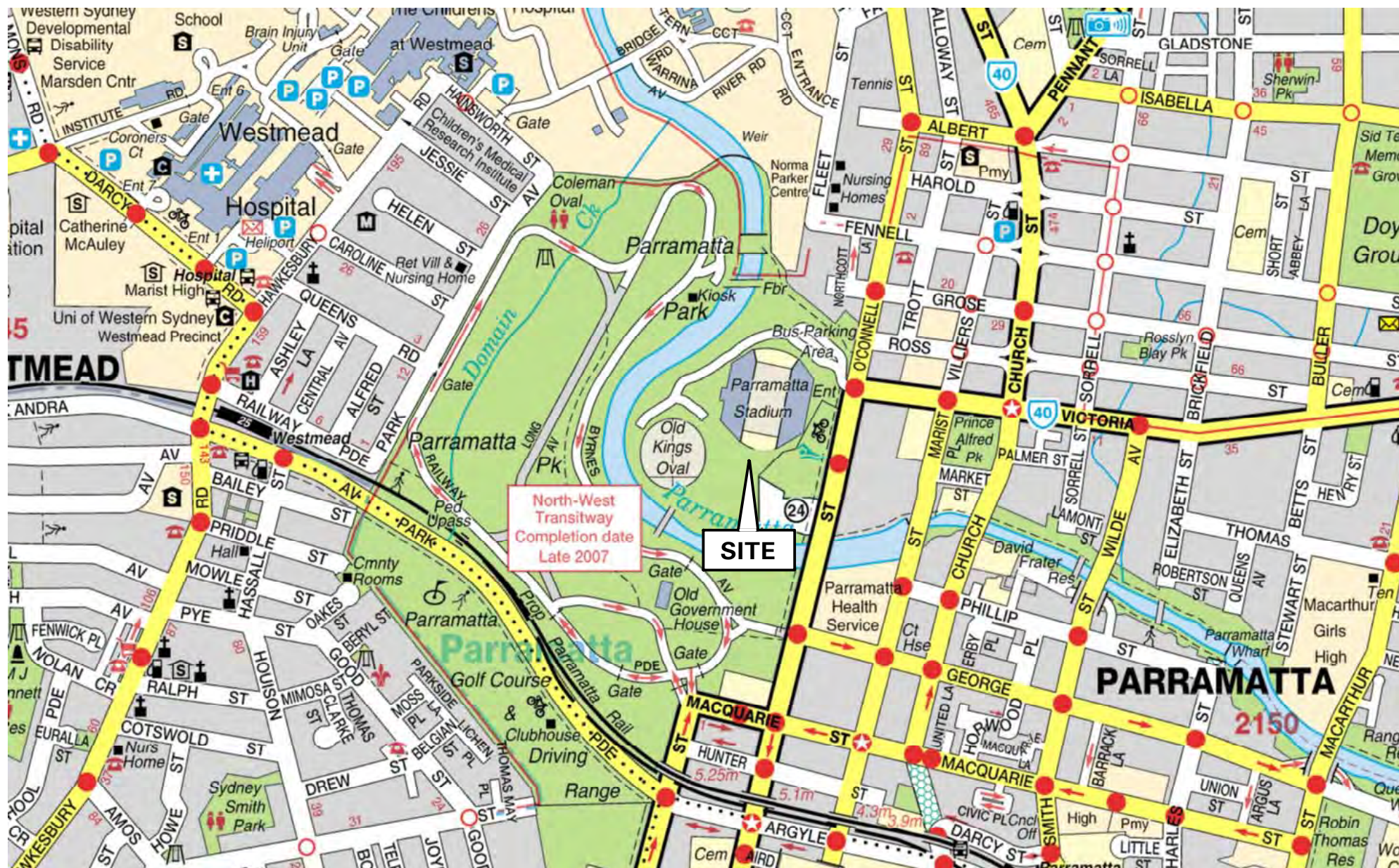


Appendix J: EIS (2014b) Summary Information



NOTES:
Figure 1 has been recreated from UBD on disc (version 5.0). Figure is not to scale.

UBD Map ref: 211 A1

Reference should be made to the report text for a full understanding of this plan.



Project Number: E27070KH2	Title: SITE LOCATION PLAN
Figure: 1	Address: PARRAMATTA STADIUM, O'CONNELL STREET, PARRAMATTA

PARRAMATTA
PARK

PARRAMATTA
PARK

PRACTICE
FIELD

PIRTEK
STADIUM

ASPHALT
CAR PARK

● BH103 (1.2)

● BH104 (1.8)

● BH108 (2.8)

● BH107 (2.5)

● BH105 (2.6)

● BH106 (1.75)

● BH101 (2.6)
Chrysotile Asbestos

● BH102 (1.0)

LEGEND:

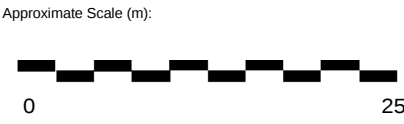
--- Approximate site boundary

● BH1 (0.2) Borehole location, number and depth of fill (m)

NOTES:
Figure 2 has been recreated from a site survey plan

The borehole locations presented on this plan have been established from site measurements only and should not be construed as survey points.

Reference should be made to the report text for a full understanding of this plan.



Project Number: E27070KH2	Title: BOREHOLE LOCATION PLAN PRACTICE FIELD
Figure: 2	Address: PARRAMATTA STADIUM, O'CONNELL STREET, PARRAMATTA, NSW

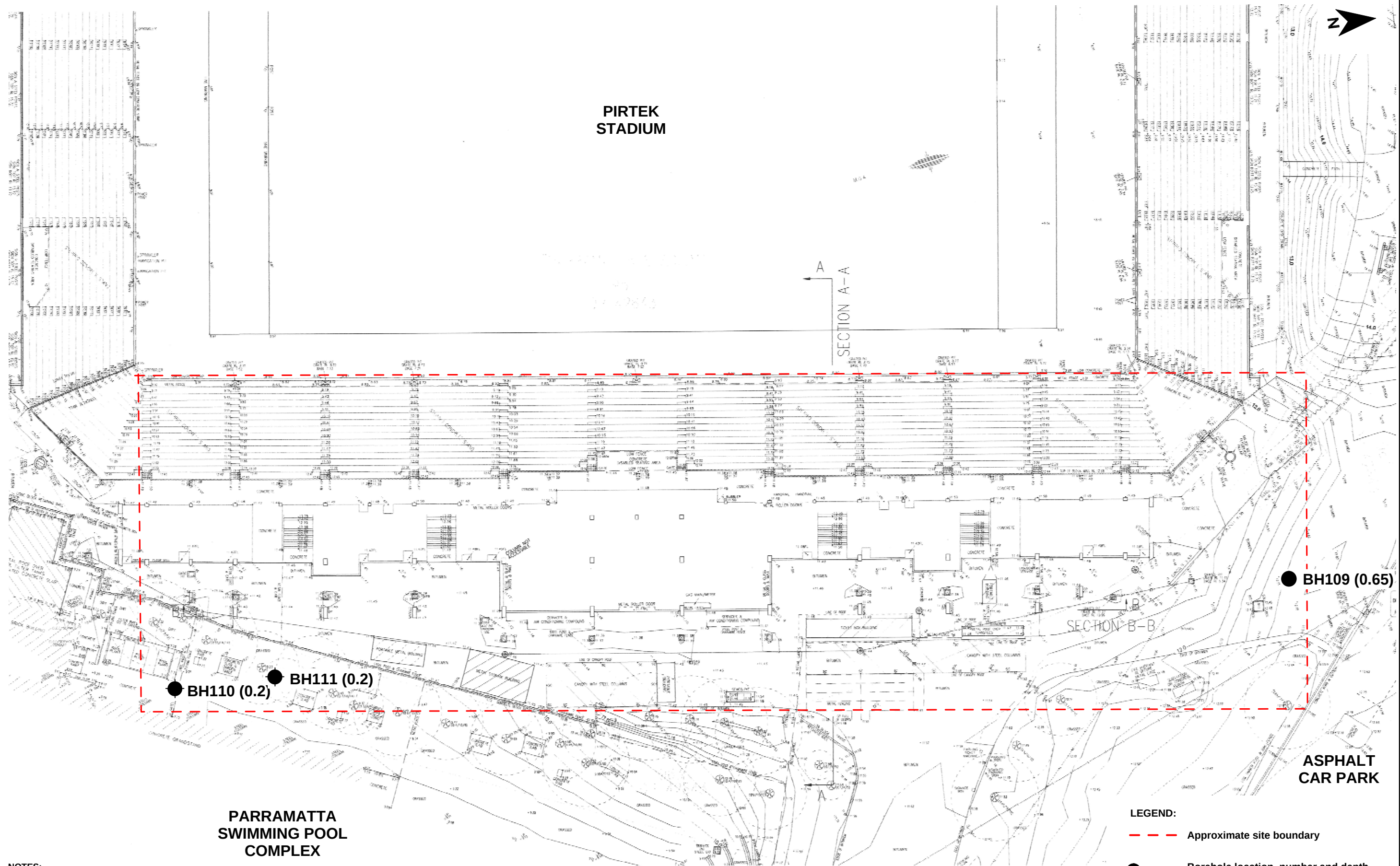


TABLE A
CHEMICAL CONTAMINANT CRITERIA FOR WASTE CLASSIFICATION
Waste Classification Guidelines Part 1: Classifying Waste DECC NSW July 2009
All data in mg/kg unless stated otherwise

CONTAMINANT	GENERAL SOLID WASTE			RESTRICTED SOLID WASTE		
	CT1	TCLP1	SCC1	CT2	TCLP2	SCC2
	(mg/kg)	(mg/L)	(mg/kg)	(mg/kg)	(mg/L)	(mg/kg)
Heavy Metals						
Arsenic	100	5	500	400	20	2,000
Beryllium	20	1	100	80	4	400
Cadmium	20	1	100	80	4	400
Chromium VI	100	5	1,900	400	20	7,600
Cyanide (total)	320	16	5,900	1280	64	23,600
Cyanide (Amenable)	70	3.5	300	280	14	1,200
Fluoride	3,000	150	10,000	12,000	600	40,000
Lead	100	5	1,500	400	20	6,000
Mercury	4	0.2	50	16	0.8	200
Molybdenum	100	5	1,000	400	20	4,000
Nickel	40	2	1,050	160	8	4,200
Selenium	20	1	50	80	4	200
Silver	100	5	180	400	20	720
Monocyclic Aromatic Hydrocarbons						
Benzene	10	0.5	18	40	2	72
Toluene	288	14.4	518	1,152	57.6	2,073
Ethyl benzene	600	30	1,080	2,400	120	4,320
Total xylenes	1,000	50	1,800	4,000	200	7,200
Petroleum Hydrocarbons (TPH)						
Light Fraction TPH (C6-C9)	nsI	nsI	650	nsI	nsI	2,600
Mid to Heavy Fraction TPH (C10-C36)	nsI	nsI	10,000	nsI	nsI	40,000
Polycyclic Aromatic Hydrocarbons (PAHs)						
Benzo(a)pyrene	0.8	0.04	10	3.2	0.16	23
Total PAHs	nsI	nsI	200	nsI	nsI	800
Others						
Polychlorinated biphenyls	nsI	nsI	< 50	nsI	nsI	< 50
Phenol (non-halogenated)	288	14.4	518	1,152	57.6	2,073
Scheduled chemicals	nsI	nsI	< 50	nsI	nsI	< 50

Explanation:

1). General Solid Waste (GSW):

- If $SCC \leq CT1$ then TCLP not needed to classify the material as GSW
- If $TCLP \leq TCLP1$ and $SCC \leq SCC1$ then treat as GSW

2). Restricted Solid Waste (RSW):

- If $SCC \leq CT2$ then TCLP not needed to classify the material as RSW
- If $TCLP \leq TCLP2$ and $SCC \leq SCC2$ then treat as RSW

3). Hazardous Waste (HW):

- If $SCC > CT2$ then TCLP not needed to classify the material as HW
- If $TCLP > TCLP2$ and/or $SCC > SCC2$ then treat as HW

Abbreviations:

SCC – Specific Contaminant Concentration

CT – Contaminant Threshold

TCLP – Toxicity Characteristics Leaching Procedure

nsI - No Set Limit

DECC - NSW Department of Environment and Climate Change (now OEH)



TABLE B
SOIL LABORATORY RESULTS COMPARED TO HIL
All data in mg/kg unless stated otherwise

			HEAVY METALS							PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES		
			Arsenic	Cadmium	Chromium VI ²	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P TEQ ³	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor			Chlorpyrifos	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC) ¹			300	90	300	17000	600	80	1200	30000	300	3	10	340	400	10	70	400	10	250	1	Detect/Not Detect	
Sample Reference	Sample Depth	Sample Description																					
BH101	0-0.1	Fill: sand	LPQL	LPQL	4	4	7	LPQL	2	12	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH101	0.4-0.5	Fill: clayey sand	4	LPQL	16	7	14	LPQL	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH101	1.9-2	Fill: clayey sand	4	LPQL	12	11	110	0.3	6	61	1.8	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	Chrysotile asbestos	
BH102	0.01-0.1	Fill: silty sand	LPQL	LPQL	7	47	2	LPQL	110	31	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	0.4-0.5	Fill: sandy clay	LPQL	LPQL	10	12	16	LPQL	13	35	0.28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	1.9-2	Silty clay	LPQL	LPQL	18	9	17	LPQL	8	14	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	0.4-0.5	Fill: sandy clay	LPQL	LPQL	9	7	20	LPQL	4	23	0.42	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	1.9-2	Silty sand	LPQL	LPQL	5	4	10	LPQL	3	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	0-0.1	Fill: sand	LPQL	LPQL	3	7	6	LPQL	1	9	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	0.4-0.5	Fill: sandy clay	LPQL	LPQL	7	6	9	LPQL	4	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH105	0-0.1	Fill: sand	LPQL	LPQL	3	6	3	LPQL	LPQL	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH105	0.9-1	Clayey sand	LPQL	LPQL	7	5	9	LPQL	2	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH106	0.4-0.5	Fill: clayey sand	LPQL	LPQL	7	6	20	LPQL	4	21	2.4	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH106	2.5-2.6	Silty clay	LPQL	LPQL	8	4	10	LPQL	5	5	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	0.4-0.5	Fill: sandy silt	LPQL	LPQL	8	6	24	LPQL	4	22	3.9	1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	1.9-2	Fill: clayey sand	7	LPQL	8	13	15	LPQL	3	8	1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	0.4-0.5	Fill: clayey sand	LPQL	LPQL	7	10	38	LPQL	7	41	1.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	1.9-2	Fill: clayey sand	4	LPQL	8	24	22	LPQL	13	58	1.7	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	0.1-0.2	Fill: gravelly sand	LPQL	LPQL	12	28	4	LPQL	63	23	2.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	0.9-1	Clayey sand	LPQL	LPQL	9	3	10	LPQL	3	7	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	0-0.1	Fill: sandy clay	LPQL	LPQL	8	7	13	LPQL	3	19	0.25	LPQL	LPQL	LPQL	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	0.5-0.6	Silty clay	LPQL	LPQL	14	9	14	LPQL	4	10	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	0-0.1	Fill: sandy silt	LPQL	LPQL	6	6	12	LPQL	2	15	0.36	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	0.5-0.6	Silty clay	LPQL	LPQL	8	4	10	LPQL	4	8	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
Total Number of Samples			24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
Maximum Value			7	LPQL	18	47	110	0.3	110	61	3.9	1	LPQL	LPQL	LPQL	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	NC	

Explanation:
1 - Site Assessment Criteria (SAC): NEPM 2013, HIL-C: 'Public open space; secondary schools; and footpaths'
2 - The results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.
3 - B(a)P TEQ - Benzo(a)pyrene Toxicity Equivalence Quotient has been calculated based on 8 carcinogenic PAHs and their Toxic Equivalence Factors (TEFs) outlined in NEPM 2013

Concentration above the SAC **VALUE**

Abbreviations:
PAHs: Polycyclic Aromatic Hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL
OPP: Organophosphorus Pesticides
OCP: Organochlorine Pesticides
PCBs: Polychlorinated Biphenyls
UCL: Upper Level Confidence Limit on Mean Value
HILs: Health Investigation Levels
NA: Not Analysed
NC: Not Calculated
NSL: No Set Limit
SAC: Site Assessment Criteria
NEPM: National Environmental Protection Measure

TABLE C SOIL LABORATORY RESULTS COMPARED TO HSL All data in mg/kg unless stated otherwise											
				C ₆ -C ₁₀ (F1)	> C ₁₀ -C ₁₆ (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID ²
PQL - Envirolab Services				25	50	0.2	0.5	1	3	1	
HSL Land Use Category ¹				RECREATIONAL							
Sample Reference	Sample Depth	Depth Category	Soil Category								
BH101	0-0.1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH101	0.4-0.5	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH101	1.9-2	1m to < 2m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH102	0.01-0.1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH102	0.4-0.5	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH102	1.9-2	1m to < 2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH103	0.4-0.5	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH103	1.9-2	1m to < 2m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH104	0-0.1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH104	0.4-0.5	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH105	0-0.1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH105	0.9-1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH106	0.4-0.5	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH106	2.5-2.6	2m to < 4m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH107	0.4-0.5	0m to < 1m	Silt	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH107	1.9-2	1m to < 2m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH108	0.4-0.5	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH108	1.9-2	1m to < 2m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH109	0.1-0.2	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH109	0.9-1	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH110	0-0.1	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH110	0.5-0.6	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH111	0-0.1	0m to < 1m	Silt	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH111	0.5-0.6	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
Total Number of Samples				24	24	24	24	24	24	24	24
Maximum Value				LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
Explanation: 1 - Site Assessment Criteria (SAC): NEPM 2013 2 - Field PID values obtained during the investigation Concentration above the SAC VALUE The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below Abbreviations: UCL: Upper Level Confidence Limit on Mean Value PQL: Practical Quantitation Limit NC: Not Calculated HSLs: Health Screening Levels LPQL: Less than PQL NL: Not Limiting NA: Not Analysed SAC: Site Assessment Criteria NEPM: National Environmental Protection Measure											

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SITE ASSESSMENT CRITERIA											
				C ₆ -C ₁₀ (F1)	> C ₁₀ -C ₁₆ (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	
PQL - Envirolab Services				25	50	0.2	0.5	1	3	1	
HSL Land Use Category ¹				RECREATIONAL							
Sample Reference	Sample Depth	Depth Category	Soil Category								
BH101	0-0.1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH101	0.4-0.5	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH101	1.9-2	1m to < 2m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH102	0.01-0.1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH102	0.4-0.5	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH102	1.9-2	1m to < 2m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH103	0.4-0.5	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH103	1.9-2	1m to < 2m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH104	0-0.1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH104	0.4-0.5	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH105	0-0.1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH105	0.9-1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH106	0.4-0.5	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH106	2.5-2.6	2m to < 4m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH107	0.4-0.5	0m to < 1m	Silt	NL	NL	NL	NL	NL	NL	NL	
BH107	1.9-2	1m to < 2m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH108	0.4-0.5	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH108	1.9-2	1m to < 2m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH109	0.1-0.2	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH109	0.9-1	0m to < 1m	Sand	NL	NL	NL	NL	NL	NL	NL	
BH110	0-0.1	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH110	0.5-0.6	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	
BH111	0-0.1	0m to < 1m	Silt	NL	NL	NL	NL	NL	NL	NL	
BH111	0.5-0.6	0m to < 1m	Clay	NL	NL	NL	NL	NL	NL	NL	



TABLE D SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES (2009) All data in mg/kg unless stated otherwise																												
			HEAVY METALS							PAHs		OCPs				TOTAL OPPs	Total PCBs	TPH					BTEX COMPOUNDS				ASBESTOS FIBRES	
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	ZiNC	Total PAHs	B(a)P	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE			Heptachlor	C ₆ -C ₉	C ₁₀ -C ₁₄	C ₁₅ -C ₂₈	C ₂₉ -C ₃₆	Total C ₁₀ -C ₃₆	Benzene	Toluene	Ethyl benzene		Total Xylenes
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	0.1	25	50	100	100	250	0.2	0.5	1	3	100
General Solid Waste CT1 ¹			100	20	100	NSL	100	4	40	NSL	NSL	0.8	NSL	NSL	NSL	NSL	detect ²	NSL	NSL	NSL		NSL	10	288	600	1000	-	
General Solid Waste SCC1 ¹			500	100	1900	NSL	1500	50	1050	NSL	200		Scheduled Chemicals < 50				50		650	NSL		10000	18	518	1080	1800	-	
Restricted Solid Waste CT2 ¹			400	80	400	NSL	400	16	160	NSL	NSL	3.2	NSL	NSL	NSL	NSL	detect ²	NSL	NSL	NSL		NSL	40	1152	2400	4000	-	
Restricted Solid Waste SCC2 ¹			2000	400	7600	NSL	6000	200	4200	NSL	800	23	Scheduled Chemicals < 50				50		2600	NSL		40000	72	2073	4320	7200	-	
Sample RefereNCe	Sample Depth	Sample Description																										
BH101	0-0.1	Fill: sand	LPQL	LPQL	4	4	7	LPQL	2	12	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH101	0.4-0.5	Fill: clayey sand	4	LPQL	16	7	14	LPQL	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH101	1.9-2	Fill: clayey sand	4	LPQL	12	11	110	0.3	6	61	1.8	0.16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	Chrysotile asbestos	
BH102	0.01-0.1	Fill: silty sand	LPQL	LPQL	7	47	2	LPQL	110	31	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	0.4-0.5	Fill: sandy clay	LPQL	LPQL	10	12	16	LPQL	13	35	0.28	0.06	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	1.9-2	Silty clay	LPQL	LPQL	18	9	17	LPQL	8	14	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	0.4-0.5	Fill: sandy clay	LPQL	LPQL	9	7	20	LPQL	4	23	0.42	0.08	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	1.9-2	Silty sand	LPQL	LPQL	5	4	10	LPQL	3	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	0-0.1	Fill: sand	LPQL	LPQL	3	7	6	LPQL	1	9	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	0.4-0.5	Fill: sandy clay	LPQL	LPQL	7	6	9	LPQL	4	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH105	0-0.1	Fill: sand	LPQL	LPQL	3	6	3	LPQL	LPQL	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH105	0.9-1	Clayey sand	LPQL	LPQL	7	5	9	LPQL	2	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH106	0.4-0.5	Fill: clayey sand	LPQL	LPQL	7	6	20	LPQL	4	21	2.4	0.23	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH106	2.5-2.6	Silty clay	LPQL	LPQL	8	4	10	LPQL	5	5	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	0.4-0.5	Fill: sandy silt	LPQL	LPQL	8	6	24	LPQL	4	22	3.9	0.46	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	1.9-2	Fill: clayey sand	7	LPQL	8	13	15	LPQL	3	8	1	0.08	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	0.4-0.5	Fill: clayey sand	LPQL	LPQL	7	10	38	LPQL	7	41	1.3	0.12	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	1.9-2	Fill: clayey sand	4	LPQL	8	24	22	LPQL	13	58	1.7	0.14	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	0.1-0.2	Fill: gravelly sand	LPQL	LPQL	12	28	4	LPQL	63	23	2.1	0.17	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	0.9-1	Clayey sand	LPQL	LPQL	9	3	10	LPQL	3	7	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	0-0.1	Fill: sandy clay	LPQL	LPQL	8	7	13	LPQL	3	19	0.25	0.05	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	0.5-0.6	Silty clay	LPQL	LPQL	14	9	14	LPQL	4	10	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	0-0.1	Fill: sandy silt	LPQL	LPQL	6	6	12	LPQL	2	15	0.36	0.07	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	0.5-0.6	Silty clay	LPQL	LPQL	8	4	10	LPQL	4	8	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
Total Number of samples			24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
Maximum Value			7	LPQL	18	47	110	0.3	110	61	3.9	0.46	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NC	
EXPLANATION: 1 - NSW DECCW Waste Classification Guidelines (2009) 2 - Some Individual OPPs have CT1 & CT2 values. RefereNCe should be made to the Waste Classification Guidelines in the event of any detections																												
CoNCentration above the CT1 CoNCentration above SCC1 CoNCentration above the SCC2																												
Abbreviations: PAHs: Polycyclic Aromatic Hydrocarbons B(a)P: Benzo(a)pyrene PQL: Practical Quantitation Limit LPQL: Less than PQL OPP: Organophosphorus Pesticides PID: Photoionisation Detector PCBs: Polychlorinated Biphenyls UCL: Upper Level ConfideNCe Limit on Mean Value ALPQL: All values less than PQL NA: Not Analysed NC: Not Calculated NSL: No Set Limit SAC: Site Assessment Criteria TPH: Total Petroleum Hydrocarbons BTEX: Monocyclic Aromatic Hydrocarbons OCP: Organochlorine Pesticides CT: Contaminant Threshold SCC: Specific Contaminant CoNCentration HILs: Health Investigation Levels NEPM: National Environmental Protection Measure																												

TABLE E
SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH104 (0-0.1m) Dup Ref = Dup 1 Envirolab Report: 103586	Arsenic	4	LPQL	LPQL	LPQL	NC
	Cadmium	0.4	LPQL	LPQL	LPQL	NC
	Chromium	1	3	4	3.5	28.6
	Copper	1	7	5	6	33.3
	Lead	1	6	7	6.5	15.4
	Mercury	0.1	LPQL	0.1	0.075	66.7
	Nickel	1	1	1	1	0.0
	Zinc	1	9	6	7.5	40.0
Sample Ref = BH102 (0.4-0.5m) Dup Ref = Dup 2 Envirolab Report: 103586	Arsenic	4	LPQL	LPQL	LPQL	NC
	Cadmium	0.4	LPQL	LPQL	LPQL	NC
	Chromium	1	10	11	10.5	9.5
	Copper	1	12	19	15.5	45.2
	Lead	1	16	15	15.5	6.5
	Mercury	0.1	LPQL	LPQL	LPQL	NC
	Nickel	1	13	21	17	47.1
	Zinc	1	35	33	34	5.9

EXPLANATION:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable

Results between 5 & 10 times PQL = RPD value <= 75% are acceptable

Results < 5 times PQL = RPD value <= 100% are acceptable

RPD Results Above the Acceptance Criteria

VALUE

ABBREVIATIONS:

PQL: Practical Quantitation Limit

LPQL: Less than PQL

NA: Not Analysed

NC: Not Calculated

OCP: Organochlorine Pesticides

OPP: Organophosphorus Pesticides

PCBs: Polychlorinated Biphenyls

TPH: Total Petroleum Hydrocarbons



TABLE F
SUMMARY OF QA/QC - TRIP BLANK RESULTS

ANALYSIS	Envirolab PQL		TB101 ^s 10/01/2014 103586 mg/kg
	mg/kg	µg/L	
C ₆ -C ₁₀ (F1)	10	10	LPQL
> C ₁₀ -C ₁₆ (F2)	50	50	LPQL
> C ₁₆ -C ₃₄ (F3)	100	100	LPQL
> C ₃₄ -C ₄₀ (F4)	100	100	LPQL
Benzene	1	1	LPQL
Toluene	1	1	LPQL
Ethylbenzene	1	1	LPQL
m + p-xylene	2	2	LPQL
o-xylene	1	1	LPQL

EXPLANATION:

^w Sample type (water)

^s Sample type (sand)

BTEX concentrations in trip spikes are presented as % recovery

Values above PQLs/Acceptance criteria

VALUE

ABBREVIATIONS:

PQL: Practical Quantitation Limit

TB: Trip Blank

LPQL: Less than PQL

NA: Not Analysed

NC: Not Calculated

E26655KH
5 February 2014

BOREHOLE LOG

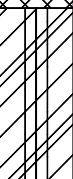
Borehole No.

101

1/3

Client: VENUES NSW
Project: PROPOSED PIRTEK STADIUM UPGRADE
Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1 **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 14.4m
Date: 13-1-14 **Datum:** AHD
Logged/Checked by: P.C./D.B.

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0			FILL: Sand, fine to medium grained, grey brown, with root fibres. FILL: Clayey sand, fine to medium grained, red brown, trace of fine grained sub angular ironstone gravel.	D M			GRASS COVER ROOT FIBRES TO 0.05m DEPTH APPEARS WELL COMPACTED
				N = 24 10,10,14	1						>600 >600 >600	
					2			FILL: Clayey sand, fine to medium grained, grey, dark grey and grey brown, trace of ash and brick fragments.				
				N = 15 7,10,5	3		CL	CLAYEY SILT/SILTY CLAY: low plasticity, grey, trace of root fibres and ash.	MC<PL	F-St		ALLUVIAL
				N = 4 1,2,2	4			SILTY SANDY CLAY: low plasticity, dark red brown.	MC>PL		80 140 180	
					5			SANDY CLAY: low plasticity, red brown.	MC>PL	VSt	320 340 380	
				N = 11 3,4,7	6		SP	SAND: fine to medium grained, brown and red brown.	M	MD		
				N = 12 6,5,7	7		SP/CL	See below	-	-		



BOREHOLE LOG

Borehole No.
101
2/3

Client: VENUES NSW													
Project: PROPOSED PIRTEK STADIUM UPGRADE													
Location: O'CONNELL STREET, PARRAMATTA, NSW													
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 14.4m													
Date: 13-1-14 Logged/Checked by: P.C./D.B. Datum: AHD													
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks	
	ES	U50	DB										
▼ AFTER 5 HRS				N = 19 6,7,12	8		SP/CL	INTERBEDDED CLAYEY SAND: fine to medium grained, grey and SANDY CLAY: medium to high plasticity, grey, trace of L strength iron indurated bands.	M/MC<PL	MD/H	350 450 550		
				N = 32 7,13,19	9		CH	SILTY CLAY: high plasticity, light grey, orange brown and dark red brown, with fine to medium grained sub angular to angular ironstone gravel.	MC<PL	H	>600 >600 >600		
					10		-	SHALE: light grey.	XW	EL		VERY LOW 'TC' BIT RESISTANCE	
					12					DW	VL-L		
				13		-	SANDSTONE: fine grained, grey and dark grey.			L-M		LOW TO MODERATE RESISTANCE	
				14						H		HIGH RESISTANCE	



BOREHOLE LOG

Borehole No.

101

3/3

Client: VENUES NSW

Project: PROPOSED PIRTEK STADIUM UPGRADE

Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1

Date: 13-1-14

Method: SPIRAL AUGER
JK500

Logged/Checked by: P.C./D.B.

R.L. Surface: ≈ 14.4m

Datum: AHD

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
									SANDSTONE: fine grained, grey and dark grey.	DW	H		
						15			END OF BOREHOLE AT 15.0m				
						16							
						17							
						18							
						19							
						20							

BOREHOLE LOG

Borehole No.

102

1/2

Client: VENUES NSW
Project: PROPOSED PIRTEK STADIUM UPGRADE
Location: O'CONNELL STREET, PARRAMATTA, NSW

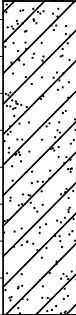
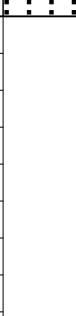
Job No. 27070SB1 **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 11.7m
Date: 13-1-14 **JK500** **Datum:** AHD
Logged/Checked by: P.C./D.B.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
						0			ASPHALTIC CONCRETE: 10mm.t FILL: Silty sandy gravel, fine to coarse grained sub angular to angular igneous, grey brown, fine to medium grained sand. FILL: Sandy clay, low to medium plasticity, brown and red brown, fine to medium grained sand, trace of fine grained sub angular igneous gravel and ash. SILTY CLAY: medium plasticity, red brown, with fine grained sand.	D MC<PL			APPEARS WELL COMPACTED
					N = 25 17,13,12	1		CL		MC<PL	(VSt-H)		ALLUVIAL
					N = 15 10,8,7	2							
						3		CH	SILTY CLAY: high plasticity, grey mottled orange brown.		H		
					N = 23 9,9,14	4						>600 >600 >600	
						5		SC	CLAYEY SAND: fine to medium grained, light grey.	D	MD		
					N = 20 20,11,9	6		CL-CH	INTERBEDDED SILTY CLAY: medium to high plasticity, light grey and CLAYEY SAND: fine to medium grained, light grey, trace of root fibres.	MC<PL/ D	H/MD		
					N = 16 8,8,8	7						>600 >600 >600	



BOREHOLE LOG

Borehole No.
102
2/2

Client: VENUES NSW														
Project: PROPOSED PIRTEK STADIUM UPGRADE														
Location: O'CONNELL STREET, PARRAMATTA, NSW														
Job No. 27070SB1			Method: SPIRAL AUGER JK500					R.L. Surface: ≈ 11.7m						
Date: 13-1-14			Datum: AHD											
Logged/Checked by: P.C./D.B.														
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks	
	ES	U50	DB	DS										
▼ ON COMPLET -ION					N > 15 16,15/ 100mm REFUSAL	8		CL-CH GC	INTERBEDDED SILTY CLAY: medium to high plasticity, light grey and CLAYEY SAND: fine to medium grained, light grey, trace of root fibres. CLAYEY GRAVEL: fine to medium grained sub rounded angular ironstone, brown, with medium to coarse grained sand.	MC<PL/ D W	H/MD MD	350 450 280	RESIDUAL	
						9		CL						SANDY CLAY: low to medium plasticity, grey mottled light grey and brown, fine to medium grained sand.
					N = 10 3,3,7	10					(VSt) VSt- H			
						11		-	SANDSTONE: fine to medium grained, light grey.	DW	VL-L L M-H			
						12			END OF BOREHOLE AT 12.0m					
						13								
						14								



BOREHOLE LOG

Borehole No.
103
1/2

Client: VENUES NSW												
Project: PROPOSED PIRTEK STADIUM UPGRADE												
Location: O'CONNELL STREET, PARRAMATTA, NSW												
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 13.8m												
Date: 9-1-14 Logged/Checked by: P.C./D.B. Datum: AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0			FILL: Sand, fine to medium grained, brown, with root fibres. FILL: Sandy clay, low to medium plasticity, red brown and brown, fine to medium grained sand.	D MC<PL			GRASS COVER ROOT FIBRES TO 0.05mm DEPTH APPEARS MODERATELY COMPACTED
				N = 13 9,6,7	1							
							SM	SILTY SAND: fine to medium grained, brown, with clay fines.	D	MD		ALLUVIAL
				N = 10 10,5,5	2							
							SM	CLAYEY SILTY SAND: fine to medium grained, red brown.				
				N = 24 11,10,14	3					540 >600 >600		
			N = 19 6,8,11	5								
						CH	GRAVELLY CLAY: high plasticity, light grey mottled brown, fine to medium grained rounded to angular ironstone gravel.	MC≈PL	VSt			
			N = 21 7,12,9	6					300 350 250			
					7							



BOREHOLE LOG

Borehole No.

103

2/2

Client: VENUES NSW Project: PROPOSED PIRTEK STADIUM UPGRADE Location: O'CONNELL STREET, PARRAMATTA, NSW												
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 13.8m Date: 9-1-14 Logged/Checked by: P.C./D.B. Datum: AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
					8		-	SHALE: dark brown and dark grey, trace of M strength bands.	XW-DW	EL-VL		VERY LOW TO LOW 'TC' BIT RESISTANCE
					9			SHALE: dark grey, with M strength bands.	DW	VL-L		
					10			SANDSTONE: fine to medium grained, light grey and grey, with VL strength bands.	DW	L-M		LOW TO MODERATE RESISTANCE WITH VERY LOW BANDS
					11							
					12			END OF BOREHOLE AT 12.0m				
					13							
					14							



BOREHOLE LOG

Borehole No.
104
1/2

Client: VENUES NSW
Project: PROPOSED PIRTEK STADIUM UPGRADE
Location: O'CONNELL STREET, PARRAMATTA, NSW
Job No. 27070SB1
Date: 9-1-14
Method: SPIRAL AUGER JK500
R.L. Surface: ≈ 13.6m
Datum: AHD
Logged/Checked by: P.C./D.B.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
DRY ON COMPLETION						0			FILL: Sand, fine to medium grained, grey brown. FILL: Sandy clay, medium plasticity, red brown, brown and grey, fine to medium grained sand, trace of ash.	D MC<PL			GRASS COVER ROOTS AND ROOT FIBRES TO 0.05m DEPTH APPEARS MODERATELY COMPACTED
					N = 9 6,5,4	1			as above, but with fine to medium grained rounded to angular ironstone gravel.				
					N = 9 5,5,4	2	ML	SANDY SILT: dark brown, fine grained sand, trace of fine to medium grained sub angular ironstone gravel.	MC<PL	(F St)		ALLUVIAL	
						3	SC	CLAYEY SAND: fine to medium grained, red brown.	D	L			
					N = 7 5,4,3	4							
						5							
					N = 14 5,9,5	6		CLAYEY SAND: fine to medium grained, light grey and light brown.	M		MD		
						7	-	SHALE; as below.	XW-DW	EL-VL			



BOREHOLE LOG

Borehole No.
104
2/2

Client: VENUES NSW Project: PROPOSED PIRTEK STADIUM UPGRADE Location: O'CONNELL STREET, PARRAMATTA, NSW													
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 13.6m Date: 9-1-14 Datum: AHD Logged/Checked by: P.C./D.B.													
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
					SPT 10/100mm REFUSAL	7.5			SHALE: grey, dark grey and dark brown, trace of clay seams, and M-H strength iron indurated bands.	XW-DW	EL-VL		VERY LOW TO LOW 'TC' BIT RESISTANCE
						8			SHALE: dark grey.	DW	M-H		MODERATE TO HIGH RESISTANCE
						9							
						10							
						10.5			END OF BOREHOLE AT 10.5m				
						11							
						12							
						13							
						14							

BOREHOLE LOG

Borehole No.

105

1/1

Client: VENUES NSW
Project: PROPOSED PIRTEK STADIUM UPGRADE
Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1 **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 14.4m
Date: 13-1-14 **Datum:** AHD
Logged/Checked by: P.C./D.B.

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0			FILL: Sand, fine to medium grained, grey, with root fibres. FILL: Clayey sand, fine to medium grained, red brown, brown and grey.	D MC<PL			GRASS COVER ROOT FIBRES TO 0.05m DEPTH
				N = 16 5,6,10							>600 >600 >600	APPEARS WELL COMPACTED
					1							
				N = 7 6,4,3				FILL: Sandy clay/clayey sand, low to medium plasticity, grey and dark grey, fine to medium grained sand, trace of ash and fine to coarse grained sub rounded to sub angular igneous gravel.	MC≈PL/ M		150 250	APPEARS POORLY TO MODERATELY COMPACTED
					2							
					3		SM	CLAYEY SILTY SAND: fine to medium grained, dark grey, trace of root fibres.	M	(VL)		ALLUVIAL
				N = 4 1,2,2			CL	SILTY CLAY: medium plasticity, dark brown and red brown.	MC≈PL	VSt-H	280 380 420	
					4		SM	CLAYEY SILTY SAND: fine to medium grained, red brown.	M	MD		
					5							
				N = 18 9,9,9								
					6		SC	CLAYEY SAND: fine to medium grained, red brown.				
				N = 16 6,6,10								
					7			END OF BOREHOLE AT 6.45m				



BOREHOLE LOG

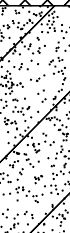
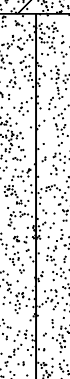
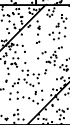
Borehole No.
106
1/1

Client: VENUES NSW												
Project: PROPOSED PIRTEK STADIUM UPGRADE												
Location: O'CONNELL STREET, PARRAMATTA, NSW												
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 14.0m												
Date: 9-1-14 Logged/Checked by: P.C./D.B. Datum: AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION					0			FILL: Sand, fine to medium grained, grey.				GRASS COVER APPEARS MODERATELY COMPACTED
				N > 9 22,9/50mm REFUSAL	1			FILL: Clayey sand, fine to medium grained, brown, trace of fine to coarse grained sub rounded to angular igneous gravel and plastic fragments.				
				N = 3 1,1,2	2	SM	CLAYEY SILTY SAND: fine to medium grained, dark grey, with root fibres.	M	VL		ALLUVIAL	
				N = 4 1,2,2	3	CL	SILTY CLAY: medium plasticity, brown.	MC<PL	VSt	360 240 380		
				N = 15 6,7,8	5				VSt-H	380 400 440		
				N = 28 8,10,18	6	SC	CLAYEY SAND: fine to medium grained, dark red brown.	M	MD			
				7			END OF BOREHOLE AT 6.45m					



BOREHOLE LOG

Borehole No.
107
1/1

Client: VENUES NSW													
Project: PROPOSED PIRTEK STADIUM UPGRADE													
Location: O'CONNELL STREET, PARRAMATTA, NSW													
Job No. 27070SB1			Method: SPIRAL AUGER					R.L. Surface: ≈ 13.9m					
Date: 9-1-14			JK500					Datum: AHD					
Logged/Checked by: P.C./D.B.													
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
DRY ON COMPLETION						0			FILL: Sand, fine to medium grained, dark grey brown.	D			GRASS COVER ROOT FIBRES TO 0.05m DEPTH APPEARS WELL COMPACTED
					N = 22 12,9,13			FILL: Sandy silt, fine to medium grained sand, with fine to medium grained sub angular ironstone gravel.					
						1		FILL: Sand, fine grained, light brown, trace of fine grained rounded ironstone gravel.					
					N = 8 4,4,4				FILL: Clayey sand, fine to medium grained, dark brown, trace of ash and brick fragments.	M		300 200	APPEARS POORLY TO MODERATELY COMPACTED
						2							
								SC	CLAYEY SAND: fine to medium grained, dark red brown.	M	L		ALLUVIAL
					N = 7 2,3,4	3							
								SM	SILTY SAND: fine to medium grained, red brown.				
					N = 9 4,4,5	4							
													
				N = 12 4,6,6	6	SC		CLAYEY SAND: fine to medium grained, dark brown and dark grey, trace of cemented sand nodules.	W				
								END OF BOREHOLE AT 6.45m					
						7							



BOREHOLE LOG

Borehole No.
108
1/1

Client: VENUES NSW												
Project: PROPOSED PIRTEK STADIUM UPGRADE												
Location: O'CONNELL STREET, PARRAMATTA, NSW												
Job No. 27070SB1			Method: SPIRAL AUGER JK500						R.L. Surface: ≈ 13.9m			
Date: 13-1-14			Logged/Checked by: P.C./D.B.						Datum: AHD			
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB DS									
DRY ON COMPLETION					0			FILL: Sand, fine to medium grained, grey brown, with root fibres. FILL: Clayey sand, fine to medium grained, brown and red brown, with fine to coarse grained sub rounded to angular igneous, sandstone and shale gravel, trace of ash.	D			GRASS COVER ROOT FIBRES TO 0.05m DEPTH
				N > 20 7,20/ 150mm REFUSAL	1			APPEARS WELL COMPACTED				
				N = 10 6,7,3	2			APPEARS MODERATELY COMPACTED				
				N = 5 2,3,2	3		CL	SILTY CLAY: medium plasticity, red brown.	MC>PL	VSt-H	280 380 420	ALLUVIAL
				N = 20 5,10,10	4			SILTY CLAY/CLAYEY SILT: low plasticity, brown and red brown.	MC<PL		290 350 400	
			N = 19 12,11,8	6		SC	CLAYEY SAND: fine to medium grained, brown.	M	MD	380 400		
								END OF BOREHOLE AT 6.45m				
					7							

BOREHOLE LOG

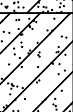
Borehole No.

109

1/2

Client: VENUES NSW
Project: PROPOSED PIRTEK STADIUM UPGRADE
Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1 **Method:** SPIRAL AUGER JK500 **R.L. Surface:** ≈ 12.6m
Date: 10-1-14 **Datum:** AHD
Logged/Checked by: P.C./D.B.

Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB	DS									
						0		-	ASPHALTIC CONCRETE: 20mm.t FILL: Gravelly sand, fine to medium grained, grey, fine to medium grained sub angular igneous gravel.	D			APPEARS WELL COMPACTED
					N = 19 8,8,11			SC	FILL: Clayey sand, fine to medium grained, light brown. CLAYEY SAND: fine to medium grained, light brown, brown and grey.	D	MD		ALLUVIAL
						1							
					N = 31 5,16,15			CL-CH	SANDY CLAY: medium to high plasticity, brown mottled red brown and grey, fine grained sand, trace of fine to medium grained sub angular to angular ironstone gravel.	MC<PL	H	>600 >600 >600	
						2							
					N = 17 6,7,10			CH	SILTY CLAY: high plasticity, grey and brown mottled red brown.			>600 >600 >600	
						3							ALLUVIAL
						4			as above, but grey, with fine to medium grained sand.				
					N = 24 6,8,16							450 500 480	
						5							
					N = 23 7,13,10			CL	SANDY CLAY: low to medium plasticity, mottled brown, grey and red brown, fine to medium grained sand.	MC≈PL	VSt-H	220 220 440	
						6							ALLUVIAL
						7							



Borehole No.
109
2/2

BOREHOLE LOG

Client: VENUES NSW												
Project: PROPOSED PIRTEK STADIUM UPGRADE												
Location: O'CONNELL STREET, PARRAMATTA, NSW												
Job No. 27070SB1 Method: SPIRAL AUGER JK500 R.L. Surface: ≈ 12.6m												
Date: 10-1-14 Logged/Checked by: P.C./D.B. Datum: AHD												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
				N = 4 0,2,3	8		CL	SANDY CLAY: low to medium plasticity, light grey, fine to medium grained sand.	MC>PL	St- VSt	190 190 250	ALLUVIAL
				N = 33 5,14,19	9		-	INTERBEDDED SANDTONE and SANDY CLAY: low to medium plasticity, light grey, fine to medium grained sand.	MC>PL/ XW	H/ EL	>600 >600 >600	
					10			SANDSTONE: fine to medium grained, light grey and light brown.	DW	VL		VERY LOW 'TC' BIT RESISTANCE
					11					L		LOW RESISTANCE
					12					M-H		MODERATE TO HIGH RESISTANCE
					13							
					14			END OF BOREHOLE AT 13.5m				



BOREHOLE LOG

Borehole No.
110
1/1

Client: VENUES NSW

Project: PROPOSED PIRTEK STADIUM UPGRADE

Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1

Date: 10-1-14

Method: HAND AUGER

Logged/Checked by: P.C./D.B.

R.L. Surface: ≈ 9.3m

Datum: AHD

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLET- ION				REFER TO DCP TEST RESULTS	0		CL	FILL: Sandy clay, low plasticity, dark grey, with root fibres.	MC>PL	H		GRASS COVER ROOT FIBRES TO 0.1m
						SILTY CLAY: medium plasticity, grey mottled red brown.		MC<PL			RESIDUAL	
						as above, but dark grey mottled brown.			400 500 450			
								END OF BOREHOLE AT 1.15m			600 500 >600	HAND AUGER REFUSAL
					2							
					3							
					4							
					5							
					6							
					7							



BOREHOLE LOG

Borehole No.

111

1/1

Client: VENUES NSW

Project: PROPOSED PIRTEK STADIUM UPGRADE

Location: O'CONNELL STREET, PARRAMATTA, NSW

Job No. 27070SB1

Date: 10-1-14

Method: HAND AUGER

Logged/Checked by: P.C./D.B.

R.L. Surface: ≈ 9.2m

Datum: AHD

Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	U50	DB									
DRY ON COMPLETION				REFER TO DCP TEST RESULTS	0		CL	FILL: Sandy silt, light brown, fine grained sand.	D			GRASS COVER ROOT FIBRES TO 0.1m DEPTH
					1			SILTY CLAY: medium plasticity, light grey mottled light brown.	MC<PL	(H)		
								END OF BOREHOLE AT 1.2m				HAND AUGER REFUSAL
					2							
					3							
					4							
					5							
					6							
					7							