

PLOT DATE: 7/02/2017 5:41:04 PM DWG FILE: S:\5 EIS\SC EIS JOBS\29000\5\29593K ORAN PARK\CAD\IE29593KRPt2.DWG



LEGEND

- APPROXIMATE SITE BOUNDARY
- BH (Fill Depth) BOREHOLE LOCATION 1-18, NUMBER AND DEPTH OF FILL (m), (EIS, 2016)
- ⊕ TP (Fill Depth) TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m), (EIS, 2016)
- BH (Fill Depth) BOREHOLE LOCATION 101-117, NUMBER AND DEPTH OF FILL (m), (EIS, 2017)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION (mg/kg)

SOIL CONTAMINATION ABOVE SAC FOR ECOLOGICAL RISK

0 12 24 36 48 60
SCALE 1:1200 @A3 METRES

This plan should be read in conjunction with the JK Geotechnics report.

Title: CONTAMINATION LOCATION PLAN	
Project: PROPOSED ORAN PARK HIGH SCHOOL SOUTH CIRCUIT, ORAN PARK, NSW	
Report No: E29593Krpt2	Figure No: 3
ENVIRONMENTAL INVESTIGATION SERVICES	



LABORATORY SUMMARY TABLES

TABLE A SOIL LABORATORY RESULTS COMPARED TO HILs 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	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	Detected/Not Detected
Sample Reference	Sample Depth	Sample Description																				
BH1	0.1-0.3	Fill: silty clay	4	LPQL	12	39	15	LPQL	18	62	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH2	0.2-0.5	Fill: silty clay	LPQL	LPQL	15	38	9	LPQL	7	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH2	3-3.45	Silty clay	16	LPQL	24	32	17	LPQL	8	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH3	0-0.4	Fill: silty clay	8	LPQL	20	18	16	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH4	2.5-3.0	Fill: silty clay	8	LPQL	16	31	16	LPQL	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH6	0-0.05	Fill: silty clay	7	LPQL	24	16	20	LPQL	8	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH7	0.1-0.3	Fill: silty clay	6	LPQL	14	45	11	LPQL	12	42	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	0.5-1.0	Fill: silty clay	6	LPQL	16	22	13	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	1.7-2.0	Silty clay	7	LPQL	13	28	14	LPQL	17	70	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH9	0.2-0.5	Fill: silty clay	8	LPQL	8	20	9	LPQL	6	22	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	0-0.2	Fill: silty clay	5	LPQL	14	26	14	LPQL	11	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	1.4-1.6	Silty clay	LPQL	LPQL	9	14	8	LPQL	8	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH11	0.5-1.0	Fill: silty clay	6	LPQL	15	29	16	LPQL	13	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH11	1.5-1.7	Silty clay	6	LPQL	16	20	12	LPQL	8	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH13	0.2-0.4	Fill: silty clay	6	LPQL	11	34	14	LPQL	18	60	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH13	3.0-3.45	Silty clay	8	LPQL	15	30	14	LPQL	11	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH14	0.2-0.5	Fill: silty clay	LPQL	LPQL	9	23	12	LPQL	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH15	0.1-0.3	Fill: silty clay	10	LPQL	18	19	15	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH16	0.6-0.7	Silty clay	5	LPQL	10	15	7	LPQL	4	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH17	0-0.1	Fill: silty clay	7	LPQL	18	18	14	LPQL	9	31	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH18	0.5-0.95	Fill: silty clay	6	LPQL	15	28	14	LPQL	10	43	1.8	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH18	2.0-2.2	Silty clay	5	LPQL	13	17	10	LPQL	4	14	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
TP19	0.1-0.4	Fill: silty clay	7	LPQL	13	23	11	LPQL	7	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP20	0.2-0.5	Fill: silty sandy clay	8	LPQL	20	20	20	LPQL	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP21	0.1-0.4	Fill: silty sandy clay	7	LPQL	15	29	16	LPQL	9	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH101	0.8-1.0	Fill: silty clay	7	LPQL	17	33	19	LPQL	13	54	0.05	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH101	3-3.2	Silty clay	22	LPQL	17	40	17	LPQL	16	64	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH102	0-0.2	Fill: silty clay	7	LPQL	23	17	21	LPQL	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH102	2.5-2.7	Silty clay	LPQL	LPQL	12	25	10	LPQL	4	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH103	0.8-1.0	Fill: silty clay	7	LPQL	16	45	20	LPQL	22	75	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH103	2.7-3.0	Silty clay	6	LPQL	18	34	17	LPQL	12	56	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH104	0-0.2	Fill: silty clay	6	LPQL	16	33	18	LPQL	13	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH104	3.8-3.0	Silty clay	10	LPQL	16	27	20	LPQL	7	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH105	0-0.1	Fill: silty sand	5	LPQL	8	27	27	LPQL	9	89	1.25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH105	1.2-1.4	Silty clay	7	LPQL	14	26	16	LPQL	9	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH106	1.95-2.05	Silty clay	7	LPQL	12	28	10	LPQL	5	23	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH107	0-0.2	Fill: sandy gravel	5	LPQL	16	24	18	LPQL	11	46	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH107	1.3-1.5	Silty clay	11	LPQL	13	18	10	LPQL	4	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH108	0.05-0.2	Fill: silty sand	8	LPQL	22	19	22	LPQL	9	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH108	1.6-1.8	Fill: silty clay	6	LPQL	20	24	21	LPQL	16	54	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH108	2.5-2.6	Silty clay	13	LPQL	28	26	23	LPQL	8	38	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH109	0-0.15	Fill: sandy silty clay	7	LPQL	14	33	18	LPQL	13	53	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH109	2-2.15	Silty clay	9	LPQL	28	19	16	LPQL	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH110	0.4-0.5	Fill: silty clay	4	LPQL	15	24	18	LPQL	15	53	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH110	1.9-2.0	Silty clay	6	LPQL	14	16	13	LPQL	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH111	0-0.2	Fill: sandy silty clay	6	LPQL	19	19	17	LPQL	9	27	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH111	2.0-2.2	Silty clay	6	LPQL	15	20	12	LPQL	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH112	0-0.15	Fill: sandy silty clay	9	LPQL	22	21	25	LPQL	11	40	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH113	0-0.2	Fill: sandy silty clay	9	LPQL	24	17	28	LPQL	11	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH113	1.9-2.0	Silty clay	LPQL	LPQL	11	15	10	LPQL	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH114	0-0.2	Fill: sandy silty clay	10	LPQL	24	23	28	LPQL	11	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH114	2.6-2.8	Silty clay	5	LPQL	16	16	12	LPQL	5	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH115	0.8-0.9	Fill: silty clay	LPQL	LPQL	13	27	15	LPQL	9	45	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH115	2.0-2.1	Silty clay	8	LPQL	19	18	18	LPQL	10	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH116	0-0.15	Fill: sandy silty clay	9	LPQL	27	14	21	LPQL	7	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH117	0-0.15	Fill: sandy silty clay	5	LPQL	22	17	21	LPQL	7	20	LPQL	LPQL</										

TABLE B SOIL LABORATORY RESULTS COMPARED TO HSLs 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					HIGH DENSITY RESIDENTIAL							
Sample Reference	Sample Depth	Sample Description	Depth Category	Soil Category								
BH1	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH2	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH3	0-0.4	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH6	0-0.05	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH7	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH8	0.5-1.0	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH8	1.7-2.0	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH9	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH10	0-0.2	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH10	1.4-1.6	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH11	0.5-1.0	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH11	1.5-1.7	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH13	0.2-0.4	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH14	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH15	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH16	0.6-0.7	Silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH17	0-0.1	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH18	0.5-0.95	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP19	0.1-0.4	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP20	0.2-0.5	Fill: silty sandy clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
TP21	0.1-0.4	Fill: silty sandy clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH101	0.8-1.0	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH102	0-0.2	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH103	0.8-1.0	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH104	0-0.2	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH105	0-0.1	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH105	1.2-1.4	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH106	0.05-0.2	Fill: silty sandy gravel	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH107	0-0.2	Fill: sandy gravel	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH107	1.3-1.5	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH108	0.05-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH108	1.6-1.8	Fill: silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH109	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH109	2-2.15	Silty clay	2m to <4m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH110	0.4-0.5	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH110	1.9-2.0	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH111	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH112	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH112	1.8-2.0	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH113	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH113	1.9-2.0	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH114	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH115	0.8-0.9	Fill: silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH116	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH117	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH117	1.9-2.05	Silty clay	1m to <2m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
Total Number of Samples					47	47	47	47	47	47	47	47
Maximum Value					LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
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 HSLs: Health Screening Levels NA: Not Analysed NC: Not Calculated NL: Not Limiting SAC: Site Assessment Criteria PQL: Practical Quantitation Limit LPQL: Less than PQL NEPM: National Environmental Protection Measure												

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					HIGH DENSITY RESIDENTIAL							
Sample Reference	Sample Depth	Sample Description	Depth Category	Soil Category								
BH1	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH2	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH3	0-0.4	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH6	0-0.05	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH7	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH8	0.5-1.0	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH8	1.7-2.0	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH9	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH10	0-0.2	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH10	1.4-1.6	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH11	0.5-1.0	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH11	1.5-1.7	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH13	0.2-0.4	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH14	0.2-0.5	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH15	0.1-0.3	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH16	0.6-0.7	Silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH17	0-0.1	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH18	0.5-0.95	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
TP19	0.1-0.4	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
TP20	0.2-0.5	Fill: silty sandy clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
TP21	0.1-0.4	Fill: silty sandy clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH101	0.8-1.0	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH102	0-0.2	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH103	0.8-1.0	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH104	0-0.2	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH105	0-0.1	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3	
BH105	1.2-1.4	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH106	0.05-0.2	Fill: silty sandy gravel	0m to < 1m	Sand	45	110	0.5	160	55	40	3	
BH106	1.95-2.05	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH107	0-0.2	Fill: sandy gravel	0m to < 1m	Sand	45	110	0.5	160	55	40	3	
BH107	1.3-1.5	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH108	0.05-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3	
BH108	1.6-1.8	Fill: silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH109	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH110	0.4-0.5	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH110	1.9-2.0	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH111	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH112	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH112	1.8-2.0	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH113	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH113	1.9-2.0	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	
BH114	0-0.2	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH115	0.8-0.9	Fill: silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH116	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH117	0-0.15	Fill: sandy silty clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5	
BH117	1.9-2.05	Silty clay	1m to <2m	Clay	90	NL	1	NL	NL	310	NL	

TABLE C SOIL LABORATORY RESULTS COMPARED TO EILs AND ESLs All data in mg/kg unless stated otherwise																								
Land Use Category ¹				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																				
				pH	CEC (cmol/kg)	Clay Content (% clay)	AGED HEAVY METALS-EILs						EILs		ESLs									
				Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C ₆ -C ₁₀ (F1)	>C ₁₀ -C ₁₆ (F2)	>C ₁₆ -C ₃₄ (F3)	>C ₃₄ -C ₆₀ (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P				
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05	
Ambient Background Concentration (ABC) ²				-	-	-	NSL	9	11	17	5	24	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	
Sample Reference	Sample Depth	Sample Description	Soil Texture																					
BH1	0.1-0.3	Fill: silty clay	Fine	NA	NA	NA	4	12	39	15	18	62	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH2	0.2-0.5	Fill: silty clay	Fine	NA	NA	NA	LPQL	15	38	9	7	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH2	3-3.45	Silty clay	Fine	NA	NA	NA	16	24	32	17	8	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH3	0-0.4	Fill: silty clay	Fine	NA	NA	NA	8	20	18	16	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH4	2.5-3.0	Fill: silty clay	Fine	NA	NA	NA	8	16	31	16	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH6	0-0.05	Fill: silty clay	Fine	NA	NA	NA	7	24	16	20	8	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH7	0.1-0.3	Fill: silty clay	Fine	NA	NA	NA	6	14	45	11	12	42	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH8	0.5-1.0	Fill: silty clay	Fine	NA	NA	NA	6	16	22	13	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH8	1.7-2.0	Silty clay	Fine	NA	NA	NA	7	13	28	14	17	70	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH9	0.2-0.5	Fill: silty clay	Fine	NA	NA	NA	8	8	20	9	6	22	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH10	0-0.2	Fill: silty clay	Fine	NA	NA	NA	5	14	26	14	11	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH10	1.4-1.6	Silty clay	Fine	NA	NA	NA	LPQL	9	14	8	8	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH11	0.5-1.0	Fill: silty clay	Fine	NA	NA	NA	6	15	29	16	13	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH11	1.5-1.7	Silty clay	Fine	NA	NA	NA	6	16	20	12	8	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH13	0.2-0.4	Fill: silty clay	Fine	NA	NA	NA	6	11	34	14	18	60	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH13	3.0-3.45	Silty clay	Fine	NA	NA	NA	8	15	30	14	11	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH14	0.2-0.5	Fill: silty clay	Fine	NA	NA	NA	LPQL	9	23	12	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH15	0.1-0.3	Fill: silty clay	Fine	NA	NA	NA	10	18	19	15	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH16	0.6-0.7	Silty clay	Fine	NA	NA	NA	5	10	15	7	4	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH17	0-0.1	Fill: silty clay	Fine	NA	NA	NA	7	18	18	14	9	31	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH18	0.5-0.95	Fill: silty clay	Fine	NA	NA	NA	6	15	28	14	10	43	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.3	
TP19	0.1-0.4	Fill: silty clay	Fine	NA	NA	NA	7	13	23	11	7	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP20	0.2-0.5	Fill: silty sandy clay	Fine	NA	NA	NA	8	20	20	20	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP21	0.1-0.4	Fill: silty sandy clay	Fine	NA	NA	NA	7	15	29	16	9	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH101	0.8-1.0	Fill: silty clay	Fine	NA	NA	NA	7	17	33	19	13	54	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.05	
BH101	3-3.2	Silty clay	Fine	NA	NA	NA	22	17	40	17	16	64	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	0-0.2	Fill: silty clay	Fine	NA	NA	NA	7	23	17	21	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH102	2.5-2.7	Silty clay	Fine	NA	NA	NA	LPQL	12	25	10	4	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	0.8-1.0	Fill: silty clay	Fine	NA	NA	NA	7	16	45	20	22	75	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH103	2.7-3.0	Silty clay	Fine	NA	NA	NA	6	18	34	17	12	56	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	0-0.2	Fill: silty clay	Fine	NA	NA	NA	6	16	33	18	13	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH104	3.8-3.0	Silty clay	Fine	NA	NA	NA	10	16	27	20	7	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH105	0-0.1	Fill: silty sand	Coarse	NA	NA	NA	5	8	27	27	9	89	0.1	LPQL	LPQL	LPQL	150	LPQL	LPQL	LPQL	LPQL	LPQL	0.05	
BH105	1.2-1.4	Silty clay	Fine	NA	NA	NA	7	14	26	16	9	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH106	0.05-0.2	Fill: silty sandy gravel	Coarse	NA	NA	NA	9	11	29	13	40	120	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.2	
BH106	1.95-2.05	Silty clay	Fine	NA	NA	NA	7	12	28	10	5	23	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	0-0.2	Fill: sandy gravel	Coarse	NA	NA	NA	5	16	24	18	11	46	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH107	1.3-1.5	Silty clay	Fine	NA	NA	NA	11	13	18	10	4	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	0.05-0.2	Fill: silty sand	Coarse	NA	NA	NA	8	22	19	22	9	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	1.6-1.8	Fill: silty clay	Fine	NA	NA	NA	6	20	24	21	16	54	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH108	2.5-2.6	Silty clay	Fine	NA	NA	NA	13	28	26	23	8	38	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	0-0.15	Fill: sandy silty clay	Fine	NA	NA	NA	7	14	33	18	13	53	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH109	2-2.15	Silty clay	Fine	NA	NA	NA	9	28	19	16	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	0.4-0.5	Fill: silty clay	Fine	NA	NA	NA	4	15	24	18	15	53	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH110	1.9-2.0	Silty clay	Fine	NA	NA	NA	6	14	16	13	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	0-0.2	Fill: sandy silty clay	Fine	NA	NA	NA	6	19	19	17	9	27	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH111	2.0-2.2	Silty clay	Fine	NA	NA	NA	6	15	20	12	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH112	0-0.15	Fill: sandy silty clay	Fine	NA	NA	NA	9	22	21	25	11	40	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH112	1.8-2.0	Silty clay	Fine	NA	NA	NA	6	17	21	16	9	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH113	0-0.2	Fill: sandy silty clay	Fine	NA	NA	NA	9	24	17	28	11	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH113	1.9-2.0	Silty clay	Fine	NA	NA	NA	LPQL	11	15	10	5	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH114	0-0.2	Fill: sandy silty clay	Fine	NA	NA	NA	10	24	23	28	11	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH114	2.6-2.8	Silty clay	Fine	NA	NA	NA	5	16	16	12	5	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH115	0.8-0.9	Fill: silty clay	Fine	NA	NA	NA	LPQL	13	27	15	9	45	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH115	2.0-2.1	Silty clay	Fine	NA	NA	NA	8	19	18	18	10	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH116	0-0.15	Fill: sandy silty clay	Fine	NA	NA	NA	9	27	14	21	7	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
BH117	0-0.15	Fill: sandy silty clay	Fine	NA	NA	NA																		

TABLE D SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES All data in mg/kg unless stated otherwise																												
			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total PCBs	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES	
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chlorpyrifos	Total Moderately Harmful ²	Total Scheduled ³		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	200	0.8	60	4	250	<50	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1 ¹			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2 ¹			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2 ¹			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	Sample Depth	Sample Description																										
BH1	0.1-0.3	Fill: silty clay	4	LPQL	12	39	15	LPQL	18	62	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH2	0.2-0.5	Fill: silty clay	LPQL	LPQL	15	38	9	LPQL	7	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH2	3-3.45	Silty clay	16	LPQL	24	32	17	LPQL	8	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH3	0-0.4	Fill: silty clay	8	LPQL	20	18	16	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH4	2.5-3.0	Fill: silty clay	8	LPQL	16	31	16	LPQL	12	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH6	0-0.05	Fill: silty clay	7	LPQL	24	16	20	LPQL	8	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH7	0.1-0.3	Fill: silty clay	6	LPQL	14	45	11	LPQL	12	42	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	0.5-1.0	Fill: silty clay	6	LPQL	16	22	13	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	1.7-2.0	Silty clay	7	LPQL	13	28	14	LPQL	17	70	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH9	0.2-0.5	Fill: silty clay	8	LPQL	8	20	9	LPQL	6	22	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	0-0.2	Fill: silty clay	5	LPQL	14	26	14	LPQL	11	48	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	1.4-1.6	Silty clay	LPQL	LPQL	9	14	8	LPQL	8	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH11	0.5-1.0	Fill: silty clay	6	LPQL	15	29	16	LPQL	13	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH11	1.5-1.7	Silty clay	6	LPQL	16	20	12	LPQL	8	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH13	0.2-0.4	Fill: silty clay	6	LPQL	11	34	14	LPQL	18	60	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH13	3.0-3.45	Silty clay	8	LPQL	15	30	14	LPQL	11	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH14	0.2-0.5	Fill: silty clay	LPQL	LPQL	9	23	12	LPQL	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH15	0.1-0.3	Fill: silty clay	10	LPQL	18	19	15	LPQL	8	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH16	0.6-0.7	Silty clay	5	LPQL	10	15	7	LPQL	4	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH17	0-0.1	Fill: silty clay	7	LPQL	18	18	14	LPQL	9	31	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH18	0.5-0.95	Fill: silty clay	6	LPQL	15	28	14	LPQL	10	43	1.8	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH18	2.0-2.2	Silty clay	5	LPQL	13	17	10	LPQL	4	14	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
TP19	0.1-0.4	Fill: silty clay	7	LPQL	13	23	11	LPQL	7	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP20	0.2-0.5	Fill: silty sandy clay	8	LPQL	20	20	20	LPQL	9	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
TP21	0.1-0.4	Fill: silty sandy clay	7	LPQL	15	29	16	LPQL	9	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH101	0.8-1.0	Fill: silty clay	7	LPQL	17	33	19	LPQL	13	54	0.05	0.05	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH101	3-3.2	Silty clay	22	LPQL	17	40	17	LPQL	16	64	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH102	0-0.2	Fill: silty clay	7	LPQL	23	17	21	LPQL	8	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH102	2.5-2.7	Silty clay	LPQL	LPQL	12	25	10	LPQL	4	20	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH103	0.8-1.0	Fill: silty clay	7	LPQL	16	45	20	LPQL	22	75	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH103	2.7-3.0	Silty clay	6	LPQL	18	34	17	LPQL	12	56	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH104	0-0.2	Fill: silty clay	6	LPQL	16	33	18	LPQL	13	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH104	3.8-3.0	Silty clay	10	LPQL	16	27	20	LPQL	7	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH105	0-0.1	Fill: silty sand	5	LPQL	8	27	27	LPQL	9	89	1.25	0.05	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	150	150	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH105	1.2-1.4	Silty clay	7	LPQL	14	26	16	LPQL	9	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH106	1.95-2.05	Silty clay	7	LPQL	12	28	10	LPQL	5	23	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH107	0-0.2	Fill: sandy gravel	5	LPQL	16	24	18	LPQL	11	46	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		

TABLE E.1
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 = BH1 (0.1-0.3) Dup Ref = DUPTC1 Envirolab Report: 151783	Arsenic	4	4	6	5.0	40
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	12	15	13.5	22
	Copper	1	39	31	35.0	23
	Lead	1	15	14	14.5	7
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	18	11	14.5	48
	Zinc	1	62	47	54.5	28
	Naphthalene	0.1	LPQL	LPQL	NC	NC
	Acenaphthylene	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	LPQL	LPQL	NC	NC
	Anthracene	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	LPQL	LPQL	NC	NC
	Pyrene	0.1	LPQL	LPQL	NC	NC
	Benzo(a)anthracene	0.1	LPQL	LPQL	NC	NC
	Chrysene	0.1	LPQL	LPQL	NC	NC
	Benzo(b,j+k)fluoranthene	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	LPQL	LPQL	NC	NC
	Indeno(123-cd)pyrene	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	LPQL	LPQL	NC	NC
	Total OCPs	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	LPQL	LPQL	NC	NC
	TRH C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	TRH >C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	TRH >C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	TRH >C ₃₄ -C ₄₀ (F4)	100	LPQL	LPQL	NC	NC
	Benzene	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	LPQL	LPQL	NC	NC
	o-xylene	1	LPQL	LPQL	NC	NC

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

If result is LPQL then 50% of the PQL is used for the calculation

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

TRH: Total Recoverable Hydrocarbons

TABLE E.2
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 = BH105 (0.0-0.1) Dup Ref = DUPKT1 Envirolab Report: 160502	Arsenic	4	5	6	5.5	18
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	8	13	10.5	48
	Copper	1	27	26	26.5	4
	Lead	1	27	23	25.0	16
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	9	11	10.0	20
	Zinc	1	89	68	78.5	27
	Naphthalene	0.1	0.1	LPQL	0.1	67
	Acenaphthylene	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	0.6	0.4	0.5	40
	Anthracene	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	0.2	0.2	0.2	0
	Pyrene	0.1	0.1	0.2	0.2	67
	Benzo(a)anthracene	0.1	LPQL	0.1	0.1	67
	Chrysene	0.1	0.2	0.2	0.2	0
	Benzo(b,j+k)fluoranthene	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	0.05	0.05	0.1	0
	Indeno(123-cd)pyrene	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	LPQL	LPQL	NC	NC
	Total OCPs	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	LPQL	LPQL	NC	NC
	TRH C6-C10 (F1)	25	LPQL	LPQL	NC	NC
	TRH >C10-C16 (F2)	50	LPQL	LPQL	NC	NC
	TRH >C16-C34 (F3)	100	LPQL	LPQL	NC	NC
	TRH >C34-C40 (F4)	100	LPQL	LPQL	NC	NC
	Benzene	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	LPQL	LPQL	NC	NC
	o-xylene	1	LPQL	LPQL	NC	NC

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

If result is LPQL then 50% of the PQL is used for the calculation

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

TRH: Total Recoverable Hydrocarbons

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

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH107 (0.0-0.2) Dup Ref = DUPKT2 Envirolab Report: 160502 Envirolab VIC Report: 191231	Arsenic	4	4	5	4	4.5	22
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	16	13	14.5	21
	Copper	1	1	24	30	27.0	22
	Lead	1	1	18	17	17.5	6
	Mercury	0.1	0.1	LPQL	0.2	0.1	120
	Nickel	1	1	11	16	13.5	37
	Zinc	1	1	46	57	51.5	21
	Naphthalene	0.1	0.1	LPQL	LPQL	NC	NC
	Acenaphthylene	0.1	0.1	LPQL	LPQL	NC	NC
	Acenaphthene	0.1	0.1	LPQL	LPQL	NC	NC
	Fluorene	0.1	0.1	LPQL	LPQL	NC	NC
	Phenanthrene	0.1	0.1	LPQL	LPQL	NC	NC
	Anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Fluoranthene	0.1	0.1	LPQL	LPQL	NC	NC
	Pyrene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(a)anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Chrysene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(b,j,k)fluoranthene	0.2	0.2	LPQL	LPQL	NC	NC
	Benzo(a)pyrene	0.05	0.05	LPQL	LPQL	NC	NC
	Indeno(123-cd)pyrene	0.1	0.1	LPQL	LPQL	NC	NC
	Dibenzo(ah)anthracene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	0.1	LPQL	LPQL	NC	NC
	Benzo(a)pyrene TEQ	0.5	0.5	LPQL	LPQL	NC	NC
	Total OCPs	0.1	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	0.1	LPQL	LPQL	NC	NC
	Total PCBs	0.1	0.1	LPQL	LPQL	NC	NC
	TRH C6-C10 (F1)	25	25	LPQL	LPQL	NC	NC
	TRH >C10-C16 (F2)	50	50	LPQL	LPQL	NC	NC
	TRH >C16-C34 (F3)	100	100	LPQL	LPQL	NC	NC
	TRH >C34-C40 (F4)	100	100	LPQL	LPQL	NC	NC
	Benzene	0.5	0.5	LPQL	LPQL	NC	NC
	Toluene	0.5	0.5	LPQL	LPQL	NC	NC
	Ethylbenzene	1	1	LPQL	LPQL	NC	NC
	m+p-xylene	2	2	LPQL	LPQL	NC	NC
	o-xylene	1	1	LPQL	LPQL	NC	NC

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

If result is LPQL then 50% of the PQL is used for the calculation

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

TRH: Total Recoverable Hydrocarbons

TABLE G
SUMMARY OF FIELD QA/QC RESULTS

ANALYSIS	Envirolab PQL		TB ^s	TB ^s
			5/08/2016	17/01/2017
	mg/kg	µg/L	151783	160502
			mg/kg	% Recovery
Benzene	1	1	LPQL	LPQL
Toluene	1	1	LPQL	LPQL
Ethylbenzene	1	1	LPQL	LPQL
m+p-xylene	2	2	LPQL	LPQL
o-xylene	1	1	LPQL	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

TS: Trip Spike

NA: Not Analysed

RS: Rinsate Sample

NC: Not Calculated

TRH: Total Recoverable Hydrocarbons

REPORT APPENDICES

Appendix A: Borehole Logs

CORED BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS
Project: PROPOSED ORAN PARK HIGH SCHOOL
Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V **Core Size:** NMLC **R.L. Surface:** ~95.5 m
Date: 16/1/17 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** K.S./P.S.

Water Loss/Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_p(50)$	DEFECT DETAILS	
									DEFECT SPACING (mm)	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating.
								EL-0.03 VL-0.1 L-0.3 M-1 H-3 VH-10 EH	500 300 100 50 30 10	Specific General
		91			START CORING AT 4.96m					
			5		SANDSTONE: fine to medium grained, brown and grey.	DW XW	M EL			
					CORE LOSS 0.35m					
		90			SHALE: grey and brown.	XW	EL			
			6			DW	L			(6.02m) J, 40°, P, S (6.10m) J, 90°, P, S
						XW	EL			
		89								
			7							
		88								
			8							
		87								
			9							
		86								
			10							
		85			END OF BOREHOLE AT 10.58 m					



Borehole No.
102
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BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS

Project: PROPOSED ORAN PARK HIGH SCHOOL

Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V

Method: SPIRAL AUGER

R.L. Surface: ~95.0 m

Date: 16/1/17

Datum: AHD

Plant Type: JK308

Logged/Checked By: K.S./P.S.

Groundwater Record	SAMPLES				Field Tests	RL (m AHD)	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 OF AUGERING										FILL: Silty clay, medium plasticity, orange brown mottled grey.	MC<PL	H		GRASS COVER
					N = 13 3,6,7	94	1						>600 >600 >600	
												VSt	280 280 320	
					N = 15 4,6,9	93	2							
					N = 9 3,4,5	92	3		CL	SILTY CLAY: medium plasticity, grey mottled red brown, with fine to medium grained ironstone gravel.	MC~PL	H	400 440 500	
					N = 29 16,13,16	90	5			SHALE: grey, with iron indurated bands.	XW	EL	>600 >600 >600	
						89	6				DW	VL - L		VERY LOW TO LOW 'TC' BIT RESISTANCE
										REFER TO CORED BOREHOLE LOG				

CORED BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS
Project: PROPOSED ORAN PARK HIGH SCHOOL
Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V **Core Size:** NMLC **R.L. Surface:** ~95.0 m
Date: 16/1/17 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** K.S./P.S.

Water Loss/Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_p(50)$	DEFECT DETAILS	
									DEFECT SPACING (mm)	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating.
								EL-0.03 VL-0.1 L-0.3 M-1 H-3 VH-10 EH	500 300 100 50 30 10	Specific General
					START CORING AT 6.44m					
			88	7	SHALE: grey and brown.	DW	L - M			(6.68m) Be, 5°, P, S (6.72m) XWS, 0°, 18 mm.t (6.80m) XWS, 0°, 28 mm.t (6.92m) Be, 0°, P, S (7.29m) Be, 0°, P, S (7.59m) J, 30°, P, S, IS (7.70m) J, 70°, P, S, IS (7.83m) XWS, 0°, 6 mm.t (8.67m) XWS, 0°, 3 mm.t (8.70m) XWS, 0°, 4 mm.t (8.75m) XWS, 0°, 34 mm.t (8.82m) FRAGMENTED ZONE, 0°, 25 mm.t (8.88m) XWS, 0°, 40 mm.t (8.93m) XWS, 0°, 15 mm.t (9.12m) Be, 0°, P, S (9.14m) J, 80°, P, S (9.17m) Be, 0°, P, S
			87	8	INTERBEDDED SHALE AND SANDSTONE		M - H			
					SANDSTONE: fine grained, grey.		H			
					SHALE: dark grey.		VL - L			
					INTERBEDDED SHALE AND SANDSTONE		H			
			86	9						
						XW	EL			
			85	10	END OF BOREHOLE AT 9.50 m					
			84	11						
			83	12						



Borehole No.
103
1 / 2

BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS
Project: PROPOSED ORAN PARK HIGH SCHOOL
Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V **Method:** SPIRAL AUGER **R.L. Surface:** ~95.5 m
Date: 18/1/17 **Datum:** AHD
Plant Type: JK308 **Logged/Checked By:** K.S./P.S.

Groundwater Record	SAMPLES				Field Tests	RL (m AHD)	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 OF AUGERING										FILL: Silty clay, low to medium plasticity, brown mottled orange brown and grey, with fine to medium grained igneous gravel and roots.	MC<PL			GRASS COVER
					N = 14 3,6,8		1							
					N = 19 6,8,11		2		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled orange brown.	MC<PL	H	>600 >600	
					N = 27 10,13,14		3			as above, but grey mottled red brown.			>600 >600 >600	
							4			SHALE: brown and grey, with EL strength bands.	DW	VL		VERY LOW 'TC' BIT RESISTANCE
							5							
							6							
							89					L		LOW RESISTANCE
										REFER TO CORED BOREHOLE LOG				

CORED BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS
Project: PROPOSED ORAN PARK HIGH SCHOOL
Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V **Core Size:** NMLC **R.L. Surface:** ~95.5 m
Date: 18/1/17 **Inclination:** VERTICAL **Datum:** AHD
Plant Type: JK308 **Bearing:** N/A **Logged/Checked By:** K.S./P.S.

Water Loss/Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX $I_p(50)$	DEFECT DETAILS	
									DEFECT SPACING (mm)	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating.
								EL-0.03 VL-0.1 L-0.3 M-1 H-3 VH-10 EH	500 300 100 50 30 10	Specific General
		89			START CORING AT 6.78m					
100% RETURN			7		SHALE: brown and dark grey.	DW	L - M			(6.92m) Be, 0°, P, R (6.93m) XWS, 0°, 3 mm.t (7.06m) XWS, 0°, 5 mm.t (7.09m) XWS, 0°, 3 mm.t (7.15m) XWS, 0°, 3 mm.t (7.20m) XWS, 0°, 15 mm.t
		88								(7.50m) XWS, 0°, 55 mm.t (7.58m) XWS, 0°, 15 mm.t (7.66m) XWS, 0°, 17 mm.t
			8		INTERBEDDED SHALE AND SANDSTONE: fine grained, grey and light grey.		M			(7.79m) HEALED J, 70°, IS (7.90m) J, 70°, P, S, IS
		87								(8.31m) XWS, 0°, 3 mm.t (8.38m) XWS, 0°, 11 mm.t (8.49m) J, 70°, P, S (8.55m) XWS, 0°, 140 mm.t
			9							(9.10m) XWS, 0°, 9 mm.t (9.13m) XWS, 0°, 16 mm.t (9.17m) XWS, 0°, 6 mm.t (9.29m) XWS, 0°, 8 mm.t (9.39m) XWS, 5°, 10 mm.t (9.45m) XWS, 5°, 7 mm.t
		86				SW	H			(9.76m) Be, 0°, P, S
			10		END OF BOREHOLE AT 9.84 m					
		85								
			11							
		84								
			12							
		83								

JK_LIB_CURRENT - V8.00.GLB Log J & K CORED BOREHOLE - MASTER 29593V ORAN PARK.GPJ <<DrawingFile>> 02/02/2017 17:34 Produced by gINT Professional. Developed by Dalgal

BOREHOLE LOG

Client: WOOLACOTTS CONSULTING ENGINEERS

Project: PROPOSED ORAN PARK HIGH SCHOOL

Location: SOUTH CIRCUIT, ORAN PARK, NSW

Job No.: 29593V

Method: SPIRAL AUGER

R.L. Surface: ~92.7 m

Date: 18/1/17

Datum: AHD

Plant Type: JK308

Logged/Checked By: K.S./P.S.

Groundwater Record	SAMPLES				Field Tests	RL (m AHD)	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 OF AUGERING										FILL: Silty clay, medium plasticity, brown mottled grey, with fine to medium grained sandstone and igneous gravel.	MC<PL			GRASS COVER
					N > 14 10,6,8/ 100mm REFUSAL	92	1							
					N = 18 8,10,8	91	2							
						90	3		CL-CH	SILTY CLAY: medium to high plasticity, red brown and grey, with fine to medium grained ironstone gravel.	MC<PL	H	>600 >600 >600	
					N = 18 4,7,11	89	4							
					N > 10 10,10/ 80mm REFUSAL	88	5			SHALE: grey.	XW	EL		
						87	6				DW	VL - L		VERY LOW TO LOW 'TC' BIT RESISTANCE
												L		LOW RESISTANCE
						86								
										REFER TO CORED BOREHOLE LOG				

JK_LIB_CURRENT - V8.00.GLB Log - J & K AUGERHOLE - MASTER 29593V ORAN PARK.GPJ <<DrawingFile>> 02/02/2017 17:34 Produced by gINT Professional. Developed by Datagel

Client: WOOLACOTTS CONSULTING ENGINEERS										
Project: PROPOSED ORAN PARK HIGH SCHOOL										
Location: SOUTH CIRCUIT, ORAN PARK, NSW										
Job No.: 29593V			Core Size: NMLC			R.L. Surface: ~92.7 m				
Date: 18/1/17			Inclination: VERTICAL			Datum: AHD				
Plant Type: JK308			Bearing: N/A			Logged/Checked By: K.S./P.S.				
Water Loss/Level	Barrel Lift	RL (m AHD)	Depth (m)	Graphic Log	CORE DESCRIPTION Rock Type, grain characteristics, colour, structure, minor components.	Weathering	Strength	POINT LOAD STRENGTH INDEX I _s (50) EL-0.03 VL-0.1 L-0.3 M-1 H-3 VH-10 EH	DEFECT DETAILS	
									DEFECT SPACING (mm) 500 300 100 50 30 10	DESCRIPTION Type, inclination, thickness, planarity, roughness, coating. SpecificGeneral
100% RETURN		-86			START CORING AT 6.71m					
			7		SHALE: grey and brown.	DW	L			
						XW	EL			
			85							
			8		INTERBEDDED SHALE AND SANDSTONE					
			84							
			9			DW	M			
		-83			END OF BOREHOLE AT 9.69 m					
			10							
			82							
			11							
			81							
			12							
			80							

ENVIRONMENTAL LOG

Borehole No.
105
1/1

Environmental logs are not to be used for geotechnical purposes

Client: WOOLACOTTS CONSULTING ENGINEERS													
Project: PROPOSED ORAN PARK HIGH SCHOOL													
Location: SOUTH CIRCUIT, ORAN PARK, NSW													
Job No. E29593K Method: EZIPROBE R.L. Surface: N/A													
Date: 17/1/17 Datum:													
Logged/Checked by: K.T./G.F.													
Groundwater Record	SAMPLES				Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	ASS	ASB	SAL									
DRY ON COMPLETION						0			FILL: Silty sand, fine to medium grained, dark brown, with fine to medium grained igneous gravel and root fibres.	D			GRASS COVER
					0.5			FILL: Silty clay, medium to high plasticity, light brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL				
						1		CL-CH	SILTY CLAY: medium to high plasticity, light brown, with root fibres.	MC<PL			
					1.5				END OF BOREHOLE AT 1.5m				
					2								
					2.5								
					3								
					3.5								

Borehole No.
106

1/1

ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Client: WOOLACOTTS CONSULTING ENGINEERS												
Project: PROPOSED ORAN PARK HIGH SCHOOL												
Location: SOUTH CIRCUIT, ORAN PARK, NSW												
Job No. E29593K Method: EZIPROBE R.L. Surface: N/A												
Date: 17/1/17 Datum:												
Logged/Checked by: K.T./G.F.												
Groundwater Record	SAMPLES			Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	ES	ASS	SAL									
DRY ON COMPLETION					0			FILL: Silty sandy gravel, fine to coarse grained, igneous, dark brown and grey, with root fibres and trace of ash.	D			GRASS COVER
				0.5	FILL: Silty clay, medium to high plasticity, brown, with fine to coarse grained igneous gravel, and root fibres.		MC<PL					
				1	as above, but with fragments of asphaltic concrete.							
				1.5	as above, but no igneous gravel.							
					2		CL-CH	SILTY CLAY: medium to high plasticity, grey and red brown, with trace of root fibres.	MC<PL			
					2.5			END OF BOREHOLE AT 2.1m				
					3							
					3.5							