

TABLE G-1 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 _e /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 ₄₀ (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	8	18	NSL	5	77	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	Sample Depth	Sample Description	Soil Texture																				
TP34	0-0.15	Fill: Silty clay	Fine	NA	NA	NA	13	29	21	29	18	65	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP34	0.3-0.5	Silty clay	Fine	NA	NA	NA	10	22	36	20	19	78	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP35	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	10	26	18	29	13	47	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP35	0.3-0.5	Silty clay	Fine	NA	NA	NA	10	26	31	19	15	63	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP36	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	11	40	12	26	10	23	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP37	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	13	44	9	25	8	15	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP38	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	7	19	23	15	9	45	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP38	0.3-0.5	Fill: Silty clay	Fine	NA	NA	NA	12	34	15	26	10	18	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP38	0.6-0.8	Silty clay	Fine	NA	NA	NA	9	25	24	18	6	34	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP39	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	10	35	9	24	7	10	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP39	0.3-0.5	Silty clay	Fine	NA	NA	NA	10	30	13	21	4	12	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP40	0-0.15	Fill: Silty clay	Fine	NA	NA	NA	11	26	23	27	19	44	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP40	0.3-0.5	Silty clay	Fine	NA	NA	NA	21	15	20	17	6	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP41	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	10	25	19	23	18	44	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP41	0.4-0.6	Silty clay	Fine	NA	NA	NA	12	28	26	18	17	60	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP42	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	12	35	14	34	18	65	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP43	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	17	31	19	30	13	57	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP44	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	9	29	13	25	9	17	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP44	0.3-0.5	Silty clay	Fine	NA	NA	NA	6	13	14	15	3	15	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP45	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	13	27	17	37	12	33	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP46	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	12	29	17	31	12	29	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP47	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	LPQL	11	21	10	10	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP47	0.4-0.6	Fill: Silty clay	Fine	NA	NA	NA	12	29	19	31	14	100	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP47	0.8-1.0	Silty clay	Fine	NA	NA	NA	10	32	19	23	8	24	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP48	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	14	29	10	24	6	13	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP48	0.3-0.5	Silty clay	Fine	NA	NA	NA	13	29	19	23	7	22	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP49	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	10	26	19	38	19	75	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP50	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	8	19	18	16	8	39	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP50	0.6-0.8	Fill: Silty clay	Fine	NA	NA	NA	13	41	13	26	9	22	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP50	1.0-1.2	Fill: Silty clay	Fine	NA	NA	NA	9	20	24	20	7	37	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
TP50	1.4-1.6	Silty clay	Fine	NA	NA	NA	5	10	13	14	2	19	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
Total Number of Samples				0	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
Maximum Value				0	0	0	21	44	36	38	19	100	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	
Explanation: 1 - Site Assessment Criteria (SAC): NEPM 2013 2 - ABC Values for selected metals has been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with low traffic have been quoted) Concentration above the SAC The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below Abbreviations: EILs: Ecological Investigation Levels B(a)P: Benzo(a)pyrene PQL: Practical Quantitation Limit UCL: Upper Level Confidence Limit on Mean Value ESLs: Ecological Screening Levels NA: Not Analysed LPQL: Less than PQL SAC: Site Assessment Criteria NEPM: National Environmental Protection Measure NC: Not Calculated NSL: No Set Limit ABC: Ambient Background Concentration																							

EIL AND ESL ASSESSMENT CRITERIA																							
Land Use Category ¹				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																			
				pH	CEC (cmol _e /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 ₄₀ (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	8	18	NSL	5	77	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	Sample Depth	Sample Description	Soil Texture																				
TP34	0-0.15	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP34	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP35	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP35	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP36	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP37	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP38	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP38	0.3-0.5	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP38	0.6-0.8	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP39	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP39	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP40	0-0.15	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP40	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP41	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP41	0.4-0.6	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP42	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP43	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP44	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP44	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP45	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP46	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP47	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP47	0.4-0.6	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP47	0.8-1.0	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP48	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP48	0.3-0.5	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP49	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP50	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP50	0.6-0.8	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP50	1.0-1.2	Fill: Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP50	1.4-1.6	Silty clay	Fine	NA	NA	NA	100	198	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7

TABLE G-2 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 _e /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 ₄₀ (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	8	18	NSL	5	77	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL		
Sample Reference	Sample Depth	Sample Description	Soil Texture																						
TP51	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	7	19	27	50	10	99	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.2		
TP52	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	10	15	26	26	11	72	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP52	0.7-1.0	Fill: Silty clay	Fine	NA	NA	NA	19	9	150	460	9	720	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP52	1.3-1.6	Fill: Silty clay	Fine	NA	NA	NA	10	23	24	17	7	32	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP53	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	6	13	25	56	8	73	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP53	1.0-1.2	Silty Clay	Fine	NA	NA	NA	9	21	31	20	12	50	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP54	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	13	25	23	22	4	43	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP55	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	10	26	18	16	5	28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP55	0.4-0.6	Silty Clay	Fine	NA	NA	NA	10	27	23	15	5	18	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP56	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	10	28	18	23	6	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP57	0-0.05	Fill: Silty clay	Fine	NA	NA	NA	6	10	43	12	8	160	LPQL	LPQL	LPQL	120	920	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP57	0.05-0.2	Fill: Silty clay	Fine	NA	NA	NA	8	23	33	18	7	41	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP58	0-0.25	Fill: Silty clay	Fine	NA	NA	NA	10	29	18	20	6	26	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP58	0.3-0.5	Silty Clay	Fine	NA	NA	NA	6	16	15	11	3	11	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP59	0-0.25	Fill: Silty clay	Fine	NA	NA	NA	6	18	32	18	11	51	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP60	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	8	25	29	20	16	76	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP60	0.6-0.9	Fill: Silty clay	Fine	NA	NA	NA	7	13	24	22	12	60	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
TP60	1.2-1.4	Silty Clay	Fine	NA	NA	NA	5	14	18	13	6	25	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
SSA1	-	Fill: Silty clay	Fine	NA	NA	NA	9	24	26	25	8	59	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL		
Total Number of Samples				NA	NA	NA	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19		
Maximum Value				NA	NA	NA	19	29	150	460	16	720	LPQL	LPQL	LPQL	120	920	LPQL	LPQL	LPQL	LPQL	LPQL	0.2		
Explanation: 1 - Site Assessment Criteria (SAC): NEPM 2013 2 - ABC Values for selected metals has been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with low traffic have been quoted)																									
Concentration above the SAC				VALUE																					
The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below																									
Abbreviations: EILs: Ecological Investigation Levels B(a)P: Benzo(a)pyrene PQL: Practical Quantitation Limit UCL: Upper Level Confidence Limit on Mean Value ESLs: Ecological Screening Levels NA: Not Analysed LPQL: Less than PQL SAC: Site Assessment Criteria NEPM: National Environmental Protection Measure NC: Not Calculated NSL: No Set Limit ABC: Ambient Background Concentration																									

EIL AND ESL ASSESSMENT CRITERIA																							
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				pH	CEC (cmol _e /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 ₄₀ (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	8	18	NSL	5	77	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	Sample Depth	Sample Description	Soil Texture																				
TP51	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP52	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP52	0.7-1.0	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP52	1.3-1.6	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP53	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP53	1.0-1.2	Silty Clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP54	0-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP55	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP55	0.4-0.6	Silty Clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP56	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP57	0-0.05	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP57	0.05-0.2	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP58	0-0.25	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP58	0.3-0.5	Silty Clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP59	0-0.25	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP60	0-0.3	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP60	0.6-0.9	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
TP60	1.2-1.4	Silty Clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7
SSA1	-	Fill: Silty clay	Fine	NA	NA	NA	100	408	78	1100	35	147	710	180	180	120	1300	5600	60	105	125	45	0.7

TABLE H
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 = TP1 (0-0.3m) Dup Ref = DUP A EnviroLab Report: 116323	Arsenic	4	7	7	6.8	7
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	16	14	15.1	10
	Copper	1	14	13	13.4	2
	Lead	1	24	23	23.3	2
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	9	9	8.7	5
	Zinc	1	28	35	31.5	24
	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)&(k)fluorant	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
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total PAHs	2.05	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
	C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	> 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

TABLE H-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 = TP10 (0-0.15m) Dup Ref = DUP B Envirolab Report: 116323	Arsenic	4	10	8.493	9.2	16
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	18	17.118	17.6	6
	Copper	1	16	15.582	16.0	5
	Lead	1	33	30.834	32.1	8
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	11	9.755	10.2	8
	Zinc	1	228	190.93	209.5	18
	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)&(k)fluorant	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
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total PAHs	2.05	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
	C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	> 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

TABLE H-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 = TP11 (0-0.25m) Dup Ref = DUP C EnviroLab Report: 116323	Arsenic	4	6	6	6.2	8
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	17	18	17.4	2
	Copper	1	18	21	19.7	14
	Lead	1	28	27	27.2	4
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	9	9	9.0	9
	Zinc	1	39	39	39.0	0
	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)&(k)fluorant	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
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total PAHs	2.05	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
	C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	> 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

TABLE H-3
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 = TP27 (0-0.3m) Dup Ref = DUP D EnviroLab Report: 116323	Arsenic	4	9	8	8.5	2
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	15	19	16.9	20
	Copper	1	12	18	14.8	41
	Lead	1	18	30	24.0	48
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	9	10	9.8	7
	Zinc	1	24	60	41.9	85
	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)&(k)fluorant	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
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total PAHs	2.05	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
	C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	> 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

TABLE H-4
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 = TP28 (0-0.2m) Dup Ref = DUP JDC1 EnviroLab Report: 130374	Arsenic	4	12	12	12.0	0
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	25	25	25.0	0
	Copper	1	22	19	20.5	15
	Lead	1	28	25	26.5	11
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	19	18	18.5	5
	Zinc	1	91	60	75.5	41
	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)&(k)fluorant	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
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total PAHs	2.05	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
	C ₆ -C ₁₀ (F1)	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	LPQL	LPQL	NC	NC
	> 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

TABLE H-5
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 = TP49 (0-0.2m) Dup Ref = DUPHLS1 Envirolab Report: 133837	Arsenic	4	10	12	11.0	18
	Cadmium	0.4	0.6	0.5	0.6	18
	Chromium	1	26	28	27.0	7
	Copper	1	19	19	19.0	0
	Lead	1	38	34	36.0	11
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	19	14	16.5	30
	Zinc	1	75	47	61.0	46
	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	0.1	LPQL	0.1	67
	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
	Benzo(a)pyrene TEQ	0.5	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 H-6
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 = TP51 (0-0.3m) Dup Ref = DUPZ1 Envirolab Report: 144438	Arsenic	4	7	7	7.0	0
	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	19	19	19.0	0
	Copper	1	27	25	26.0	8
	Lead	1	50	51	50.5	2
	Mercury	0.1	1.3	0.6	1.0	74
	Nickel	1	10	9	9.5	11
	Zinc	1	99	87	93.0	13
	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	0.2	0.2	0.2	0
	Pyrene	0.1	0.2	0.2	0.2	0
	Benzo(a)anthracene	0.1	0.1	0.2	0.2	67
	Chrysene	0.1	0.1	0.2	0.2	67
	Benzo(b,j,k)fluoranthene	0.2	0.3	0.4	0.4	29
	Benzo(a)pyrene	0.05	0.2	0.3	0.3	40
	Indeno(123-cd)pyrene	0.1	0.1	0.1	0.1	0
	Dibenzo(ah)anthracene	0.1	LPQL	LPQL	NC	NC
	Benzo(ghi)perylene	0.1	0.1	0.1	0.1	0
	Benzo(a)pyrene TEQ	0.5	LPQL	LPQL	NC	NC
	Total OCPs	0.1	LPQL	LPQL	NC	NC
	Total OPPs	0.1	0.1	0.1	0.1	0
	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 I
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 = TP26 (0-0.2m) Dup Ref = DUP E Envirolab Report: 116323 Envirolab VIC Report: 4761	Arsenic	4	4	8	12	10.1	38
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	15	20	17.7	27
	Copper	1	1	20	29	24.7	35
	Lead	1	1	27	24	25.5	12
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	11	11	10.9	2
	Zinc	1	1	71	110	90.4	43
	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)&(k)fluorant	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 PAHs	2.05	2.05	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
	C ₆ -C ₁₀ (F1)	25	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	100	LPQL	LPQL	NC	NC
	> C ₃₄ -C ₄₀ (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

TABLE I-1
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 = TP22 (0-0.2m) Dup Ref = DUP D Envirolab Report: 116323 Envirolab VIC Report: 4761	Arsenic	4	4	9	12	10.3	33
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	15	20	17.6	27
	Copper	1	1	12	14	12.9	17
	Lead	1	1	18	16	17.1	13
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	9	10	9.7	6
	Zinc	1	1	24	25	24.5	4
	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)&(k)fluorant	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 PAHs	2.05	2.05	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
	C ₆ -C ₁₀ (F1)	25	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	100	LPQL	LPQL	NC	NC
	> C ₃₄ -C ₄₀ (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

TABLE I-2
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 = TP29 (0-0.2m) Dup Ref = DUP JDC2 Envirolab Report: 130374 Envirolab VIC Report: 6565	Arsenic	4	4	7	5	6.0	33
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	22	15	18.5	38
	Copper	1	1	26	21	23.5	21
	Lead	1	1	35	28	31.5	22
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	20	15	17.5	29
	Zinc	1	1	94	66	80.0	35
	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)&(k)fluorant	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 PAHs	2.05	2.05	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
	C ₆ -C ₁₀ (F1)	25	25	LPQL	LPQL	NC	NC
	> C ₁₀ -C ₁₆ (F2)	50	50	LPQL	LPQL	NC	NC
	> C ₁₆ -C ₃₄ (F3)	100	100	LPQL	LPQL	NC	NC
	> C ₃₄ -C ₄₀ (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

TABLE I-3
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 = TP35 (0-0.2m) Dup Ref = DUPHLS2 Envirolab Report: 133837 Envirolab VIC Report: 6988	Arsenic	4	4	10	6	8.0	50
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	26	26	26.0	0
	Copper	1	1	18	16	17.0	12
	Lead	1	1	29	16	22.5	58
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	13	10	11.5	26
	Zinc	1	1	47	29	38.0	47
	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 I-4
SOIL INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab WA PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = TP54 (0-0.2m) Dup Ref = DUPZ2 Envirolab Report: 144438 Envirolab WA Report: 179262	Arsenic	4	4	13	9	11.0	36
	Cadmium	0.4	0.4	LPQL	LPQL	NC	NC
	Chromium	1	1	25	27	26.0	8
	Copper	1	1	23	26	24.5	12
	Lead	1	1	22	28	25.0	24
	Mercury	0.1	0.1	LPQL	LPQL	NC	NC
	Nickel	1	1	4	6	5.0	40
	Zinc	1	1	43	60	51.5	33
	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 J
DAM WATER INTER-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS
All results in µg/L unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	Envirolab VIC PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = DW1 Dup Ref = JUPJS1 Envirolab Report: 133830 Envirolab Vic Report: 6989	Arsenic	1	1	LPQL	1	0.75	66.7
	Cadmium	0.1	0.1	LPQL	LPQL	NC	NC
	Chromium	1	1	LPQL	LPQL	NC	NC
	Copper	1	1	2	2	2	0.0
	Lead	1	1	LPQL	LPQL	NC	NC
	Mercury	0.5	0.5	LPQL	LPQL	NC	NC
	Nickel	1	1	LPQL	1	0.75	66.7
	Zinc	1	1	4	4	4	0.0
	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	0.1	0.1	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
	TRH C6-C10 (F1)	10	10	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	1	1	LPQL	LPQL	NC	NC
	Toluene	1	1	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 K SUMMARY OF FIELD QA/QC RESULTS											
ANALYSIS	Envirolab PQL		TB2A ^S 6/04/2016 144438 mg/kg	TSA1 ^S 6/04/2016 144438 % Recovery	TB1 ^S 15-16/09/2014 116323 mg/kg	TS1 ^S 15-16/09/2014 116323 % Recovery	TB1 ^S 30/06/2015 130374 mg/kg	TS1 ^S 30/06/2015 130374 % Recovery	TS1 ^S 3/09/2015 133837 % Recovery	TB1 ^S 3/09/2015 133837 mg/kg	TBW1 ^W 3/09/2015 133830 µg/L
	mg/kg	µg/L									
Arsenic	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Cadmium	0.4	0.1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Chromium	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Copper	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Lead	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Mercury	0.1	0.5	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Nickel	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Zinc	1	1	NA	NA	NA	NA	NA	NA	NA	LPQL	NA
Benzene	1	1	LPQL	92	LPQL	100	LPQL	99	98	NA	LPQL
Toluene	1	1	LPQL	91	LPQL	101	LPQL	99	100	NA	LPQL
Ethylbenzene	1	1	LPQL	91	LPQL	100	LPQL	100	95	NA	LPQL
m+p-xylene	2	2	LPQL	91	LPQL	101	LPQL	99	93	NA	LPQL
o-xylene	1	1	LPQL	89	LPQL	102	LPQL	99	92	NA	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											





Appendix A: Testpit Logs and Explanatory Notes

ENVIRONMENTAL LOG

Test Pit No.
1
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY												
Project: PROPOSED SCHOOL												
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW												
Job No. E27556K			Method: EXCAVATOR				R.L. Surface: N/A					
Date: 15-9-14			Datum:									
Logged/Checked by: M.D./A.K.												
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 clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.8m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
2
1/1


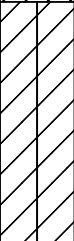
Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 15-9-14</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.				
					0.5		CH	SILTY CLAY: high plasticity, brown mottled light brown and grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
3
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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 clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
4
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 15-9-14 Datum:</div> <div>Logged/Checked by: M.D./A.K.</div>												
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone and igneous gravel, trace of ash, fibre cement fragments and root fibres.	MC<PL			GRASS COVER
					0.5		CH	SILTY CLAY: high plasticity, light brown mottled brown, with fine to medium grained ironstone gravel and root fibres.	MV<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
5
1/1


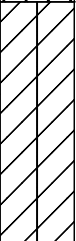
Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel, ash and root fibres.	MC~PL			ASH FROM BURNT ROOTS
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
6
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K			Method: EXCAVATOR				R.L. Surface: N/A						
Date: 15-9-14			Datum:										
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown mottled light brown, with fine to medium grained ironstone gravel and root fibres.	MC~PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
7
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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 clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC~PL			
					1			END OF TEST PIT AT 0.7m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
8
1/1

Environmental logs are not to be used for geotechnical purposes



<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, light brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

Test Pit No.
9

1/1

ENVIRONMENTAL LOG



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K				Method: EXCAVATOR				R.L. Surface: N/A					
Date: 15-9-14				Datum:									
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, brown mottled grey, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
10
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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		CH	FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5			SILTY CLAY: high plasticity, brown mottled light brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.8m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
11
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 15-9-14</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
12
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel, ash, root fibres and brick and plastic fragments.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
						1			END OF TEST PIT AT 1.0m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
13
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 15-9-14</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 1.0m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
14
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K			Method: EXCAVATOR				R.L. Surface: N/A						
Date: 15-9-14			Datum:										
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sand, fine to medium grained, dark brown, with fine to medium grained ironstone and igneous gravel, trace of ash, metal and plastic fragments, and root fibres.	D			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
						1			END OF TEST PIT AT 1.0m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.

15

1/1

Environmental logs are not to be used for geotechnical purposes

Client:

CATHOLIC EDUCATION OFFICE-SYDNEY

Project:

PROPOSED SCHOOL

Location:

135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW

Job No.

E27556K

Method:

EXCAVATOR

R.L. Surface:

N/A



Date:

15-9-14

Logged/Checked by:

M.D./A.K.



Datum:

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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres, trace of plastic fragments.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
16
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 15-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
17
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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 clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone and igneous gravel, trace of ash and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, light brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
					1			END OF TEST PIT AT 0.8m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
18
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel, plastic fragments and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
19
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, light brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC~PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
20
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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 clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			GRASS COVER
					0.5		CH	SILTY CLAY: high plasticity, light brown mottled grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
21
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A													
Date: 16-9-14 Datum:													
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
22
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY

Project: PROPOSED SCHOOL

Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW

Job No. E27556K



Date: 16-9-14

Method: EXCAVATOR

Logged/Checked by: M.D./A.K.

R.L. Surface: N/A


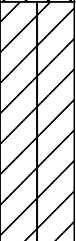
Datum:

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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel, quartz gravel, ash, and trace of plastic, concrete and roof fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
23
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A													
Date: 16-9-14 Datum:													
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel, quartz gravel, ash, and trace of plastic, concrete and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.				
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
24
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 16-9-14</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Sandy clay, topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.				
						1			END OF TEST PIT AT 0.8M				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
25
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 16-9-14 Datum:</div> <div>Logged/Checked by: M.D./A.K.</div>												
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		CL	FILL: Sandy clay, topsoil, low plasticity, dark brown, with fine to medium grained ironstone gravel, ash and root fibres.	MC<PL			GRASS COVER
					0.5			SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.				
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
26
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A													
Date: 16-9-14 Datum:													
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sandy clay, topsoil, low plasticity, dark brown, fine to medium grained ironstone gravel, slag, ash, and root fibres.	MC<PL			GRASS COVER
						0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
27
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 16-9-14</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay, topsoil, low plasticity, dark brown, fine to medium grained ironstone gravel, slag, ash, and root fibres.	MC<PL			GRASS COVER
					0.5		CL	SILTY CLAY: medium plasticity, brown mottled grey, with fine to medium grained ironstone gravel.	MC<PL			
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
28
1/1

Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 30/6/15</div><div>Datum:</div><div>Logged/Checked by: J.D.C./M.D.</div></div>												
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 clay, low to medium plasticity, brown, traces of ash, root fibres, and fine to medium grained ironstone gravel.	MC~PL			GRASS COVER
					0.5		CL-CH	SILTY CLAY: medium to high plasticity, light brown mottled red brown	MC~PL			
					0.5			END OF TEST PIT AT 0.5m				
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
29
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY

Project: PROPOSED SCHOOL

Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW

Job No. E27556K



Date: 30/6/15

Method: EXCAVATOR

R.L. Surface: N/A

Datum:



Logged/Checked by: J.D.C./M.D.

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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, brown, traces of ash, root fibres, fine to medium grained ironstone gravel, and trace of fibre cement fragments.	MC~PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled light brown, traces of root fibres, and fine to medium grained ironstone gravel. END OF TEST PIT AT 0.5m	MC~PL			
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
30
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 30/6/15 Datum:</div> <div>Logged/Checked by: J.D.C./M.D.</div>												
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 COMPLET ION					0			FILL: Silty clay, low to medium plasticity, brown, traces of ash, root fibres,and fine to medium grained ironstone gravel.	MC~PL			GRASS COVER
							L-CH	SILTY CLAY: medium to high plasticity, red brown and light brown.	MC~PL			
					0.5			END OF TEST PIT AT 0.5m				
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
31
1/1

Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 30/6/15</div>				<div>Method: EXCAVATOR</div> <div>Logged/Checked by: J.D.C./M.D.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>				
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 clay, low to medium plasticity, brown, traces of ash, root fibres, and fine to medium grained ironstone gravel.	MC>PL			GRASS COVER
					0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown and light brown, traces of root fibres, fine to medium grained END OF TEST PIT AT 0.5m	MC>PL			
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
32
1/1




Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 30/6/15 Datum:</div> <div>Logged/Checked by: J.D.C./M.D.</div>												
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	ABS									
DRY ON COMPLETION					0		CL-CH	FILL: Silty clay, low to medium plasticity, brown, traces of ash, root fibres, and fine to medium grained ironstone gravel. SILTY CLAY: medium to high plasticity, red brown mottled light brown, traces of fine to medium grained ironstone gravel. END OF TEST PIT AT 0.4m	MC~PL			GRASS COVER
					0.5							
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
33
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client:</div><div>CATHOLIC EDUCATION OFFICE-SYDNEY</div></div> <div><div>Project:</div><div>PROPOSED SCHOOL</div></div> <div><div>Location:</div><div>135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No.</div><div>E27556K</div></div> <div><div>Method:</div><div>EXCAVATOR</div></div> <div><div>R.L. Surface:</div><div>N/A</div></div>												
<div><div>Date:</div><div>30/6/15</div></div> <div><div>Logged/Checked by:</div><div>J.D.C./M.D.</div></div> <div><div>Datum:</div><div></div></div>												
<div>Groundwater Record</div>	<div>SAMPLES</div>			<div>Field Tests</div>	<div>Depth (m)</div>	<div>Graphic Log</div>	<div>Unified Classification</div>	<div>DESCRIPTION</div>	<div>Moisture Condition/ Weathering</div>	<div>Strength/ Rel. Density</div>	<div>Hand Penetrometer Readings (kPa.)</div>	<div>Remarks</div>
	ES	ASS	SAL									
	ABS											
DRY ON COMPLETION					0			FILL: Silty clay, low to medium plasticity, brown, traces of ash, root fibres, and fine to medium grained ironstone gravel.	MC<PL			GRASS COVER
					0.5			as above, but dark brown.	MC>PL			SEWAGE LAYER
					1		CL-CH	SILTY CLAY: medium to high plasticity, light brown mottled red brown, traces of root fibres, fine to medium grained ironstone gravel.	MC≈PL			
					1.5			END OF TEST PIT AT 1.1m				
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
34
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0		CL-CH	FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres and fine to coarse grained ironstone gravel.	MC>PL			GRASS COVER
						0.5			SILTY CLAY: medium to high plasticity, orange brown, trace of fine to coarse grained ironstone gravel.	MC≥PL			
									END OF TEST PIT AT 0.6m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
35
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>													
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 3-9-15 Datum:</div> <div>Logged/Checked by: H.L./M.D.</div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, brown, trace of roots and root fibres, fine to medium grained ironstone gravel and ash.	MC>PL			GRASS COVER
						0.5		CL	SILTY CLAY: low to medium plasticity, red brown mottled light brown, trace of root fibres and fine to medium grained ironstone gravel. as above, but grey mottled brown.	MC>PL MC>PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
36
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, dark brown, trace of fine to coarse grained ironstone gravel, root fibres and ash.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to coarse grained ironstone gravel and root fibres. as above, but grey mottled red brown.	MC>PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
37
1/1


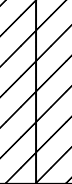
Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to coarse grained ironstone gravel.	MC>PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
38
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 3-9-15</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: H.L./M.D.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
					0			FILL: Silty clay, low to medium plasticity, light brown/yellow brown, trace of root fibres, fine to coarse grained ironstone gravel and ash. FILL: Silty clay, low to medium plasticity, dark brown, trace of fine to coarse grained ironstone gravel, root fibres and ash.	MC>PL			GRASS COVER BUILT UP WALL OF DAM
					0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey.	MC>PL			
					1							
								END OF TEST PIT AT 1.1m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
39
1/1




Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>													
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 3-9-15 Datum:</div> <div>Logged/Checked by: H.L./M.D.</div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, brown, trace of root fibres, fine to medium grained ironstone gravel and ash.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to medium grained ironstone gravel, root fibres and ash.	MC≥PL			
									as above, but grey mottled red brown.				
						1			END OF TEST PIT AT 0.9m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
40
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0		CL-CH	FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC>PL			GRASS COVER
									SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to medium grained ironstone gravel, root fibres and ash.	MC≥PL			ORGANIC ODOUR
						0.5			as above, but grey mottled red brown. END OF TEST PIT AT 0.8m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
41
1/1

Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>												
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		CL-CH	FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC>PL			GRASS COVER
					0.5			SILTY CLAY: medium to high plasticity, red brown mottled grey, fine to coarse grained ironstone gravel.	MC≥PL			
								END OF TEST PIT AT 0.6m				
					1							
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
42
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY

Project: PROPOSED SCHOOL

Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW

Job No. E27556K



Date: 3-9-15

Method: EXCAVATOR

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

R.L. Surface: N/A



Datum:

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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel, brick fragments and plastic.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, light brown/orange brown, trace of fine to coarse grained ironstone gravel.	MC≥PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
43
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres and fine to coarse grained ironstone and sandstone gravel.	MC>PL			GRASS COVER
								CL-CH	SILTY CLAY: medium to high plasticity, light brown/orange brown, trace of fine to coarse grained ironstone gravel.	MC≥PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
44
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to coarse grained ironstone gravel and ash.	MC>PL			
						1			END OF TEST PIT AT 0.85m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
45
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>												
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									
					0			FILL: Silty clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC~PL			GRASS COVER
					0.5		CL-CH	SILTY CLAY: medium to high plasticity, red brown mottled grey, trace of fine to coarse grained ironstone gravel and ash.	MC>PL			WET SOIL SOME PONDING AT SURFACE
					1			END OF TEST PIT AT 0.9m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
46
1/1

Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>												
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 clay, low to medium plasticity, dark brown, trace of root fibres, fine to coarse grained ironstone gravel and ash.	MC>PL			GRASS COVER
					0.5		CL-CH	SILTY CLAY: medium to high plasticity, orange brown, trace of fine to coarse grained ironstone gravel.	MC>PL			WET SOIL SOME PONDING AT SURFACE
					1			END OF TEST PIT AT 0.85m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
47
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>												
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 clay, low to medium plasticity, light brown mottled grey, trace of root fibres and ash.	MC>PL			GRASS COVER
					0.5			FILL: Silty clay, low to medium plasticity, dark brown, trace of fine to coarse grained ironstone gravel, root fibres and ash.				
							CL-CH	SILTY CLAY: medium to high plasticity, red brown, trace of fine to coarse grained ironstone gravel and ash.	MC>PL			
					1			END OF TEST PIT AT 1.0m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
48
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>													
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 3-9-15 Datum:</div> <div>Logged/Checked by: H.L./M.D.</div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, brown, trace of root fibres and fine to coarse grained ironstone gravel.	MC>PL			GRASS COVER
						0.5		CL-CH	SILTY CLAY: medium to high plasticity, light brown and orange brown, trace of fine to medium grained ironstone gravel.	MC≥PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
49
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>													
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	ABS	SAL									
DRY ON COMPLET ION						0			FILL: Silty clay, low to medium plasticity, brown, trace of root fibres, glass and and fine to medium grained ironstone gravel.	MC>PL			GRASS COVER
								CL-CH	SILTY CLAY: medium to high plasticity, light brown and orange brown.	MC≥PL			
						0.5			END OF TEST PIT AT 0.5m				
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
50
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 3-9-15</div><div>Datum:</div><div>Logged/Checked by: H.L./M.D.</div></div>												
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 clay, medium to high plasticity, red brown mottled grey, trace of root fibres, fine to medium grained ironstone gravel.	MC>PL			GRASS COVER
				0.5			FILL: Silty clay, low to medium plasticity, dark brown, trace of fine to medium grained ironstone gravel, root fibres and ash.					
					1			FILL: Silty clay, medium to high plasticity, yellow brown and dark brown, trace of fine to medium grained ironstone gravel, root fibres and ash.				
					1.5		CL-CH	SILTY CLAY: medium to high plasticity, grey mottled yellow brown, trace of fine to medium grained ironstone gravel.	MC≥PL			
								END OF TEST PIT AT 1.6m				
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
51
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 6-4-16</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, medium plasticity, brown, with fine to medium grained ironstone, igneous and sandstone gravel, brick, concrete, glass, metal, plastic and tile fragments.	MC>PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, light brown mottled brown and grey, with root fibres.	MC>PL			
						1			END OF TEST PIT AT 1.0m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
52
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K			Method: EXCAVATOR				R.L. Surface: N/A						
Date: 6-4-16			Datum:										
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low to medium plasticity, brown, with fine to medium grained ironstone, igneous and shale gravel, brick and concrete fragments and cobbles, plastic, metal and root fibres.	MC>PL			GRASS COVER
						0.5							
						1							
						1.5		CL	SILTY CLAY: medium plasticity, light brown mottled orange and grey, trace of root fibres.	MC≈PL			
						2			END OF TEST PIT AT 1.9m				
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
53
1/1



Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY													
Project: PROPOSED SCHOOL													
Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW													
Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A													
Date: 6-4-16 Datum:													
Logged/Checked by: M.D./A.K.													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low plasticity, light brown, with fine to medium grained ironstone and igneous gravel, sandstone cobbles and brick and concrete fragments and plastic.	MC>PL			GRASS COVER
						0.5							
						1		CH	SILTY CLAY: high plasticity, dark brown mottled light brown and grey, trace of fine to medium grained ironstone gravel.	MC≈PL			POSSIBLE FORMER TOPSOIL
						1.5			SILTY CLAY: high plasticity, grey mottled orange, trace of fine to medium grained ironstone gravel.	MC>PL			
						2			END OF TEST PIT AT 1.7m				
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
54
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K Method: EXCAVATOR R.L. Surface: N/A</div> <div>Date: 6-4-16 Datum:</div> <div>Logged/Checked by: M.D./A.K.</div>												
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 clay, low to medium plasticity, dark brown, with fine to medium grained ironstone, and igneous gravel and root fibres.	MC>PL			GRASS COVER
					0.5		CH	SILTY CLAY: high plasticity, light brown mottled orange and grey, with fine to medium grained ironstone gravel and root fibres.	MC>PL			
					1			END OF TEST PIT AT 0.7m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
55
1/1



Environmental logs are not to be used for geotechnical purposes

<div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div> <div>Project: PROPOSED SCHOOL</div> <div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div>												
<div>Job No. E27556K</div> <div>Date: 6-4-16</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel and root fibres.	MC>PL			GRASS COVER
					0.5		CH	SILTY CLAY: high plasticity, light brown mottled orange and grey, with fine to medium grained ironstone gravel.	MC>PL			
					1			END OF TEST PIT AT 0.8m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
56
1/1

Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div>Job No. E27556K</div> <div>Date: 6-4-16</div>			<div>Method: EXCAVATOR</div> <div>Logged/Checked by: M.D./A.K.</div>				<div>R.L. Surface: N/A</div> <div>Datum:</div>					
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	ABS									
DRY ON COMPLETION					0			FILL: Silty sandy clay, low plasticity, brown, with fine to medium grained ironstone gravel and root fibres.	MC<PL			GRASS COVER
					0.5		CH	SILTY CLAY: high plasticity, light brown mottled orange and grey, with fine to medium grained ironstone gravel and root fibres.	MC<PL			
					1			END OF TEST PIT AT 0.7m				
					1.5							
					2							
					2.5							
					3							
					3.5							

ENVIRONMENTAL LOG

Test Pit No.
57
1/1

Environmental logs are not to be used for geotechnical purposes

Client: CATHOLIC EDUCATION OFFICE-SYDNEY

Project: PROPOSED SCHOOL

Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW

Job No. E27556K



Date: 6-4-16

Method: EXCAVATOR

Logged/Checked by: M.D./A.K.

R.L. Surface: N/A



Datum:

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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty sand, fine to medium grained, dark brown, with ash, charcoal and organic matter.	D MC>PL			GRASS COVER
						0.5		CH	FILL: Silty clay, high plasticity, brown, with fine to medium grained ironstone and igneous gravel, trace of ash and fibre cement fragments. SILTY CLAY: high plasticity, light brown mottled brown, trace of fine to medium grained ironstone gravel.	MC>PL			
						1			END OF TEST PIT AT 0.8m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
58
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client:</div><div>CATHOLIC EDUCATION OFFICE-SYDNEY</div></div> <div><div>Project:</div><div>PROPOSED SCHOOL</div></div> <div><div>Location:</div><div>135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div><div>Job No.</div><div>E27556K</div></div> <div><div>Method:</div><div>EXCAVATOR</div></div> <div><div>R.L. Surface:</div><div>N/A</div></div>													
<div><div>Date:</div><div>6-4-16</div></div> <div><div>Logged/Checked by:</div><div>M.D./A.K.</div></div> <div><div>Datum:</div><div></div></div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low plasticity, dark brown, with fine to medium grained ironstone and shale gravel, ash and root fibres.	MC>PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, brown mottled orange and grey, with fine to medium grained ironstone gravel and root fibres.	MC>PL			
						1			END OF TEST PIT AT 0.75m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
59
1/1



Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>													
<div>Job No. E27556K</div>			<div>Method: EXCAVATOR</div>				<div>R.L. Surface: N/A</div>						
<div>Date: 6-4-16</div>			<div>Datum:</div>										
<div>Logged/Checked by: M.D./A.K.</div>													
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	ABS	SAL									
DRY ON COMPLETION						0			FILL: Silty clay, low plasticity, dark brown, with fine to medium grained ironstone and shale gravel, ash and root fibres.	MC>PL			GRASS COVER
						0.5		CH	SILTY CLAY: high plasticity, brown mottled orange and grey, with fine to medium grained ironstone gravel and root fibres.	MC>PL			
						1			END OF TEST PIT AT 0.7m				
						1.5							
						2							
						2.5							
						3							
						3.5							

ENVIRONMENTAL LOG

Test Pit No.
60
1/1

Environmental logs are not to be used for geotechnical purposes

<div><div>Client: CATHOLIC EDUCATION OFFICE-SYDNEY</div><div>Project: PROPOSED SCHOOL</div><div>Location: 135,135A,145,155,165 TENTH AVENUE & 140,160,170 ELEVENTH AVENUE,AUSTRAL,NSW</div></div>												
<div><div>Job No. E27556K</div><div>Method: EXCAVATOR</div><div>R.L. Surface: N/A</div><div>Date: 6-4-16</div><div>Datum:</div><div>Logged/Checked by: M.D./A.K.</div></div>												
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 clay, low plasticity, brown and orange, with fine to medium grained ironstone, shale, igneous and sandstone gravel, bricks, plastic and metal fragments, and a fibre cement fragment.	MC>PL			GRASS COVER
					0.5							
					1							
					1.5		CH	SILTY CLAY: high plasticity, brown mottled orange, with fine to medium grained ironstone gravel.	MC>PL			
					2			END OF TEST PIT AT 1.7m				
					2.5							
					3							
					3.5							

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: $N > 30 (15, 30/40\text{mm})$

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.