1	2
054	TP227_0.3-0.5	2	13	1	1	1	2
055	TP228_0.1-0.2	2	13	1	1	1	2
056	TP228_0.9-1.0	2	-	1	1	1	2
057	TP229_0.0-0.1	2	13	1	1	1	2
058	TP229_1.1-1.3	2	-	1	1	1	2
059	TP225_0.4-0.5	2	13	1	1	1	2
060	TP226_0.8-1.0	2	-	1	1	1	2

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
SGS ENVIRONMENTAL SERVICES
UNIT 16, 33 MADDOX STREET
ALEXANDRIA NSW 2015
P: (02) 85940400
F: (02) 85940499

Attention: DANIEL / TRENT

EIS Job Number: E28870KB

Date Results Required: STANDARD

Page: 1 of 5

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Vittal Boggaram
Email: vboggaram@jkgroup.net.au

Location: Arndell Park
Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	CA5 (EC)	AG3	TEXTURE (AS4419)	CLAY (AS1141)
6/11/15	1	BH201	0.5/0.95	P	Clay	X	X	X	
			2.5/3.0		Shale				
	2		3.5/4.0				X	X	
		BH202	0.5/0.95		Clay				
	3		1.5/1.95			X	X	X	
	4		2.5/3.0		Shale		X	X	
			3.0/3.6						
	5	BH203	0.5/0.95		Clay	X	X	X	
	6		1.5/1.95		Shale		X	X	
			2.5/3.0						
			4.0/4.5						
2/11/15		BH204	0.5/0.95		Clay				
	7		1.5/1.95			X	X	X	
			3.0/3.45						
			3.6/3.9		Shale				
			5.5/6.0						
	8		7.0/7.5				X	X	
	9		8.5/9.0				X	X	
	10	BH205	0.5/0.95		Clay	X	X	X	
			1.5/1.95						
	11		3.0/3.45				X	X	
			4.1/4.6		Shale				
			5.5/6.0						
			6.7/7.1						
		BH206	0.5/0.95		Clay				

SGS Alexandria Environmental
SE145929 COC
Received: 12 – Nov – 2015

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal BS	11/11/15	2.20		12/11/15

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
SGS ENVIRONMENTAL SERVICES
UNIT 16, 33 MADDOX STREET
ALEXANDRIA NSW 2015
P: (02) 85940400
F: (02) 85940499

Attention: DANIEL / TRENT

EIS Job Number: E28870KB

Date Results Required: STANDARD

Page: 2 of 5

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Vittal Boggaram
Email: vboggaram@jkgroup.net.au

Location: Arndell Park
Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	CA5	AG3	TEXTURE (AS4419)	CLAY (AS1141)
2/11/15	12	BH206	1.5/1.95	P	Clay	X	X	X	
			2.5/3.0		Shale				
	13		4.0/4.5				X	X	
			5.5/6.0						
	14		7.0/7.5				X	X	
			8.5/9.0		Shale				
	15	BH207	0.5/0.95		Clay	X	X	X	
			1.5/1.9						
	16		3.0/3.45				X	X	
			4.5/4.95						
	17		6.0/6.45				X	X	
			7.5/7.95						
	18		10/10.5		Shale		X	X	
	19	BH208	0.5/0.95		Sand	X	X	X	
			1.5/1.95		Clay				
			3.0/3.45						
	20		4.5/4.95				X	X	
			6.0/6.45						
			7.0/7.5		Shale				
			8.5/9.0						
6/11/15	21	BH209	0.5/0.95		Sand	X	X	X	
			1.5/1.95						
	22		3.0/3.45				X	X	
			4.5/4.95		Clay				
	23		7.0/7.5		Shale		X	X	

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	11/11/15			12/11/15 @ 2:25

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
SGS ENVIRONMENTAL SERVICES UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 P: (02) 85940400 F: (02) 85940499 Attention: DANIEL / TRENT	EIS Job Number: E28870KB Date Results Required: STANDARD Page: 3 of 5	ENVIRONMENTAL INVESTIGATION SERVICES REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram Email: vboggaram@jkgroup.net.au

Location: Arndell Park

Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	CA5	AG3	TEXTURE (AS4419)	CLAY (AS1141)
4/11/15	24	BH210	0.5/0.95	P	clay	X	X	X	
			1.6/2.0						
	25		3.0/3.45		shale		X	X	
			3.45/3.65						
3/11/15	26	BH211	0.5/0.95		clay	X	X	X	
			1.5/1.8						
	27	BH212	0.5/0.95		clay	X	X	X	
			1.5/1.95						
	28		3.0/3.45				X	X	
			4.5/4.6		shale				
	29		5.5/6.0				X	X	
			7.2/7.4						
		BH213	0.5/0.95		clay				
	30		1.5/1.95			X	X	X	
			3.0/3.45						
	31		4.0/4.3		sand stone		X	X	
4/11/15	32	BH214	0.5/0.95		clay	X	X	X	
			1.5/1.95						
	33		3.0/3.15		shale		X	X	
			4.0/4.3						
3/11/15	34	BH215	0.5/0.95		silt	X	X	X	
			1.5/1.95		clay				
			3.0/3.45						
	35		4.5/4.95				X	X	
	36		5.5/6.0		shale		X	X	

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B.S	11/11/15			12/11/15 @ 2:20

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
SGS ENVIRONMENTAL SERVICES
UNIT 16, 33 MADDOX STREET
ALEXANDRIA NSW 2015
P: (02) 85940400
F: (02) 85940499

Attention: DANIEL / TRENT

EIS Job Number: E28870KB

Date Results Required: STANDARD

Page: 4 of 5

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Vittal Boggaram
Email: vboggaram@jkgroup.net.au

Location: Arndell Park
Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	CA5	AG3	TEXTURE (AS4419)	CLAY (AS1141)								
3/11/15		BH215	7.0/7.5	P	Shale												
	37		8.0/8.3		↓		X	X									
	38	BH216	0.5/0.95		Clay	X	X	X									?
↓			1.5/1.95		↓												
4/11/15	39	BH217	0.5/0.95		Clay	X	X	X									
	40		1.5/1.95		↓		X	X									
			2.8/3.0		Sandstone												
		↓	3.6/4.0		↓												
	41	BH218	0.5/0.95		Clay	X	X	X									
			1.5/1.95														
	42		3.0/3.45		↓		X	X									
		↓	3.8/4.0		Shale												
	43	BH219	0.5/0.95		Clay	X	X	X									
			1.5/1.75		↓												
	44		2.5/3.0		Shale		X	X									
			3.2/3.5														
↓		↓	4.0/4.3		↓												
5/11/15		TP220	0.1/0.3		Clay												
	45		0.4/0.5			X	X	X									
		↓	0.7/0.9		↓												
	46	TP221	0.1/0.2		Clay	X	X	X									
			0.4/0.5														
	47	↓	0.9/1.0		↓		X	X									
	48	TP222	0.1/0.2		Clay	X	X	X									
↓	49	↓	0.9/1.0	↓	↓		X	X									

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	4/11/15			12/11/15 @2:20

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
SGS ENVIRONMENTAL SERVICES
UNIT 16, 33 MADDOX STREET
ALEXANDRIA NSW 2015
P: (02) 85940400
F: (02) 85940499

Attention: DANIEL / TRENT

EIS Job Number: E28870KB

Date Results Required: STANDARD

Page: 5 of 5

FROM:
ENVIRONMENTAL INVESTIGATION SERVICES
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Vittal Boggaram
Email: vboggaram@jkgroup.net.au

Location: Arndell Park
Sampler: JS

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	CA5	AG3	TEXTURE (AS4419)	CLAY (AS1141)
5/4/15	50	TP223	0.1/0.2	P	Clay	X	X	X	
		↓	0.4/0.5		↓				
	51	TP224	0.0/0.2		Clay	X	X	X	
		↓	0.3/0.4		↓				
	•	TP225	0.0/0.2		Silt	X	X	X	
	59	↓	0.4/0.5		Clay				
	52	↓	1.1/1.3		↓		X	X	
	53	TP226	0.4/0.5		Clay	X	X	X	
	60	↓	0.8/1.0		↓				
	•	↓	1.3/1.5		↓		X	X	
	54	TP227	0.3/0.5		Clay	X	X	X	
	55	TP228	0.1/0.2		Silt	X	X	X	
		↓	0.3/0.4		Sand				
	56	↓	0.9/1.0		↓		X	X	
		↓	1.2/1.3		Clay				
	57	TP229	0.0/0.1		Silt	X	X	X	
↓	58	↓	1.1/1.3	↓	Clay		X	X	

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
Vittal B-S	11/4/15			12/4/15 @ 2-20

AU.SampleReceipt.Sydney (Sydney)

From: Vittal Boggaram [VBoggaram@jkgroup.net.au]
Sent: Thursday, 12 November 2015 5:58 PM
To: AU.SampleReceipt.Sydney (Sydney)
Subject: Re: SE145929 - E28870KB

Hi Emily,

Can you please test the following samples from TP225 and TP266:

59 TP225 - 0.4m to 0.5m

60 TP226 - 0.8m to 1.0m

Please keep the rest of the extra samples. We don't need any testing on them at this stage.

Sent from Outlook

Regards,

Vittal Boggaram
Associate | Environmental Scientist

VBoggaram@jkgroup.net.au

EIS have a new website! Click here to see for yourself..

Environmental Investigation Services
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113
T: +612 9888 5000 F: +612 9888 5001

From: AU.SampleReceipt.Sydney (Sydney) <au.samplereceipt.sydney@sgs.com>
Sent: Thursday, November 12, 2015 5:27 PM
Subject: SE145929 - E28870KB
To: Vittal Boggaram <vboggaram@jkgroup.net.au>

Dear Vittal,

SGS has received these samples.

Samples with "Red dots" next to them not received. Do you want another sample analysed?

Extra samples 203_5.5-5.8, 207_1.7-1.9, 209_3.6-3.8, 209_7.6-7.8, 211_1.7-1.8, 216_2.3-2.7 and 222_0.4-0.5 received.

Do you want them analysed?

Appendix F: Report Explanatory Notes

STANDARD SAMPLING PROCEDURE

These protocols specify the basic procedures to be used when sampling soils or groundwater for environmental site assessments undertaken by EIS.

The purpose of these protocols is to provide standard methods for: sampling, decontamination procedures for sampling equipment, sample preservation, sample storage and sample handling. Deviations from these procedures must be recorded.

Soil Sampling

- Prepare a borehole/test pit log or made a note of the sample description for stockpiles.
- Layout sampling equipment on clean plastic sheeting to prevent direct contact with ground surface. The work area should be at a distance from the drill rig/excavator such that the machine can operate in a safe manner.
- Ensure all sampling equipment has been decontaminated prior to use.
- Remove any surface debris from the immediate area of the sampling location.
- Collect samples and place in glass jar with a Teflon seal. This should be undertaken as quickly as possible to prevent the loss of any volatiles. If possible, fill the glass jars completely.
- Collect samples for asbestos analysis and place in a zip-lock plastic bag.
- Label the sampling containers with the EIS job number, sample location (eg. BH1), sampling depth interval and date. If more than one sample container is used, this should also be indicated (eg. 2 = Sample jar 1 of 2 jars).
- Photoionisation detector (PID) screening of volatile organic compounds (VOCs) should be undertaken on samples using the soil sample headspace method. Headspace measurements are taken following equilibration of the headspace gasses in partly filled zip-lock plastic bags. PID headspace data is recorded on the borehole/test pit log and the chain of custody forms.
- Record the lithology of the sample and sample depth on the borehole/test pit log generally in accordance with AS1726-1993[25].
- Store the sample in a sample container cooled with ice or chill packs. On completion of the sampling the sample container should be delivered to the lab immediately or stored in the refrigerator prior to delivery to the lab. All samples are preserved in accordance with the standards outlined in the report.
- Check for the presence of groundwater after completion of each borehole using an electronic dip metre or water whistle. Boreholes should be left open until the end of fieldwork. All groundwater levels in the boreholes should be rechecked on the completion of the fieldwork.
- Backfill the boreholes/test pits with the excavation cuttings or clean sand prior to leaving the site.

Decontamination Procedures for Soil Sampling Equipment

- All sampling equipment should be decontaminated between every sampling location. This excludes single use PVC tubing used for push tubes etc. Equipment and materials required for the decontamination include:
  - Phosphate free detergent (Decon 90);
  - Potable water;
  - Stiff brushes; and
  - Plastic sheets.

[25] Standards Australia, (1993), *Geotechnical Site Investigations.* (AS1726-1993)

- Ensure the decontamination materials are clean prior to proceeding with the decontamination.
- Fill both buckets with clean potable water and add phosphate free detergent to one bucket.
- In the bucket containing the detergent, scrub the sampling equipment until all the material attached to the equipment has been removed.
- Rinse sampling equipment in the bucket containing potable water.
- Place cleaned equipment on clean plastic sheets.

If all materials are not removed by this procedure, high-pressure water cleaning is recommended. If any equipment is not completely decontaminated by both these processes, then the equipment should not be used until it has been thoroughly cleaned.

Groundwater Sampling

Groundwater samples are more sensitive to contamination than soil samples and therefore adhesion to this protocol is particularly important to obtain reliable, reproducible results. The recommendations detailed in AS/NZS 5667.1:1998 are considered to form a minimum standard.

The basis of this protocol is to maintain the security of the borehole and obtain accurate and representative groundwater samples. The following procedure should be used for collection of groundwater samples from previously installed groundwater monitoring wells.

- After monitoring well installation, at least three bore volumes should be pumped from the monitoring wells (well development) to remove any water introduced during the drilling process and/or the water that is disturbed during installation of the monitoring well. This should be completed prior to purging and sampling.
- Groundwater monitoring wells should then be left to recharge for at least three days before purging and sampling. Prior to purging or sampling, the condition of each well should observed and any anomalies recorded on the field data sheets. The following information should be noted: the condition of the well, noting any signs of damage, tampering or complete destruction; the condition and operation of the well lock; the condition of the protective casing and the cement footing (raised or cracked); and, the presence of water between protective casing and well.
- Take the groundwater level from the collar of the piezometer/monitoring well using an electronic dip meter. The collar level should be taken (if required) during the site visit using a dumpy level and staff.
- Purging and sampling of piezometers/monitoring wells is done on the same site visit when using micro-purge (or other low flow) techniques.
- Layout and organize all equipment associated with groundwater sampling in a location where they will not interfere with the sampling procedure and will not pose a risk of contaminating samples. Equipment generally required includes:
  - Micropore filtration system or Stericup single-use filters (for heavy metals samples);
  - Filter paper for Micropore filtration system; Bucket with volume increments;
  - Sample containers: teflon bottles with 1 ml nitric acid, 75mL glass vials with 1 mL hydrochloric acid, 1 L amber glass bottles;
  - Bucket with volume increments;
  - Flow cell;
  - pH/EC/Eh/T meters;
  - Plastic drums used for transportation of purged water;
  - Esky and ice;
  - Nitrile gloves;
  - Distilled water (for cleaning);
  - Electronic dip meter;

- Low flow pump pack and associated tubing; and
- Groundwater sampling forms.

- If single-use stericup filtration is not used, clean the Micropore filtration system thoroughly with distilled water prior to use and between each sample. Filter paper should be changed between samples. 0.45um filter paper should be placed below the glass fibre filter paper in the filtration system.
- Ensure all non-disposable sampling equipment is decontaminated or that new disposable equipment is available prior to any work commencing at a new location. The procedure for decontamination of groundwater equipment is outlined at the end of this section.
- Disposable gloves should be used whenever samples are taken to protect the sampler and to assist in avoidance of contamination.
- Groundwater samples are obtained from the monitoring wells using low flow/micro-purge sampling equipment to reduce the disturbance of the water column and loss of volatiles.
- During pumping to purge the well, the pH, temperature, conductivity, dissolved oxygen, redox potential and groundwater levels are monitored (where possible) using calibrated field instruments to assess the development of steady state conditions. Steady state conditions are generally considered to have been achieved when the difference in the pH measurements was less than 0.2 units and the difference in conductivity was less than 10%.
- All measurements are recorded on specific data sheets.
- Once steady state conditions are considered to have been achieved, groundwater samples are obtained directly from the pump tubing and placed in appropriate glass bottles, BTEX vials or plastic bottles.
- All samples are preserved in accordance with water sampling requirements detailed in the NEPM 2013 and placed in an insulated container with ice. Groundwater samples are preserved by immediate storage in an insulated sample container with ice as outlined in the report text.
- Record the sample on the appropriate log in accordance with AS1726:1993. At the end of each water sampling complete a chain of custody form.

Decontamination Procedures for Groundwater Sampling Equipment

- All equipment associated with the groundwater sampling procedure (other than single-use items) should be decontaminated between every sampling location.
- The following equipment and materials are required for the decontamination procedure:
  - Phosphate free detergent;
  - Potable water;
  - Distilled water; and
  - Plastic Sheets or bulk bags (plastic bags).
- Fill one bucket with clean potable water and phosphate free detergent, and one bucket with distilled water.
- Flush potable water and detergent through pump head. Wash sampling equipment and pump head using brushes in the bucket containing detergent until all materials attached to the equipment are removed.
- Flush pump head with distilled water.
- Change water and detergent solution after each sampling location.
- Rinse sampling equipment in the bucket containing distilled water.
- Place cleaned equipment on clean plastic sheets.
- If all materials are not removed by this procedure that equipment should not be used until it has been thoroughly cleaned

QA/QC DEFINITIONS

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994[26]) methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (H. Keith 1991[27]).

Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection limit (MDL) for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations.

"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit" Keith 1991.

Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD). Acceptable targets for precision in this report will be less than 50% RPD for concentrations greater than ten times the PQL, less than 75% RPD for concentrations between five and ten times the PQL and less than 100% RPD for concentrations that are less than five times the PQL.

Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured. The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes.

The proximity of an averaged result to the true value, where all random errors have been statistically removed. Accuracy is measured by percent recovery. Acceptable limits for accuracy generally lie between 70% to 130% recoveries. Certain laboratory methods may allow for values that lie outside these limits.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

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[26] US EPA, (1994), *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*. (US EPA SW-846)

[27] Keith., H, (1991), *Environmental Sampling and Analysis, A Practical Guide.*

Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms; Sample receipt form;
- All sample results reported; All blank data reported;
- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

Comparability

Comparability is the evaluation of the similarity of conditions (eg. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

Blanks

The purpose of laboratory and field blanks is to check for artifacts and interferences that may arise during sampling and analysis.

Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$

Appendix G: Calibration Documents

Air-Met Scientific P/L
7-11 Ceylon Street
Nunawading
Victoria 3131, Australia

Calibration Certificate

This document hereby certifies that this instrument detailed has been calibrated to the parameters listed below.

Certificate Print Date: 19 June, 2015
Calibration Date: 19 June, 2015
Next Calibration Due: 19 December, 2015

Call ID: 00176805

Arrow Job Code: 211149

Customer:	Jeffery & Katauskas Pty Ltd & EIS	**Type:**	Port Gas Det
Model:	MINIRAE 2000	**Serial No:**	110-006735
Description:	PORTABLE GAS DETECTOR		

Sensor	Date Code	Gas Bottle No.	Calibration Gas and Concentration	C.F	C.V	Certified	Instrument Readings Before / Span Res.	After
PID	/	SY22	ISOBUTYLENE 1000PPM			NIST	620PPM	1003PPM
PID	/	SY45	ISOBUTYLENE 100PPM			NIST	59.2PPM	99.8PPM
	/							
	/							
	/							
	/							

Completed by: *Timothy Harmer* **Signed:**

Australian Standard Alarm Levels ☑

CF - Conversion Factor, CV Compensated Value
CV = CF * Span Gas

AES
ACTIVE ENVIRONMENTAL SOLUTIONS

Calibration and Service Report – PID

Company:	Environmental Investigation Ser	**Manufacturer:**	RAE	**Serial #:**	110-901778
Contact:	Jake Cashman	**Instrument:**	MiniRAE 2000 - 110-901778	**Asset #:**	
Address:	PO Box 976 NORTH RYDE, NSW	**Model:**	MiniRAE 2000	**Part #:**	-
		Configuration:		**Sold:**	14.12.2010
		Wireless:		**Last Cal:**	28.02.2014
Phone:	02 9888 5000	**Network ID:**		**Job #:**	1853
Fax:		**Unit ID:**		**Cal Spec:**	
Email:	jcashman@jkgroup.net.au	**Details:**		**Order #:**	EIS PID 2A

Item	Test	Pass/Fail	Comments	Serial Number
Battery	NiCd, NiMH, Dry cell, LiIon	P		
Charger	Power Supply	-		
	Cradle, Travel Charger	-		
Pump	Flow	X	>500ml/min	
FIlter	Filter, fitting, etc	X	Fitted new filter	002-3022-001
Alarms	Audible, visual, vibration	P		
Display	Operation	P		
Switches	Operation	P		
PCB	Operation	P		
Connectors	Condition	P		
Firmware	Version	P	V 2.00	
Datalogger	Operation	P		
Monitor Housing	Condition	P		
Case	Condition / Type	P		
Sensors				
PID	Lamp	P		
PID	Sensor	P		
THP	Sensor	P		

Engineer's Report

Checked PC configuration and data download
Unit serviced and calibrated

Melbourne	**Head Office**	2 Merchant Avenue	THOMASTOWN VIC 3074	T: +(613) 9464 2300	F:+ (613) 9464 3421
Sydney	S14 Lvl 2	6-8 Holden Street	ASHFIELD NSW 2131	T: +(612) 9716 5966	F:+ (612) 9716 5988
Perth	Unit 6	41 Holder Way	MALAGA WA 6090	T: +(618) 9249 5663	F:+ (618) 9249 5362
Brisbane	Unit 17	23 Ashtan Place	BANYO QLD 4014	T: +(617) 3267 1433	F:+ (617) 3267 3559

sales@aesolutions.com.au

ISO Certified 9001:2008

www.aesolutions.com.au

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ACTIVE ENVIRONMENTAL SOLUTIONS

Calibration Certificate

Sensor	Type	Serial No.	Span Gas	Concentration	Traceability Lot #	CF	Reading	
							Zero	Span
PID	10.6 eV Lamp	106H820556	Isobutylene	100 ppm	S21306		0	100

Calibrated/Repaired by: AMEND ROSHAN KUMAR Date: 27.03.2015 Next Due: 27.09.2015

Melbourne	**Head Office**	2 Merchant Avenue	THOMASTOWN VIC 3074	T: +(613) 9464 2300	F:+ (613) 9464 3421
Sydney	S14 Lvl 2	6-8 Holden Street	ASHFIELD NSW 2131	T: +(612) 9716 5966	F:+ (612) 9716 5988
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