Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Jacobs Group (Australia) Pty Ltd		TITLE: **Aerial Photograph 2004** **Project Roger** **Part Rural Block 2249, Jerrabomberra**	N	PROJECT No: 103028.01
	OFFICE: Canberra	DRAWN BY: SDG			PLATE No: D7
	SCALE: NTS	DATE: 31.07.2020			REVISION: 0

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Jacobs Group (Australia) Pty Ltd		TITLE: **Aerial Photograph 2012** **Project Roger** **Part Rural Block 2249, Jerrabomberra**	N	PROJECT No: 103028.01
	OFFICE: Canberra	DRAWN BY: SDG			PLATE No: D8
	SCALE: NTS	DATE: 31.07.2020			REVISION: 0

Douglas Partners Geotechnics / Environment / Groundwater	CLIENT: Jacobs Group (Australia) Pty Ltd	TITLE: **Aerial Photograph 2019** **Project Roger** **Part Rural Block 2249, Jerrabomberra**	PROJECT No: 103028.01
	OFFICE: Canberra / DRAWN BY: SDG		PLATE No: D9
	SCALE: NTS / DATE: 31.07.2020		REVISION: 0

Appendix E

Site Photographs

Sch 1 1.14

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT:	103028.01
	HMAS Harman, Part Block 2249, Jerrabomberra	Plate	1
		REV:	A
	Client: Jacobs Group (Australia) Pty Ltd	DATE:	11-Sep-20

Sch 1 1.14

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT:	103028.01
	HMAS Harman, Part Block 2249, Jerrabomberra	Plate	2
		REV:	A
	Client: Jacobs Group (Australia) Pty Ltd	DATE:	11-Sep-20

Sch 1 1.14

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT:	103028.01
	HMAS Harman, Part Block 2249, Jerrabomberra	Plate	3
		REV:	A
	Client: Jacobs Group (Australia) Pty Ltd	DATE:	11-Sep-20

Sch 1 1.14

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT:	103028.01
	HMAS Harman, Part Block 2249, Jerrabomberra	Plate	4
		REV:	A
	Client: Jacobs Group (Australia) Pty Ltd	DATE:	11-Sep-20

Sch 1 1.14

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs**	PROJECT:	103028.01
	HMAS Harman, Part Block 2249, Jerrabomberra	Plate	5
		REV:	A
	Client: Jacobs Group (Australia) Pty Ltd	DATE:	11-Sep-20

Appendix F

Borehole 1 – 19 Logs

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 580.0 AHD
EASTING: 699609
NORTHING: 6086084
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
580	0.15	TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine to coarse grained sand and rootlets, dry to moist, w<PL, very stiff										
		Silty CLAY (CL/CI): low to medium plasticity, orange-brown, yellow and red mottle, with iron staining and ironstone nodules, trace fine to coarse grained sand and gravel up to 10mm in size, dry to moist, w<PL, very stiff, alluvial							S			8,8,13 N = 21
	0.6	Silty CLAY (CI): medium plasticity, red-brown, trace gravel up to 10mm in size, moist to dry, w<PL, very stiff, alluvial							D			PID 2.2
579	1.0	Silty CLAY (CL/CI): low to medium plasticity, yellow-brown, with fine to coarse grained sand, dry to moist, w<PL, hard, extremely weathered dacite							S			8,16,21 N = 37
									C	100	0	
578	2.0	DACITE: fine to coarse grained, yellow-brown, dry, very low strength, highly weathered, highly fractured -from 2.2m, low strength						2.11m: J, 15°,pl, ro, cly vn 2.111m: - 3.0m: J, 90°, v, irr, sl ro, fe stn, cly vn 2.112m: - 2.25m: J, 10°-25°, ir, ro, cly vn 2.25m: EOR 2.38m: - 2.81m: J, 20°-30°, pl, sm, cly vn, some fe stn 2.84m: - 2.88m: fg 2.91m: J, 15°, cu, sm, cly vn	C	100	34	PL(D) = 0.07
	3.0											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.2m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 580.0 AHD
EASTING: 699609
NORTHING: 6086084
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
577		DACITE: fine to coarse grained, yellow-brown, dry, low strength, highly weathered, highly fractured						2.94m: J, 45°, pl, sm, cly vn 3m: Driller's Break 3.08m: J, 10°, ir, ro, cly vn 3.14m: J, 45°, pl, sm, cly vn 3.19m: J, 25°, pl, sm, cly vn 3.3m: J, 25°, pl, sm, cly vn 3.32m: J, 45°, pl, sm, cly co (5mm) 3.4m: J, 80°, pl, sm , fe stn, cly vn 3.46m: J, 10°, pl, sm, fe stn 3.59m: J, 40°, pl, sm, fe stn 3.63m: J, 30°, ir, ro, cly vn 3.8m: J, 10°, ir, ro, stn, cly vn	C	100	34	
		-from 3.3m, low to medium strength, distinctly weathered										
576	4	-from 4.0m, low strength, highly weathered						4m: Driller's Break 4.06m: J, 10°, ir, ro, stn 4.14m: J, 65°, ir, ro, stn, cly vn				
	4.2	Bore discontinued at 4.2m -limit of investigation						4.2m: End of Run				PL(D) = 0.23
575	5											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW

TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.2m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Sch 1 1.13

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 1 DEPTH: 1.50 m – 4.20 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.5 AHD
EASTING: 699636
NORTHING: 6086095
DIP/AZIMUTH: 90°/--

BORE No: 2
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
582	0.2	TOPSOIL/Silty CLAY (CL): low plasticity, dark brown, with rootlets, trace fine grained sand, moist, w~PL, stiff to very stiff							
		Silty CLAY (CL/CI): low to medium plasticity, dark orange brown, trace fine to medium grained sand, moist, w~PL, stiff to very stiff, possible residual/alluvium			0.5				
				D S	0.7		6,6,10 N = 16		
	0.8	Silty CLAY (CI/CH): medium to high plasticity, yellow brown, orange mottle, trace fine to coarse grained sand, gravel up to 30mm in size, dry to moist, w<PL, hard, residual/extremely weathered dacite			0.95				
	1				1.0				1
				S			7,15,25 N = 40		
					1.45				
581	1.5	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered							
	2								2
				D S	2.5		20/120 refusal		
580					2.62				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.5 AHD
EASTING: 699636
NORTHING: 6086095
DIP/AZIMUTH: 90°/--

BORE No: 2
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
579	4	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)* -from 3.0m, low strength -from 3.5m, low to medium strength, distinctly weathered							4
578	5 5.0	Bore discontinued at 5.0m -limit of investigation							5
577									

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699660
NORTHING: 6086103
DIP/AZIMUTH: 90°/--

BORE No: 3
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Type	Core Rec. %	RQD %	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Test Results & Comments
584	0.2	TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with rootlets, fine grained sand, dry to moist, w<PL, hard, FILL						
		Silty CLAY (CL/CI): low to medium plasticity, brown, moist to dry, w<PL, very stiff to hard, possible residual		D				
				S				7,13,25 N = 38
	0.6	Silty CLAY (CI/CH): medium to high plasticity, yellow brown, red mottle, trace fine to coarse grained sand, dry to moist, w<PL, hard, residual/extremely weathered dacite		D				
	0.9	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered						
583	1			S				10,10/20 refusal
	1.2	CORE LOSS					1.2m: CORE LOSS: 400mm	
	1.6	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered		C	62	0	1.6m: - 2.25m, drillers break	
582	2							
		-from 2.1m, high strength, slightly weathered, blue grey						
	2.25	-from 2.15m, very low strength, highly weathered						
		CORE LOSS					2.25m: CORE LOSS: 350mm	
	2.6	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered		C	83	0	2.66m: J, 0-5°, pl, slightly ro, fe stn	PL(D) = 0.06

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW

TYPE OF BORING: 110mm diameter solid flight auger to 1.2m, then NMLC coring to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699660
NORTHING: 6086103
DIP/AZIMUTH: 90°/--

BORE No: 3
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
581		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)*						3m: drillers break				
								3.13m: J, 45°, pl, slight;yro, stn				
		-from 3.3m, extremely low strength						3.27m: J, 45°, pl, sm, cly vn				
								3.35m: J, 75°, pl, sm, cly vn				PL(A) = 0.01
								3.42m: J, 5°, pl, slightly ro, cly vn				PL(D) = 0.03
								3.52m: J, 45°, pl, sm, cly vn				
								3.6m: J, 5°, pl, sm, cly vn	C	83	0	
								3.79m: drillers break				
								3.87m: J, 20°, pl, sm, fe stn, cly vn				
580	4							3.9m: J, 45°, pl, sm, fe stn, cly vn				
								4m: drillers break				
								4.12m: drillers break				PL(D) = 0.02
	4.3	CORE LOSS						4.3m: CORE LOSS: 1400mm				
								4.48m: drillers break				
579	5								C	18	0	
	5.7	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered						5.8m: J, 5°, ir, ro, fe stn				
		-from 5.9m, high strength, fresh stained, blue grey						5.9m: J, 30°, ir, ro, stn, fg				
	6.0	Bore discontinued at 6.0m-limit of investigation										

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW

TYPE OF BORING: 110mm diameter solid flight auger to 1.2m, then NMLC coring to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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DOUGLAS PARTNERS PTY LTD

[redacted]

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 3 DEPTH: 1.6 m – 6.0 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699603
NORTHING: 6086107
DIP/AZIMUTH: 90°/--

BORE No: 4
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
582		FILL/Gravelly CLAY (CI): medium plasticity, orange brown, gravel up to 40mm in size, with silt and fine to coarse grained sand, moist to dry, w<PL, very stiff, FILL							
	0.4	Silty CLAY (CI/CH): medium to high plasticity, orange brown, red mottle, trace fine to coarse grained sand, dry to moist, w<PL, hard, residual			0.5				
				S			8,17,19 N = 36		
		-from 0.8m, with ironstone nodules, trace gravel up to 20mm in size		D	0.9				
					0.95				
581	1	-from 1.0m, yellow brown, red mottle			1.0				1
				S			4,14,18 N = 32		
					1.45				
	1.8	DACITE: fine to coarse grained, yellow brown, dry, very low to low strength, highly weathered							
580	2								2
		-from 2.5m, low to medium strength, distinctly weathered		D S	2.5 2.57		15/70 refusal		
	3.0								

Bore discontinued at 3.0m-refusal

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 3.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699631
NORTHING: 6086114
DIP/AZIMUTH: 90°/--

BORE No: 5
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01 0.05 0.10 0.50 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
	0.15	TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with rootlets, fine grained sand, dry to moist, w<PL, hard, FILL										
583		Silty CLAY (CI/CH): medium to high plasticity, red brown, dry to moist, w<PL, very stiff, residual							D U_{50}			PID<1
	0.8	Silty CLAY (CI): medium plasticity, yellow brown, with fine to coarse grained sand, dry to moist, w<PL, hard, extremely weathered dacite										
	1.0	DACITE: fine to coarse grained, pale yellow grey, dry, very low strength, highly weathered							S			13,18,25 N = 43
582	1.5	CORE LOSS						1.5m: CORE LOSS: 250mm				
	1.75	DACITE: fine to coarse grained, pale yellow grey, dry, very low strength, highly weathered						1.75m: -1.87m, fg 1.87m: J, 5°, pl, slightly ro, fe stn, cly vn 1.95m: J, 65°, pl, sm, fe stn 2.04m: J, 40°, pl, sm, fe stn 2.11m: -2.14m, fg 2.15m: -2.2m, fg	C	62	0	
581								2.23m: J, 50°, st, sm, cly co (5mm) 2.28m: J, 45°-60°, pl, sm, cly co 2.53m: J, 5°, st, sm, cly vn, fe stn 2.67m: J, 45°, pl, slightly ro, cly co (10mm) 2.74m: J, 75°, pl, sm, cly co (5mm) 2.79m: J, 70°, stm, sm, cly vn 2.89m: -3.07m, fg	C	100	61	

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 5.3m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699631
NORTHING: 6086114
DIP/AZIMUTH: 90°/--

BORE No: 5
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
580		DACITE: fine to coarse grained, pale yellow grey, dry, very low strength, highly weathered *(continued)* -from 3.0m, low to medium strength, distinctly weathered						3.14m: J, 70°, pl, slightly ro, fe stn 3.18m: J, 45°, pl, sm, cly vn 3.36m: 2 x J, 45°, cu, ro, cly vn 3.48m: J, 70°, cu, ro, cly vn 3.65m: J, 75°, pl, sm, fe stn, cly vn 3.72m: J, 90°, pl, slightly ro, fe st, cly vn 3.86m: J, 20°, pl, slightly ro, st, cly vn 3.93m: J, 10°, ir, ro, st, cly vn	C	100	61	
	4							4m: -4.1m, fg				
579		-from 4.1m, medium strength, moderately weathered						4.17m: J, 85°, ir, slightly ro, fe stn, cly vn 4.32m: J, 40°, pl, slightly ro, fe stn, cly vn 4.39m: J, 10°, pl, sm, cly vn 4.42m: J, 40°, pl, slightly ro, cly vn	C	100	30	
	5							4.54m: J, 55°, pl, sm, fe stn 4.62m: J, 60°, pl, sm, fe stn 4.73m: J, 70°, ir, slightly ro, fe stn 4.83m: J, 5°, ir, slightly ro, fe stn 4.92m: J, 45°, pl, sm, fe stn 4.96m: J, 5°, pl, sm, fe stn 5.07m: fg 5.12m: J, 45°-60°, pl, slightly ro, cly vn 5.23m: J, 5°, ir, ro, fe stn	C	100	26	PL(D) = 0.4
	5.3	Bore discontinued at 5.3m -limit of investigation										
578												

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 5.3m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

DOUGLAS PARTNERS PTY LTD

Sch 1 1.13
JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 5 DEPTH: 1.5 m – 5.3 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 585.0 AHD
EASTING: 699656
NORTHING: 6086121
DIP/AZIMUTH: 90°/--

BORE No: 6
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
585	0.2	TOPSOIL FILL/Silty CLAY (CL): low plasticity, dark brown, with gravel, trace bricks and terracotta pipe fragments, fine to coarse grained sand, moist, w<PL, very stiff, FILL							
		CLAY (CH): high plasticity, yellow brown, orange mottle, trace fine to coarse grained sand, dry to moist, w<PL, very stiff, residual/extremely weathered dacite		S	0.5		5,9,12 N = 21		
584	1				0.95				1
				D S	1.0 1.2		6,13,18 N = 31		
	1.5				1.45				
		DACITE: fine to coarse grained, pale grey yellow, dry, very low to low strength, highly weathered							
583	2			S	2.5		19,3/10 refusal		2
					2.66				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 6.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 585.0 AHD
EASTING: 699656
NORTHING: 6086121
DIP/AZIMUTH: 90°/--

BORE No: 6
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
582		DACITE: fine to coarse grained, pale grey yellow, dry, very low to low strength, highly weathered *(continued)*		D	3.5				
581	4								4
580	5								5
	6.0	Bore discontinued at 6.0m-limit of investigation							

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 6.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics | Environment | Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699598
NORTHING: 6086127
DIP/AZIMUTH: 90°/--

BORE No: 7
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
582	0.0	TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with rootlets, glass and brick fragments, trace fine grained sand, moist, w~PL, stiff, FILL					
	0.2	Silty CLAY (CI/CH): medium to high plasticity, red brown, yellow mottled, with roots, moist to dry, w<PL, very stiff to hard					
		-from 0.5m, yellow-brown, red mottle		U_{50}			
581	1			D,E			PID<1
				S			4,10,22 N = 32
	1.3	DACITE: fine to coarse grained, pale yellow-grey, dry, medium to high strength, moderately weathered, fractured					
			1.58m: J, 75°, pl, sl ro, cly vn 1.67m: - 1.75m: J, 45°, pl, sm, fe stn	C	100	47	PL(D) = 1.07
580	2		1.9m: J, 45°, ir, ro, fe stn 1.9001m: - 2.15m: J, 90° v, pl, sm, fe stn, with, J, 30°, pl, sm, stn 2.15m: J, 65°, pl, ro, cly vn 2.25m: End of Run				
			2.34m: J, 5°, pl, fe stn, sm 2.41m: J, 65°, pl, ro, fe stn 2.64m: J, 75°, ir, ro, fe stn 2.8m: J, 75°, pl, sl ro, fe stn 2.9m: J, 10°, pl, sm, cly vn	C	100	81	PL(D) = 1.33

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics | Environment | Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699598
NORTHING: 6086127
DIP/AZIMUTH: 90°/--

BORE No: 7
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
579		DACITE: fine to coarse grained, pale yellow-grey, dry, medium to high strength, moderately weathered, fractured *(continued)*						3m: J, 10°, pl, sm, cly vn	C	100	81	
								3.1m: End of Run				
								3.26m: J, 75°, pl, sm, cly vn				
								3.36m: J, 75°, ir, sl ro, fe stn				
								3.49m: J, 25°, cu, sm, stn	C	100	60	
								3.57m: J, 40°, pl, sm, cly ro (5mm)				PL(D) = 1.61
								3.78m: J, 45°, pl, sm, cly vn				
								3.85m: J, 15°, ir, ro, fe stn				PL(A) = 0.62
								3.91m: J, 20°, ir, sm, cly vn, fe stn				PL(A) = 0.45
578	4 4.0	Bore discontinued at 4.0m -limit of investigation						4m: End of Run				
577	5											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

DOUGLAS PARTNERS PTY LTD

Sch 1 1.13
JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 7 DEPTH: 1.5 m – 4.0 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699626
NORTHING: 6086135
DIP/AZIMUTH: 90°/--

BORE No: 8
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
584	0.2	FILL/Silty CLAY (CL): low plasticity, brown, with gravel up to 30mm in size, rootlets and fine to coarse grained sand, dry to moist, w<PL, hard, fILL							
		CLAY (CH): high plasticity, red brown, trace silt and fine grained sand, dry to moist, w<PL, hard, residual		U_{50}	0.5				
	0.9	CLAY (CH): high plasticity, yellow brown, trace silt, fine grained sand, dry to moist, w<PL, hard, residual/extremely weathered dacite			0.9				
583	1			S	1.0		4,11,16 N = 27		1
	1.3	DACITE: fine to coarse grained, yellow brown, dry, very low to low strength, highly weathered			1.45				
582	2			D S	2.5 2.62		15/120 refusal		2
		-from 2.8m, low to medium strength, distinctly weathered							

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699626
NORTHING: 6086135
DIP/AZIMUTH: 90°/--

BORE No: 8
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
581		DACITE: fine to coarse grained, yellow brown, dry, very low to low strength, highly weathered *(continued)*							
580	4								4
		-from 4.5m, medium strength, moderately weathered		D	4.5				
579	5 5.0	Bore discontinued at 5.0m -limit of investigation							5

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 585.5 AHD
EASTING: 699650
NORTHING: 6086141
DIP/AZIMUTH: 90°/--

BORE No: 9
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 1 OF 3

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
585	0.0	FILL/Gravelly CLAY (CI): medium plasticity, red brown, gravel up to 30mm in size, with rootlets, moist to dry, w<PL, hard, FILL										
									U_{50}			
									D			
	0.6	CLAY (CH): high plasticity, yellow brown, red mottle, trace silt, dry to moist, w<PL, hard										
	1											
	1.2	Gravelly CLAY (CI/CH): medium to high plasticity, yellow red brown, gravel up to 20mm in size, dry to moist, w<PL, hard, possible extremely weathered conglomerate							S			5,10,25 N = 35
584												
	1.7	DACITE: fine to coarse grained, yellow grey, dry, very low strength, highly weathered, fractured with some fragmented zones						1.75m: drillers break 1.81m: drillers break 1.89m: drillers break 2m: drillers break 2.05m: -2.2m, fg	C	100	0	
	2											
	2.2	CORE LOSS						2.2m: CORE LOSS: 350mm				
583	2.55	DACITE: fine to coarse grained, yellow grey, dry, very low strength, highly weathered, fractured with some fragmented zones from 2.72m, vertical joint (90°) from 2.75m, low strength, highly weathered						2.55m: -2.72m, fg 2.72m: J, 10°, pl, ro, cly vn 2.84m: J, 90°, pl, ro, fe stn	C	84	54	

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.7m, then NMLC coring to 6.65m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 585.5 AHD
EASTING: 699650
NORTHING: 6086141
DIP/AZIMUTH: 90°/--

BORE No: 9
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 2 OF 3

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
582		DACITE: fine to coarse grained, yellow grey, dry, very low strength, highly weathered, fractured with some fragmented zones *(continued)*						3.03m: J, 25°, pl, slightly ro, cly vn 3.15m: J, 40°, pl, sm, stn 3.24m: J, 20°, ir, slightly ro, cly vn 3.3m: -3.6m, J, 35°-50°,pl, sm, fe stn				
		-from 3.5m, low to medium strength, distinctly weathered							C	84	54	
	4	-from 3.85m, very low to low strength, highly weathered						3.76m: J, 30°, ir, slightly ro, stn 3.82m: drillers break 3.92m: J, 45°, pl, ro, stn 4m: drillers break 4.23m: J, 20°, pl, sm, fe stn				PL(D) = 0.2
581	4.4	CORE LOSS						4.4m: CORE LOSS: 600mm				
	5	DACITE: fine to coarse grained, yellow brown, dry, very low to extremely low strength, highly weathered, fractured						5m: all drillers break from dropped core	C	35	0	PL(D) = 0.01
580	5.6	CORE LOSS						5.6m: CORE LOSS: 400mm				
	6.0											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.7m, then NMLC coring to 6.65m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 585.5 AHD
EASTING: 699650
NORTHING: 6086141
DIP/AZIMUTH: 90°/--

BORE No: 9
PROJECT No: 103028.00
DATE: 6/8/2020
SHEET 3 OF 3

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
579		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered, fractured to fragmented from 6.0m, vertical joint (90°)						6.07m: J, 20°, pl, slightly ro, fe stn 6.16m: J, 20°, ir, ro, fe stn 6.2m: J, 10°, pl, sm, fe stn 6.22m: -6.37m, fg 6.37m: J, 30°-45°, pl, slightly ro, fe stn	C	100	0	
	6.65	Bore discontinued at 6.65m -limit of investigation										
578	7											
577	8											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.7m, then NMLC coring to 6.65m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

DOUGLAS PARTNERS PTY LTD

Sch 1 1.13

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 9 DEPTH: 1.5 m – 6.65 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.5 AHD
EASTING: 699601
NORTHING: 6086145
DIP/AZIMUTH: 90°/--

BORE No: 10
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		TOPSOIL FILL/Silty CLAY (CI): medium plasticity, with rootlets, trace plastic, asphalt fragments, moist, w~PL, very stiff, FILL							
	0.2	Silty CLAY (CI/CH): medium to high plasticity, red brown, trace fine to medium grained sand, moist to dry, w~PL, very stiff, residual							
582					0.5				
				D	0.6				
				S			4,10,16 N = 26		
		-from 0.8m, yellow brown							
					0.95				
	1				1.0				1
				S			8,13,16 N = 29		
	1.4	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered							
581					1.45				
	2			D	2.0				2
580					2.5				
				S			10,5/150 refusal		
		-from 2.6m, low to medium strength, distinctly weathered			2.65				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

Douglas Partners
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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.5 AHD
EASTING: 699601
NORTHING: 6086145
DIP/AZIMUTH: 90°/--

BORE No: 10
PROJECT No: 103028.00
DATE: 4/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
579		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)*							
	4 4.0	Bore discontinued at 4.0m -limit of investigation							4
578	5								5
577									

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699622
NORTHING: 6086151
DIP/AZIMUTH: 90°/--

BORE No: 11
PROJECT No: 103028.00
DATE: 7 - 10/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Type	Core Rec. %	RQD %	Test Results & Comments
584	0.1	TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with rootlets, glass and brick fragments, trace fine grained sand, moist, w~PL, stiff, FILL					
		Silty CLAY (CI/CH): medium to high plasticity, red-brown, trace fine grained sand, dry to moist, w<PI, very stiff to hard, residual		D			
	0.7	Silty CLAY (CH): high plasticity, yellow-brown, trace fine to coarse grained sand, dry to moist, w<PL, hard, extremely weathered dacite/residual		S			4,14,17 N = 31
583	1						
	1.2	DACITE: fine to coarse grained, yellow-brown, dry, low strength, highly weathered, highly fractured		S			15,25 refusal
				C	100	0	PL(A) = 0.12 PL(D) = 0.12
582	2	-from 2.5m, medium strength, moderately weathered		C	100	67	PL(A) = 0.18 PL(D) = 0.35
	3.0						

Discontinuities (B - Bedding, J - Joint, S - Shear, F - Fault)

1.35m: J, 10°, pl, sm, stn, cly vn
1.38m: J, 10°, pl, sm, stn, cly vn
1.41m: J, 5°, ir, ro, cly vn
1.49m: Driller's Break
1.55m: J, 65°, pl, sl ro, fe stn
1.82m: - 1.62m: fg
2m: Driller's Break
2.09m: J, 20°, ir, ro, cly vn, stn
2.15m: J, ir, ro, stn
2.2m: End of Run
2.26m: J, 5°, pl, sm, cly vn, stn
2.3m: J, 30°, pl, sl ro, stn
2.38m: - 2.43m: fg
2.43m: - 3.25m: J, 5°-15°, pl, sm-sl ro, stn, cly vn

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.3m, then NMLC coring to 5.2m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699622
NORTHING: 6086151
DIP/AZIMUTH: 90°/--

BORE No: 11
PROJECT No: 103028.00
DATE: 7 - 10/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
581		DACITE: fine to coarse grained, yellow-brown, dry, medium strength, moderately weathered, highly fractured						3m: Driller's Break				
								3.44m: J, 20°, ir, ro ,stn				
		-from 3.5m, low strength, highly weathered						3.56m: J, 5°, pl, sl ro, stn				PL(A) = 0.21 PL(D) = 0.04
								3.71m: J, 70°, pl, sm, fe stn 3.77m: J, 10°, pl, ro, cly vn, fe stn 3.84m: J, 35°, pl, ro, cly vn, fe stn				
580	4							4m: Driller's Break 4.03m: Driller's Break 4.09m: J, 10°, pl, sm, cly vn, stn 4.15m: J, 45°, pl, sl ro, cly vn, stn	C	100	67	
								4.31m: J, 20°, pl, sm, fe stn				
								4.42m: J, 45°, pl, sm, fe stn				
								4.52m: - 4.72m: J, 20°, sm, pl, fe stn				PL(D) = 0.17 PL(A) = 0.24 PL(D) = 0.16
		-from 4.8m, medium strength, moderately weathered						4.85m: J, 50°, pl, sm, fe stn 4.9m: J, 30°, pl, sm, fe stn				
579	5	-from 5.0m, low strength, highly weathered						4.95m: J, 20°, ir, ro, cly vn 5m: Driller's Break 5.1m: J, 65°, st, sl ro, fe stn, cly vn				
	5.2	Bore discontinued at 5.2m -limit of investigation						5.2m: End of Run				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.3m, then NMLC coring to 5.2m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Sch 1 1.13

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 11 DEPTH: 1.3 m – 5.2 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699589
NORTHING: 6086159
DIP/AZIMUTH: 90°/--

BORE No: 12
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
582		TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with rootlets, glass and brick fragments, trace fine grained sand, moist, w~PL, stiff, FILL										
	0.3	Silty CLAY (CI): medium plasticity, red-brown, moist, w~PL, stiff, residual							D			
									S			3,5,5 N = 10
	0.9	CLAY (CH): high plasticity, yellow-brown, red mottle, moist to dry, w<PL, hard, residual/extremely weathered dacite							E,D			
581	1											
	1.2	DACITE: fine to coarse grained, yellow-brown, dry, very low to low strength, highly weathered, highly fractured to fragmented							S			5,14,24 N = 38
	1.5	CORE LOSS						1.5m: CORE LOSS: 200mm				
	1.7	DACITE: fine to coarse grained, yellow-brown, dry, very low to low strength, highly weathered, highly fractured to fragmented						1.7m: - 2.04m: fg	C	100	0	
580	2							2.04m: - 2.17m: J, 90°, pl, sl ro, stn 2.17m: J, 45°, pl, ro, stn cly vn 2.24m: J, 15°, ir, ro ,stn 2.241m: - 2.30m: fg 2.3m: End or Run				
		-from 2.3m, low to medium strength, fractured						2.39m: J, 10°, pl, ro, cly co (10mm) 2.44m: J, 5°, cy, sm, cly vn 2.47m: J, 15°, cu, sm, cly vn	C	100	0	PL(D) = 0.48
	3.0	-from 2.9m, very low to low strength, fragmented to highly						2.71m: - 2.87m: J, 90°, with 10° h J, pl, sl ro, stn				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** v

TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699589
NORTHING: 6086159
DIP/AZIMUTH: 90°/--

BORE No: 12
PROJECT No: 103028.00
DATE: 11/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
579		fractured						3m: J, 5°, ir, ro, stn				
		DACITE: fine to coarse grained, yellow-brown, dry, very low to low strength, highly weathered, highly fractured to fragmented						3.1m: J, 5°, pl, sl ro, stn 3.101m: - 3.35m: J, 90°, v, pl, fe stn, with h, J, 10°-45°, pl, sl ro, stn				PL(A) = 0.01
								3.45m: J, 15°, st, ro, stn	C	100	0	PL(D) = 0.05
								3.68m: J, 45°, pl, ro, stn				PL(D) = 0.09
								3.93m: J, 10°, pl, ro, stn 3.9301m: - 4.00m: Driller's Break				
578	4 4.0	Bore discontinued at 4.0m -limit of investigation						4m: End or Run				
577	5											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** v

TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Sch 1 1.13

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 12 DEPTH: 1.5 m – 4.0 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699609
NORTHING: 6086165
DIP/AZIMUTH: 90°/--

BORE No: 13
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
583	0.15	FILL/Gravelly Silty CLAY (CL): low plasticity, pale brown, gravel up to 20mm in size, trace fine to coarse grained sand, dry to moist, w<PL, hard, FILL							
		Silty CLAY (CI): medium plasticity, red brown, trace fine to coarse grained sand, gravel up to 30mm in size, moist to dry, w~PL, very stiff, residual			0.5				
				D	0.6				
				S			5,9,12 N = 21		
		-from 0.8m, yellow brown mottle			0.95				
	1				1.0				1
				S			5,10,10 N = 20		
	1.3	CLAY (CH): high plasticity, yellow brown, trace fine to coarse grained sand, dry to moist, w<PL, very stiff, residual			1.45				
582	1.6	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered							
	2								2
581		-from 2.5m, low strength, highly weathered			2.5				
				S			18 refusal		
					2.65				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699609
NORTHING: 6086165
DIP/AZIMUTH: 90°/--

BORE No: 13
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
580		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)*							
		-from 3.5m, medium strength, moderately weathered		D	3.5				
	4								4
579									
	5	5.0							5
		Bore discontinued at 5.0m -limit of investigation							
578									

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699629
NORTHING: 6086170
DIP/AZIMUTH: 90°/--

BORE No: 14
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
584	0.02	ASPHALT: 20mm thick spray seal							
		FILL/Gravelly SAND (SW): fine to coarse grained, well graded							
	0.2	Silty CLAY (CI): medium plasticity, red brown, trace fine to coarse grained sand, moist to dry, very stiff to hard, residual		D	0.5				
				U_{50}	0.7				
	0.8	CLAY (CI/CH): medium to high plasticity, yellow brown, trace gravel up to 10mm in size, dry to moist, w<PL, hard, residual/extremely weathered dacite		D	0.9				
583	1								1
	1.5	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered							
582	2	-from 2.5m, low strength		D	2.8				2

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 6.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 584.0 AHD
EASTING: 699629
NORTHING: 6086170
DIP/AZIMUTH: 90°/--

BORE No: 14
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
581		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)*							
		-from 3.7m, low to medium strength, distinctly weathered							
580	4								4
		-from 4.5m, low strength, highly weathered (possible very low strength seams)							
579	5								5
	6.0	Bore discontinued at 6.0m-limit of investigation							

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 6.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 581.5 AHD
EASTING: 699584
NORTHING: 6086180
DIP/AZIMUTH: 90°/--

BORE No: 15
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
	0.12	TOPSOIL FILL/Sandy Gravelly CLAY (CL): low plasticity, brown, fine to coarse grained sand, gravel up to 20mm in size, with rootlets, moist to dry, w<PL, very stiff, FILL							
		Silty CLAY (CI): medium plasticity, red brown, moist to dry, w<PL, very stiff, alluvial							
		-from 0.3m, trace ironstone nodules		D	0.5				
581	0.6	Silty CLAY (CI): medium plasticity, yellow brown, mottled orange, dry to moist, w<PL, very stiff to hard, extremely weathered dacite		S			7,8,12 N = 20		
					0.95				
	1				1.0				1
				S			7,14,18 N = 32		
					1.45				
580	1.5	DACITE: fine to coarse grained, pale yellow grey, dry, very low strength, highly weathered							
	2								2
579		-from 2.5m, medium strength, moderately weathered, pale grey		D	2.5		7/50 refusal		
				S	2.55				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 581.5 AHD
EASTING: 699584
NORTHING: 6086180
DIP/AZIMUTH: 90°/--

BORE No: 15
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
578		DACITE: fine to coarse grained, pale yellow grey, dry, very low strength, highly weathered *(continued)*							
	4.0	Bore discontinued at 4.0m -limit of investigation							
577	4								4
	5								5
576									

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT: Sch 1 1.13
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.0 AHD
EASTING: 699604
NORTHING: 6086185
DIP/AZIMUTH: 90°/--

BORE No: 16
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
583	0.2	FILL/Silty CLAY (CL/CI): low to medium plasticity, dark brown, with fine grained sand and rootlets, trace PVC pipe fragments, moist, w~PL, stiff, residual							
		Silty CLAY (CH): high plasticity, red brown, dry to moist, w<PL, very stiff, residual			0.45		6,7,11		
				S	0.5		N = 18		
	0.7	CLAY (CH): high plasticity, yellow brown, trace fine to coarse grained sand and ironstone nodules, dry to moist, w<PL, very stiff, residual/extremely weathered dacite							
582	1				1.0				1
				S			12,17,12/80 refusal		
	1.3	DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered			1.38				
581	2								2
		-from 2.5m, low to medium strength, distinctly weathered		D	2.5				

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.0 AHD
EASTING: 699604
NORTHING: 6086185
DIP/AZIMUTH: 90°/--

BORE No: 16
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
580		DACITE: fine to coarse grained, yellow brown, dry, very low strength, highly weathered *(continued)* -from 3.0m, medium strength, moderately weathered		D	3.9				
579	4								4
578	5 5.0	Bore discontinued at 5.0m -limit of investigation							5

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699624
NORTHING: 6086191
DIP/AZIMUTH: 90°/--

BORE No: 17
PROJECT No: 103028.00
DATE: 10/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
583	0.2	TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, dark brown, with rootlets, trace brick and nail fragments, moist, w~PL, stiff, FILL							D			
		Silty CLAY (CH): high plasticity, red-brown, dry to moist, w<PL, very stiff to hard, residual							U_{50}			
	0.9	-from 0.8m, yellow-brown, extremely weathered dacite/residual										
	1	DACITE: fine to coarse grained, yellow-grey/brown, dry, very low strength, highly weathered							S			17,25 refusal
582	1.5	CORE LOSS						1.5m: CORE LOSS: 220mm				
	1.72	DACITE: fine to coarse grained, yellow-brown, dry, very low strength, highly weathered, fragmented, highly fractured -from 1.9m, low strength						1.72m: - 2.20m: fg	C	69	0	
	2											
	2.2	CORE LOSS						2.2m: End of Run CORE LOSS: 50mm				
	2.25	DACITE: fine to coarse grained, yellow-brown, dry, low to medium strength, highly to moderately weathered, fragmented, highly fractured						2.3m: J, 5°, pl, sm, stn 2.33m: J, 10°, pl, sm, cly vn 2.37m: J, 80°, cu, sl ro, fe stn 2.42m: J, 5°-10°, pl, sl ro, cly co (5mm) 2.51m: J, 65°, pl, sl ro, cly co (5mm) 2.56m: J, 10°-15°, pl, sl ro, cly co (5mm) 2.75m: J, 20°, irr, ro, cly co (10mm) 2.82m: - 2.90m: J, 30°-40°, pl, ro, cly vn	C	97	24	PL(D) = 0.31 PL(A) = 0.1
581												

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 6.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 583.5 AHD
EASTING: 699624
NORTHING: 6086191
DIP/AZIMUTH: 90°/--

BORE No: 17
PROJECT No: 103028.00
DATE: 10/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
		DACITE: fine to coarse grained, yellow-brown, dry, low to medium strength, highly to moderately weathered, fragmented, highly fractured *(continued)*						3m: - 3.65m: J, 90°, pl, sl ro, fe stn 3.06m: J, 45°, st, sl ro, cly vn 3.14m: - 3.65m: J, 10°-30°, pl, sl ro, cly co (2-5mm)				
		-from 3.0m to 3.65m, numerous 90° vertical joints throughout core							C	97	24	
580		-from 3.65m, pale grey-yellow, medium strength, moderately weathered						3.65m: - 3.86m: J, 30°-45°, pl, sm, cly vn				PL(D) = 0.74
								3.9m: J, 40°, cu, ro, stn 3.901m: - 4.00m: fg				
	4							4.05m: End of Run 4.1m: J, 10°, pl, sm, cly co (3mm) 4.12m: J, 45°, st, sm, cly co (3mm) 4.26m: J, 15°, ir, ro, cly vn 4.33m: J, 75°, pl, sm, cly vn 4.331m: - 4.48m: fg 4.5m: J, 5°, pl, sm, cly co (5mm) 4.63m: J, 75°, pl, sm, cly vn, fe stn	C	100	55	
579		-from 4.8m to 6.0m, highly fractured to fragmented						4.8m: End of Run 4.801m: - 5.00m: fg				
	5							5.05m: J, 45°, pl, sm, cly cn 5.09m: J, 10°, irr, ro, stn 5.19m: - 5.30m: fg	C	100	0	
								5.3m: End of Run 5.301m: - 5.60m: fg				
578									C	100	0	
								5.6m: - 6.00m: fg				
	6.0	Bore discontinued at 6.0m-limit of investigation							C	100	0	

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW

TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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DOUGLAS PARTNERS PTY LTD

[redacted]

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 17 DEPTH: 1.5 m – 6.0 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 581.0 AHD
EASTING: 699586
NORTHING: 6086202
DIP/AZIMUTH: 90°/--

BORE No: 18
PROJECT No: 103028.00
DATE: 10 - 11/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
581		TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, dark brown, with rootlets, moist, w~PL, stiff, FILL										
	0.2	Silty CLAY (CI/CH): medium to high plasticity, red-brown, moist, w~PL, very stiff, residual							S			5,8,11 N = 19
	0.9	Silty CLAY (CI/CH): medium to high plasticity, yellow-brown, trace fine to coarse grained sand, moist to dry, w<PL, very stiff, residual							S			5,8,15 N = 23
580	1											
	1.6	DACITE: fine to coarse grained, yellow-brown, dry, low strength, highly weathered, highly fractured to fragmented -from 1.75m to 1.85m, 90° vertical joint						1.5m: - 1.60m: Slity Clay (Extremely weathered dacite) 1.66m: J, 80°, st, ro, cly vn 1.661m: - 1.85m: J, 25°-45°, pl, cly vn, fe stn 1.8m: J, 90°, pl, cly co (5mm) 1.85m: J, 45°, ir, ro ,stn, cly vn 1.92m: Driller's Break 1.98m: Driller's Break 2m: End of Run 2.001m: - 2.26m: fg	C	100	0	
579	2	- from 2.5m, medium to high strength, moderately weathered, fractured						2.26m: - 2.31m: J, 45°, pl, sm, stn 2.37m: J, 70°, pl, sm, stn 2.44m: J, 40°, ir, ro, fe stn 2.47m: - 2.6m: fg 2.6m: End of Run 2.65m: J, 25°, ir, ro, cly vn 2.83m: J, 75°, pl, sm, fe stn 2.89m: J, 10°, ir, ro, cly vn	C	100	0	
	3.0	- from 2.9m, fragmented							C	100	40	PL(D) = 1.36

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 581.0 AHD
EASTING: 699586
NORTHING: 6086202
DIP/AZIMUTH: 90°/--

BORE No: 18
PROJECT No: 103028.00
DATE: 10 - 11/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
578		DACITE: fine to coarse grained, yellow-brown, dry, medium to high strength, highly weathered, highly fractured to fragmented						2.891m: - 3.05m: fg	C	100	40	
								3.05m: End of Run 3.051m: - 3.40m: fg	C	100	0	
		- from 3.4m, fractured						3.4m: End of Run 3.43m: J, 45°, pl, sm, fe stn 3.46m: J, 5°, pl, sm, cly vn 3.56m: J, 45°, cu, ro, cly co (10mm) 3.64m: J, 20°, ir, ro, stn 3.69m: J, 65°, st, sl ro, stn 3.83m: J, 15°, ir, ro, cly vn 3.831m: - 3.94m: J, 90°, pl, sm, fe stn 3.94m: J, 45°, pl, ro, fe stn 4m: End of Run	C	100	58	PL(D) = 1.51
577	4.0	Bore discontinued at 4.0m -limit of investigation										
576	5											

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:** HW
TYPE OF BORING: 110mm diameter solid flight auger to 1.5m, then NMLC coring to 4.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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DOUGLAS PARTNERS PTY LTD

[redacted]

JERRABOMBERRA, PART RURAL BLOCK 2249, HARMAN

BORE: 18 DEPTH: 1.5 m – 4.0 m PROJECT: 103028.00 AUGUST 2020

BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699607
NORTHING: 6086207
DIP/AZIMUTH: 90°/--

BORE No: 19
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
582	0.15	TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with gravel up to 20mm in size, moist to dry, w<PL, with rootlets, stiff, FILL							
		Silty CLAY (CH): high plasticity, red brown, moist to dry, w<PL			0.5				
	0.7	Silty CLAY (CH): high plasticity, yellow brown, moist to dry, w<PL, extremely weathered dacite		S			4,4,6 N = 10		
581	1				0.95				1
				U	1.0				
	1.2	DACITE: fine to coarse grained, pale yellow grey, very low strength, highly weathered			1.2				
580	2	-from 2.0m, low strength, highly weathered							2

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Jacobs Group (Australia) Pty Ltd
PROJECT:
LOCATION: Part Rural Block 2249, Jerrabomberra

SURFACE LEVEL: 582.0 AHD
EASTING: 699607
NORTHING: 6086207
DIP/AZIMUTH: 90°/--

BORE No: 19
PROJECT No: 103028.00
DATE: 5/8/2020
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
579		DACITE: fine to coarse grained, pale yellow grey, very low strength, highly weathered *(continued)*		D	3.5				
578	4	-from 4.5m, medium to high strength, moderately weathered							4
577	5 5.0	Bore discontinued at 5.0m -limit of investigation							5

RIG: Explora 140 **DRILLER:** Ground Test **LOGGED:** SDG **CASING:**
TYPE OF BORING: 110mm diameter solid flight auger to 5.0m
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Appendix G

Laboratory Certificates of Analysis and Chain of Custody Documentation

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager:		**Sampler:**	**Attn:**
Emails:	@douglaspartners.com.a	@hotmail.com.au	**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** @envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Date Sampled	Sample Type: S - soil, W - water	Container Type: G - glass, P - plastic	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Clay			Notes/preservation
Bore 1/0.1	1	11/08/20	S	G	x									
Bore 1/0.5	2	18/08/20	S	G		x								
Bore 1/1.0	3	18/08/20	S	G		x								
Bore 2/0.1	4	04/08/20	S	G	x									
Bore 2/0.5	5	04/08/20	S	G	x									
Bore 2/1.0	6	04/08/20	S	G		x					x			
Bore 2/2.0	7	04/08/20	S	G		x								
Bore 2/3.0	8	04/08/20	S	G		x								
Bore 2/4.0	9	04/08/20	S	G		x								
Bore 2/5.0	10	04/08/20	S	G		x								
Bore3/0.1	11	06/08/20	S	G	x									
Bore 3/0.5	12	06/08/20	S	G		x								
Bore 3/1.0	13	06/08/20	S	G		x								
Bore 4/0.1	14	06/08/20	S	G	x									
Bore 4/0.5	15	06/08/20	S	G										
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** @douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

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

Job No: 249251

Date Received: 14/08/2020
Time Received: 10:00
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

received 18/08/2020

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 4/1.0	16	04/08/20	S	G		x								
Bore 4/2.0	17	04/08/20	S	G		x								
Bore 4/3.0	18	04/08/20	S	G	x	x	add 20.1.25							
Bore 4/4.0	NR	04/08/20	S	G	x									
Bore 5/0.1	19	06/08/20	S	G	x									
Bore 5/0.5	20	06/08/20	S	G		x								
Bore 5/1.0	21	06/08/20	S	G		x								
Bore 6/0.1	22	04/08/20	S	G	x									
Bore 6/0.5	23	04/08/20	S	G		x								
Bore 6/1.0	24	04/08/20	S	G	x	x								
Bore 6/2.0	25	04/08/20	S	G		x								
Bore 6/3.0	26	04/08/20	S	G		x								
Bore 6/4.0	27	04/08/20	S	G		x								
Bore 6/5.0	28	04/08/20	S	G		x								
Bore 6/6.0	29	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

249251

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 7/0.1	30	11/08/20	S	G	x	x								
Bore 7/0.5	31	11/08/20	S	G		x								
Bore 7/1.0	32	11/08/20	S	G		x								
Bore 8/0.1	33	04/08/20	S	G	x									
Bore 8/0.5	34	04/08/20	S	G		x								
Bore 8/1.0	35	04/08/20	S	G		x								
Bore 8/2.0	36	04/08/20	S	G		x								
Bore 8/3.0	37	04/08/20	S	G		x								
Bore 8/4.0	38	04/08/20	S	G		x								
Bore 8/5.0	39	04/08/20	S	G		x								
Bore 9/0.1	40	06/08/20	S	G	x									
Bore 9/0.5	41	06/08/20	S	G	x									
Bore 9/1.0	42	06/08/20	S	G		x								
Bore 10/0.1	43	04/08/20	S	G	x									
Bore 10/0.5	44	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

249251

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager	[redacted]	**Sampler:** [redacted]	**Attn:** [redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]@hotmail.com.au	**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** [redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, C			Notes/preservation
Bore 10/1.0	45	04/08/20	S	G	x						x			
Bore 10/2.0	46	04/08/20	S	G		x								
Bore 10/3.0	47	04/08/20	S	G		x								
Bore 10/4.0	48	04/08/20	S	G		x								
Bore 11/0.1	49	07/08/20	S	G	x									
Bore 11/0.5	50	07/08/20	S	G		x								
Bore 11/1.0	51	07/08/20	S	G		x								
Bore 12/0.1	52	11/08/20	S	G	x									
Bore 12/0.5	53	11/08/20	S	G		x								
Bore 12/1.0	54	11/08/20	S	G		x								
Bore 13/0.1	55	05/08/20	S	G	x									
Bore 13/0.5	56	05/08/20	S	G		x								
Bore 13/1.0	57	05/08/20	S	G		x								
Bore 13/2.0	58	05/08/20	S	G		x								
Bore 13/3.0	59	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

24925 1

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]	@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 13/4.0	60	05/08/20	S	G	x									
Bore 13/5.0	61	05/08/20	S	G		x								
Bore 14/0.1	62	05/08/20	S	G	x									
Bore 14/0.5	63	05/08/20	S	G		x								
Bore 14/1.0	64	05/08/20	S	G		x								
Bore 14/2.0	65	05/08/20	S	G		x								
Bore 14/3.0	66	05/08/20	S	G										
Bore 14/4.0	67	05/08/20	S	G										
Bore 14/5.0	68	05/08/20	S	G										
Bore 14/6.0	69	05/08/20	S	G										
Bore 15/0.1	70	05/08/20	S	G	x									
Bore 15/0.5	71	05/08/20	S	G	x									
Bore 15/1.0	72	05/08/20	S	G		x								
Bore 15/2.0	73	05/08/20	S	G		x								
Bore 15/3.0	74	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: COMB. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 15/4.0	75	05/08/20	S	G		x								
Bore 16/0.1	76	05/08/20	S	G	x									
Bore 16/0.5	77	05/08/20	S	G		x								
Bore 16/1.0	78	05/08/20	S	G		x								
Bore 16/2.0	79	05/08/20	S	G		x								
Bore 16/3.0	80	05/08/20	S	G		x								
Bore 16/4.0	81	05/08/20	S	G		x								
Bore 16/5.0	82	05/08/20	S	G		x								
Bore 17/0.1	83	10/08/20	S	G	x									
Bore 17/0.5	84	10/08/20	S	G		x								
Bore 17/1.0	85	10/08/20	S	G	x									
Bore 18/0.1	86	10/08/20	S	G	x									
Bore 18/0.5	87	10/08/20	S	G		x								
Bore 18/1.0	88	10/08/20	S	G		x								
TB1	89	04/08/20	S	G			x							
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

249231

[redacted]

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]	@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, C			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

249251

[redacted]

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 19/0.1	100	05/08/20	S	G	x									
Bore 19/0.5	101	05/08/20	S	G							x			
Bore 19/1.0	102	05/08/20	S	G		x								
Bore 19/2.0	103	05/08/20	S	G	x									
Bore 19/3.0	104	05/08/20	S	G		x								
Bore 19/4.0	105	05/08/20	S	G		x								
Bore 19/5.0	106	05/08/20	S	G										
R1	107					x								
R2	108					x								
R3	109					x								
R4	110					x								
TS1 1/8	111						x	asbestos ID 3/9/8						
TB4 6/8	112						x							
TB4 6/8	113						x							
PQL (S) mg/kg														ANZECC PQLs req'd for all water analytes ☐

Edm

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

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Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au		[redacted]@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Date Sampled	Sample Type: S - soil, W - water	Container Type: G - glass, P - plastic	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 1/0.1	1	11/08/20	S	P	x									
Bore 1/0.5	2	18/08/20	S	P		x								
Bore 1/1.0	3	18/08/20	S	P		x								
Bore 2/0.1	4	04/08/20	S	P		x								
Bore 2/0.5	5	04/08/20	S	P		x								
Bore 2/1.0	6	04/08/20	S	P		x								
Bore 2/2.0	7	04/08/20	S	P		x								
Bore 2/3.0	8	04/08/20	S	P		x								
Bore 2/4.0	9	04/08/20	S	P		x								
Bore 2/5.0	10	04/08/20	S	P		x								
Bore3/0.1	11	06/08/20	S	P		x								
Bore 3/0.5	12	06/08/20	S	P		x								
Bore 3/1.0	13	06/08/20	S	P	x									
Bore 4/0.1	14	06/08/20	S	P		x								
Bore 4/0.5	15	06/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

249251

[redacted]

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold							Notes/preservation
Bore 4/1.0	16	04/08/20	S	P		x							
Bore 4/2.0	17	04/08/20	S	P		x							
Bore 4/3.0	18	04/08/20	S	P		x							
Bore 4/4.0	NR	04/08/20	S	P		x							
Bore 5/0.1	19	06/08/20	S	P		x							
Bore 5/0.5	20	06/08/20	S	P		x							
Bore 5/1.0	21	06/08/20	S	P		x							
Bore 6/0.1	22	04/08/20	S	P		x							
Bore 6/0.5	23	04/08/20	S	P		x							
Bore 6/1.0	24	04/08/20	S	P		x							
Bore 6/2.0	25	04/08/20	S	P	x								
Bore 6/3.0	26	04/08/20	S	P		x							
Bore 6/4.0	27	04/08/20	S	P		x							
Bore 6/5.0	28	04/08/20	S	P		x							
Bore 6/6.0	29	04/08/20	S	P		x							
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:		**Relinquished by:**	SDG	**Transported to laboratory by:**	TNT
Send Results to:	Douglas Partners Pty Ltd	**Address:**	[redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:		**Received by:**		**Date & Time:**	

249251

[redacted]

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 7/0.1	30	11/08/20	S	P		x								
Bore 7/0.5	31	11/08/20	S	P	x									
Bore 7/1.0	32	11/08/20	S	P		x								
Bore 8/0.1	33	04/08/20	S	P		x								
Bore 8/0.5	34	04/08/20	S	P		x								
Bore 8/1.0	35	04/08/20	S	P		x								
Bore 8/2.0	36	04/08/20	S	P		x								
Bore 8/3.0	37	04/08/20	S	P		x								
Bore 8/4.0	38	04/08/20	S	P		x								
Bore 8/5.0	39	04/08/20	S	P	x									
Bore 9/0.1	40	06/08/20	S	P		x								
Bore 9/0.5	41	06/08/20	S	P		x								
Bore 9/1.0	42	06/08/20	S	P		x								
Bore 10/0.1	43	04/08/20	S	P		x								
Bore 10/0.5	44	04/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

249251

[redacted]

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Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab	
Project Name: Jerrabomberra	**Order Number**		
Project Manager:	**Sampler:**	**Attn:**	
Emails: @douglaspartners.com.au		**Phone:** 612 9910 6200	
Date Required: Standard ☐		**Email:** @envirolab.com.au	
Prior Storage: ☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

	Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
45	Bore 10/1.0	44	04/08/20	S	P		x								
46	Bore 10/2.0	45	04/08/20	S	P	x									
47	Bore 10/3.0	46	04/08/20	S	P		x								
48	Bore 10/4.0	47	04/08/20	S	P		x								
49	Bore 11/0.1	48	07/08/20	S	P		x								
50	Bore 11/0.5	49	07/08/20	S	P		x								
51	Bore 11/1.0	50	07/08/20	S	P		x								
52	Bore 12/0.1	51	11/08/20	S	P	x									
53	Bore 12/0.5	52	11/08/20	S	P		x								
54	Bore 12/1.0	53	11/08/20	S	P		x								
55	Bore 13/0.1	54	05/08/20	S	P		x								
56	Bore 13/0.5	55	05/08/20	S	P		x								
57	Bore 13/1.0	56	05/08/20	S	P		x								
58	Bore 13/2.0	57	05/08/20	S	P		x								
59	Bore 13/3.0	58	05/08/20	S	P		x								
	PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** @douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 13/4.0	60	05/08/20	S	P		x								
Bore 13/5.0	61	05/08/20	S	P		x								
Bore 14/0.1	62	05/08/20	S	P		x								
Bore 14/0.5	63	05/08/20	S	P		x								
Bore 14/1.0	64	05/08/20	S	P		x								
Bore 14/2.0	65	05/08/20	S	P		x								
Bore 14/3.0	66	05/08/20	S	P		x								
Bore 14/4.0	67	05/08/20	S	P		x								
Bore 14/5.0	68	05/08/20	S	P	x									
Bore 14/6.0	69	05/08/20	S	P		x								
Bore 15/0.1	70	05/08/20	S	P		x								
Bore 15/0.5	71	05/08/20	S	P		x								
Bore 15/1.0	72	05/08/20	S	P		x								
Bore 15/2.0	73	05/08/20	S	P		x								
Bore 15/3.0	74	05/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No: 249251

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:		**Sampler:**		**Attn:**	
Emails:	@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold		Asbestos ID						Notes/preservation
Bore 15/4.0	75	05/08/20	S	P		x								
Bore 16/0.1	76	05/08/20	S	P		x								
Bore 16/0.5	77	05/08/20	S	P		x								
Bore 16/1.0	78	05/08/20	S	P		x								
Bore 16/2.0	79	05/08/20	S	P		x								
Bore 16/~~3.0~~ 2.5	80	05/08/20	S	P		x								
Bore 16/4.0	81	05/08/20	S	P		x								
Bore 16/5.0	82	05/08/20	S	P		x								
Bore 17/0.1	83	10/08/20	S	P		x								
Bore 17/0.5	84	10/08/20	S	P		x								
Bore 17/1.0	85	10/08/20	S	P	x									
Bore 18/0.1	86	10/08/20	S	P		x								
Bore 18/0.5	87	10/08/20	S	P		x								
Bore 18/1.0	88	10/08/20	S	P		x								
R5	89	11/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No: 249251

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** @douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manage	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold							Notes/preservation
R6	98	11/08/20		P		x							
R7	99	11/08/20		P		x							
RR5	—	11/08/20		P		x							Please send to third party lab
RR6	—	11/08/20		P		x							Please send to third party lab
RR7	—	11/08/20		P		x							Please send to third party lab
R1	107			P		x							
R2	108			P		x							
R3	109			P		x							
R4	110			P		x							
Bore 19/0.1	100	05/08/20	S	P	x								
Bore 19/0.5	101	05/08/20	S	P		x							
Bore 19/1.0	102	05/08/20	S	P		x							
Bore 19/2.0	103	05/08/20	S	P		x							
Bore 19/3.0	104	05/08/20	S	P		x							
Bore 19/4.0	105	05/08/20	S	P		x							
PQL (S) mg/kg												**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

24925)

[redacted]

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251
Date Sample Received	14/08/2020
Date Instructions Received	19/08/2020
Date Results Expected to be Reported	25/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 1-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 1-0.5																✓
Bore 1-1.0																✓
Bore 2-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-1.0											✓	✓	✓			
Bore 2-2.0																✓
Bore 2-3.0																✓
Bore 2-4.0																✓
Bore 2-5.0																✓
Bore 3-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 3-0.5																✓
Bore 3-1.0										✓						
Bore 4-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 4-0.5																✓
Bore 4-1.0																✓
Bore 4-2.0																✓
Bore 4-3.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.5																✓
Bore 5-1.0																✓
Bore 6-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-0.5																✓
Bore 6-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-2.0										✓						
Bore 6-3.0																✓
Bore 6-4.0																✓
Bore 6-5.0																✓
Bore 6-6.0																✓
Bore 7-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 7-0.5										✓						
Bore 7-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 8-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 8-0.5																✓
Bore 8-1.0																✓
Bore 8-2.0																✓
Bore 8-3.0																✓
Bore 8-4.0																✓
Bore 8-5.0										✓						
Bore 9-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-1.0																✓
Bore 10-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 10-0.5																✓
Bore 10-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓			
Bore 10-2.0										✓						
Bore 10-3.0																✓
Bore 10-4.0																✓
Bore 11-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 11-0.5																✓
Bore 11-1.0																✓
Bore 12-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 12-0.5																✓
Bore 12-1.0																✓
Bore 13-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-0.5																✓
Bore 13-1.0																✓
Bore 13-2.0																✓
Bore 13-3.0																✓
Bore 13-4.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-5.0																✓
Bore 14-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 14-0.5																✓
Bore 14-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 14-2.0																✓
Bore 14-3.0																✓
Bore 14-4.0																✓
Bore 14-5.0										✓						
Bore 14-6.0																✓
Bore 15-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-1.0																✓
Bore 15-2.0																✓
Bore 15-3.0																✓
Bore 15-4.0																✓
Bore 16-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 16-0.5																✓
Bore 16-1.0																✓
Bore 16-2.0																✓
Bore 16-3.0																✓
Bore 16-4.0																✓
Bore 16-5.0																✓
Bore 17-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 17-0.5																✓
Bore 17-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 18-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 18-0.5																✓
Bore 18-1.0																✓
TB1	✓	✓														
TS2	✓															
TB2	✓	✓														
TS3	✓															
TB3	✓	✓														
RIN1														✓	✓	
RIN2														✓	✓	
RIN3														✓	✓	

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
R5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R6	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R7																✓
Bore 19-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 19-0.5											✓	✓	✓			
Bore 19-1.0																✓
Bore 19-2.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 19-3.0																✓
Bore 19-4.0																✓
Bore 19-5.0																✓
R1																✓
R2																✓
R3																✓
R4																✓
TS1	✓															
TS4	✓															
TB4	✓	✓														

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 249251

Client Details

Client	Douglas Partners Canberra
Attention	
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	110 soil, 3 water
Date samples received	14/08/2020
Date completed instructions received	19/08/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	25/08/2020
Date of Issue	25/08/2020
Reissue Details	This report replaces R00 created on 25/08/2020 due to: matrix type error

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Results Approved By
, Team Leader, Inorganics
, Senior Chemist
, Senior Chemist
, Asbestos Supervisor
, Organics Development Manager, Sydney
, Organics Supervisor

Authorised By
, Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	99	103	113	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	128	97	114	103	106

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	112	110	112	111

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	115	109	117	124	100

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vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	109	110	103	110

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-86	249251-89	249251-90	249251-91	249251-92
Your Reference	UNITS	Bore 18	TB1	TS2	TB2	TS3
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	[NA]	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	110%	<0.2	103%
Toluene	mg/kg	<0.5	<0.5	115%	<0.5	105%
Ethylbenzene	mg/kg	<1	<1	112%	<1	106%
m+p-xylene	mg/kg	<2	<2	113%	<2	107%
o-Xylene	mg/kg	<1	<1	114%	<1	108%
naphthalene	mg/kg	<1	<1	[NA]	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	[NA]	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	105	106	103	104	100

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vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-93	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	TB3	R5	R6	Bore 19	Bore 19
Depth		-	-	-	0.1	2.0
Date Sampled		6/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	20/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	20/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	114	101	101	104	111

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		249251-111	249251-112	249251-113
Your Reference	UNITS	TS1	TS4	TB4
Depth		-	-	-
Date Sampled		11/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	[NA]	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	[NA]	<25
Benzene	mg/kg	97%	109%	<0.2
Toluene	mg/kg	94%	112%	<0.5
Ethylbenzene	mg/kg	97%	112%	<1
m+p-xylene	mg/kg	96%	111%	<2
o-Xylene	mg/kg	97%	112%	<1
naphthalene	mg/kg	[NA]	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	[NA]	<3
Surrogate aaa-Trifluorotoluene	%	95	96	108

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svTRH (C10-C40) in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	110	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	130	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	52	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	52	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	190	100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	240	100	<50	<50	<50
Surrogate o-Terphenyl	%	87	89	86	98	84

svTRH (C10-C40) in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	86	87	102	87

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svTRH (C10-C40) in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	85	87	87	88

svTRH (C10-C40) in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	110
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	180
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	240
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	150
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	390
Surrogate o-Terphenyl	%	86	87	97	87	97

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svTRH (C10-C40) in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	88	88	87	87

svTRH (C10-C40) in Soil						
Our Reference		249251-86	249251-89	249251-91	249251-93	249251-97
Your Reference	UNITS	Bore 18	TB1	TB2	TB3	R5
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	6/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	120	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	89	85	86	85

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svTRH (C10-C40) in Soil					
Our Reference		249251-98	249251-100	249251-103	249251-113
Your Reference	UNITS	R6	Bore 19	Bore 19	TB4
Depth		-	0.1	2.0	-
Date Sampled		11/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	87	87	87	91

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PAHs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	115	115	120	119	120

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	130	119	118	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	119	120	120	120	125

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.7
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	10
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	3.9
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	3.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	5.8
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	4.6
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	34
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Surrogate p-Terphenyl-d14	%	121	120	119	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	121	123	122	123	124

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	122	119	127	121	121

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	117	116	115	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

PCBs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

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PCBs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

PCBs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

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PCBs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

PCBs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

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Acid Extractable metals in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	5	4	<4	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	78	42	48	28	45
Copper	mg/kg	10	23	14	12	14
Lead	mg/kg	14	60	20	72	36
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	10	10	7	8
Zinc	mg/kg	14	120	42	57	27

Acid Extractable metals in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	49	56	31	46	34
Copper	mg/kg	8	9	11	17	10
Lead	mg/kg	6	12	26	9	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	6	6	16	7
Zinc	mg/kg	52	12	28	31	37

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Acid Extractable metals in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	7	7	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	40	38	32	35	51
Copper	mg/kg	7	10	12	16	20
Lead	mg/kg	15	23	13	37	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	5	6	10	17
Zinc	mg/kg	13	33	16	120	40

Acid Extractable metals in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	29	52	39	45	17
Copper	mg/kg	10	10	8	14	7
Lead	mg/kg	14	15	9	7	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	16	13	23
Zinc	mg/kg	16	14	16	46	11

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Acid Extractable metals in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	36	59	36	24	35
Copper	mg/kg	12	21	14	13	14
Lead	mg/kg	12	12	21	28	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	15	10	10	13
Zinc	mg/kg	31	19	56	55	18

Acid Extractable metals in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	41	50	52	52	43
Copper	mg/kg	17	8	20	19	14
Lead	mg/kg	35	30	10	23	34
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	5	14	12	10
Zinc	mg/kg	52	20	19	42	58

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Acid Extractable metals in soil			
Our Reference		249251-114	249251-115
Your Reference	UNITS	Bore 1 - [TRIPLICATE]	Bore 15 - [TRIPLICATE]
Depth		0.1	0.1
Date Sampled		11/08/2020	5/08/2020
Type of sample		soil	soil
Date prepared	-	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	49	44
Copper	mg/kg	12	14
Lead	mg/kg	12	11
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	7	9
Zinc	mg/kg	17	22

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Misc Soil - Inorg						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Misc Soil - Inorg						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Moisture						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-13
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 3
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	18	15	13	11

Moisture						
Our Reference		249251-14	249251-18	249251-19	249251-22	249251-24
Your Reference	UNITS	Bore 4	Bore 4	Bore 5	Bore 6	Bore 6
Depth		0.1	3.0	0.1	0.1	1.0
Date Sampled		6/08/2020	4/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	8.3	6.1	14	15	15

Moisture						
Our Reference		249251-25	249251-30	249251-31	249251-33	249251-39
Your Reference	UNITS	Bore 6	Bore 7	Bore 7	Bore 8	Bore 8
Depth		2.0	0.1	0.5	0.1	5.0
Date Sampled		4/08/2020	11/08/2020	11/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	25	16	32	9.3	6.3

Moisture						
Our Reference		249251-40	249251-41	249251-43	249251-45	249251-46
Your Reference	UNITS	Bore 9	Bore 9	Bore 10	Bore 10	Bore 10
Depth		0.1	0.5	0.1	1.0	2.0
Date Sampled		6/08/2020	6/08/2020	4/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	14	16	20	8.0

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Moisture						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	9.5	13	13	8.4	3.2

Moisture						
Our Reference		249251-68	249251-70	249251-71	249251-76	249251-83
Your Reference	UNITS	Bore 14	Bore 15	Bore 15	Bore 16	Bore 17
Depth		5.0	0.1	0.5	0.1	0.1
Date Sampled		5/08/2020	5/08/2020	5/08/2020	5/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	10	16	23	16	20

Moisture						
Our Reference		249251-85	249251-86	249251-97	249251-98	249251-100
Your Reference	UNITS	Bore 17	Bore 18	R5	R6	Bore 19
Depth		1.0	0.1	-	-	0.1
Date Sampled		10/08/2020	10/08/2020	11/08/2020	11/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	20	13	13	25	19

Moisture		
Our Reference		249251-103
Your Reference	UNITS	Bore 19
Depth		2.0
Date Sampled		5/08/2020
Type of sample		soil
Date prepared	-	18/08/2020
Date analysed	-	19/08/2020
Moisture	%	19

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	31.93g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	YES	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 45g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 30g	Approx. 25g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	25.44g	Approx. 25g	Approx. 25g	Approx. 25g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	YES	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 30g	Approx. 25g	Approx. 25g	Approx. 30g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

PFAS in Soils Short						
Our Reference		249251-1	249251-13	249251-25	249251-31	249251-39
Your Reference	UNITS	Bore 1	Bore 3	Bore 6	Bore 7	Bore 8
Depth		0.1	1.0	2.0	0.5	5.0
Date Sampled		11/08/2020	6/08/2020	4/08/2020	11/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	1.8	0.6	<0.1	0.2	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.7	0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	108	109	98	112	101
Surrogate $^{13}C_2$ *PFOA*	%	95	108	98	101	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	79	93	94	92	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	64	69	79	76	85
Extracted ISTD $^{13}C_4$ *PFOA*	%	66	84	91	88	92
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	73	88	88	85	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	75	108	100	108	113
Total Positive PFHxS & PFOS	µg/kg	2.2	0.6	<0.1	0.2	<0.1
Total Positive PFOS & PFOA	µg/kg	2.5	0.7	<0.1	0.2	<0.1
Total Positive PFAS	µg/kg	2.9	0.7	<0.1	0.2	<0.1

Client Reference: 103028.01, Jerrabomberra

PFAS in Soils Short						
Our Reference		249251-46	249251-52	249251-68	249251-85	249251-100
Your Reference	UNITS	Bore 10	Bore 12	Bore 14	Bore 17	Bore 19
Depth		2.0	0.1	5.0	1.0	0.1
Date Sampled		4/08/2020	11/08/2020	5/08/2020	10/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	0.4	<0.1	<0.1	0.9
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	101	108	102	105	112
Surrogate $^{13}C_2$ *PFOA*	%	96	95	92	95	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	93	99	104	92
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	106	113	110	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	108	105	103	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95	113	98	97	180
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	102	106	107	97	#
Total Positive PFHxS & PFOS	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFOS & PFOA	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFAS	µg/kg	<0.1	0.8	<0.1	<0.1	0.9

Client Reference: 103028.01, Jerrabomberra

Misc Inorg - Soil				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
pH 1:5 soil:water	pH Units	6.3	7.1	6.3

Client Reference: 103028.01, Jerrabomberra

CEC				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	21/08/2020	21/08/2020	21/08/2020
Exchangeable Ca	meq/100g	10	14	6.2
Exchangeable K	meq/100g	0.2	0.4	0.4
Exchangeable Mg	meq/100g	10	9.8	6.4
Exchangeable Na	meq/100g	0.50	0.94	0.67
Cation Exchange Capacity	meq/100g	21	25	14

Client Reference: 103028.01, Jerrabomberra

Clay 50-120g				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	24/08/2020	24/08/2020	24/08/2020
Clay in soils <2µm	% (w/w)	42	68	76

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
TRH C_6 - C_9	µg/L	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10
Benzene	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
o-xylene	µg/L	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	105	122	122
Surrogate toluene-d8	%	93	96	92
Surrogate 4-BFB	%	88	86	87

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	22/08/2020	22/08/2020	22/08/2020
TRH C_{10} - C_{14}	µg/L	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	105	107	99

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

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Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			20/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	75	69
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	94	86
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	94	87
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	90	81
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	89	81
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	113	1	98	110	12	112	103

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
Benzene	mg/kg	0.2	Org-023	[NT]	33	<0.2	<0.2	0	77	70
Toluene	mg/kg	0.5	Org-023	[NT]	33	<0.5	<0.5	0	82	87
Ethylbenzene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	81	87
m+p-xylene	mg/kg	2	Org-023	[NT]	33	<2	<2	0	77	82
o-Xylene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	76	81
naphthalene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	33	110	106	4	99	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	70	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	70	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	70	98	102	4	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	103	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	103	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	103	111	101	9	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	88	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	110	110	0	72	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	130	160	21	123	120
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	52	<50	4	88	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	190	220	15	72	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	110	10	123	120
Surrogate o-Terphenyl	%		Org-020	90	1	87	103	17	112	89

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
Surrogate o-Terphenyl	%		Org-020	[NT]	33	85	86	1	106	87

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	70	88	89	1	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	103	87	87	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	99
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	103
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	109
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	112
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	108	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	123	1	115	115	0	113	112

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	101
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	106
Fluorene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	105
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	113	109
Anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	118	114
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	33	<0.05	<0.05	0	107	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	33	119	118	1	121	117

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QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	70	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	70	121	122	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	103	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	103	121	121	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	101
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	98
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	99
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	103
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	127
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	86
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	105
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

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QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	97
HCB	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	111	108
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	103	97
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	108	105
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	106	104
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	101	95
Endrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	82
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	74	74
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	82	78
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	94
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	105
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	83
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	124
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	107
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	91
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	78	71
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	96
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	83	71
Malathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	80	92
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	97	97
Parathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	76	73
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	113
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	118	116
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	118	1	93	93	0	92	91

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	120	118
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	33	114	113	1	115	113

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	<4	1	5	<4	22	103	86
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	104	85
Chromium	mg/kg	1	Metals-020	<1	1	78	43	58	102	87
Copper	mg/kg	1	Metals-020	<1	1	10	9	11	99	94
Lead	mg/kg	1	Metals-020	<1	1	14	11	24	101	108
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	88	97
Nickel	mg/kg	1	Metals-020	<1	1	8	6	29	103	86
Zinc	mg/kg	1	Metals-020	<1	1	14	12	15	103	102

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	[NT]	33	<4	<4	0	96	69
Cadmium	mg/kg	0.4	Metals-020	[NT]	33	<0.4	<0.4	0	98	71
Chromium	mg/kg	1	Metals-020	[NT]	33	40	34	16	98	85
Copper	mg/kg	1	Metals-020	[NT]	33	7	7	0	96	87
Lead	mg/kg	1	Metals-020	[NT]	33	15	14	7	98	71
Mercury	mg/kg	0.1	Metals-021	[NT]	33	<0.1	<0.1	0	95	77
Nickel	mg/kg	1	Metals-020	[NT]	33	6	5	18	99	77
Zinc	mg/kg	1	Metals-020	[NT]	33	13	10	26	98	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	70	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	70	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	70	36	78	74	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	70	12	13	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	70	12	11	9	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	70	8	15	61	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	70	31	32	3	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	103	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	103	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	103	43	42	2	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	103	14	15	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	103	34	30	12	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	103	10	11	10	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	103	58	49	17	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	102	101

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	33	<5	<5	0	103	103

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	70	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	103	<5	<5	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-85
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.4	0.3	29	109	99
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	1.8	1.8	0	98	91
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	0.7	0.8	13	100	98
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	87
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	102	134
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	1	108	104	4	106	100
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	106	1	95	106	11	100	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	97	1	79	78	1	98	103
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	90	1	64	63	2	107	108
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	94	1	66	66	0	105	103
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	100	1	73	73	0	98	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	107	1	75	71	5	108	85

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	117	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate toluene-d8	%		Org-023	92	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate 4-BFB	%		Org-023	88	[NT]	[NT]	[NT]	[NT]	115	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
Surrogate o-Terphenyl	%		Org-020	116	[NT]	[NT]	[NT]	[NT]	72	[NT]

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Client Reference: 103028.01, Jerrabomberra

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Client Reference: 103028.01, Jerrabomberra

Report Comments

BTEX/TRH/PAH/OCP/OPP/PCB/Phenols of Bore 4/3.0 - out of recommended holding time

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 249251-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 249251-114.
- The laboratory RPD acceptance criteria has been exceeded for 249251-70 for Cr and Ni. Therefore a triplicate result has been issued as laboratory sample number 249251-115.
- Spike recovery for As in sample #85 at 69% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 96%. Sample heterogeneity suspected.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

pH / EC
Samples were out of the recommended holding time for this analysis.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

Sample 249251-4; Chrysotile asbestos identified in matted material, it is estimated to be 0.34g/kg in 31.93g of soil (i.e. > reporting limit for the method of 0.1g/kg).

Sample 249251-70; Loose fibre bundles of Chrysotile asbestos identified within the sample, however it is estimated less than the reporting limit for the method (i.e. < 0.1g/kg).

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]douglaspartners.com.a			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
116 M1	—	05/08/20	M	P				x						To be sent on Monday
117 M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

rec'd on 21/8/2020 10:30 RL

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Lab Report/Reference No:

Metals to Analyse: 8HM unless specified here:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

249251 - A

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251-A
Date Sample Received	14/08/2020
Date Instructions Received	21/08/2020
Date Results Expected to be Reported	28/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water, 2 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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12 Ashley St Chatswood NSW 2067
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www.envirolab.com.au

Sample ID	Asbestos ID - materials	On Hold
Bore 1-0.1		✓
Bore 1-0.5		✓
Bore 1-1.0		✓
Bore 2-0.1		✓
Bore 2-0.5		✓
Bore 2-1.0		✓
Bore 2-2.0		✓
Bore 2-3.0		✓
Bore 2-4.0		✓
Bore 2-5.0		✓
Bore 3-0.1		✓
Bore 3-0.5		✓
Bore 3-1.0		✓
Bore 4-0.1		✓
Bore 4-0.5		✓
Bore 4-1.0		✓
Bore 4-2.0		✓
Bore 4-3.0		✓
Bore 5-0.1		✓
Bore 5-0.5		✓
Bore 5-1.0		✓
Bore 6-0.1		✓
Bore 6-0.5		✓
Bore 6-1.0		✓
Bore 6-2.0		✓
Bore 6-3.0		✓
Bore 6-4.0		✓
Bore 6-5.0		✓
Bore 6-6.0		✓
Bore 7-0.1		✓
Bore 7-0.5		✓
Bore 7-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 8-0.1		✓
Bore 8-0.5		✓
Bore 8-1.0		✓
Bore 8-2.0		✓
Bore 8-3.0		✓
Bore 8-4.0		✓
Bore 8-5.0		✓
Bore 9-0.1		✓
Bore 9-0.5		✓
Bore 9-1.0		✓
Bore 10-0.1		✓
Bore 10-0.5		✓
Bore 10-1.0		✓
Bore 10-2.0		✓
Bore 10-3.0		✓
Bore 10-4.0		✓
Bore 11-0.1		✓
Bore 11-0.5		✓
Bore 11-1.0		✓
Bore 12-0.1		✓
Bore 12-0.5		✓
Bore 12-1.0		✓
Bore 13-0.1		✓
Bore 13-0.5		✓
Bore 13-1.0		✓
Bore 13-2.0		✓
Bore 13-3.0		✓
Bore 13-4.0		✓
Bore 13-5.0		✓
Bore 14-0.1		✓
Bore 14-0.5		✓
Bore 14-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 14-2.0		✓
Bore 14-3.0		✓
Bore 14-4.0		✓
Bore 14-5.0		✓
Bore 14-6.0		✓
Bore 15-0.1		✓
Bore 15-0.5		✓
Bore 15-1.0		✓
Bore 15-2.0		✓
Bore 15-3.0		✓
Bore 15-4.0		✓
Bore 16-0.1		✓
Bore 16-0.5		✓
Bore 16-1.0		✓
Bore 16-2.0		✓
Bore 16-3.0		✓
Bore 16-4.0		✓
Bore 16-5.0		✓
Bore 17-0.1		✓
Bore 17-0.5		✓
Bore 17-1.0		✓
Bore 18-0.1		✓
Bore 18-0.5		✓
Bore 18-1.0		✓
TB1		✓
TS2		✓
TB2		✓
TS3		✓
TB3		✓
RIN1		✓
RIN2		✓
RIN3		✓

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

Sample ID	Asbestos ID - materials	On Hold
R5		✓
R6		✓
R7		✓
Bore 19-0.1		✓
Bore 19-0.5		✓
Bore 19-1.0		✓
Bore 19-2.0		✓
Bore 19-3.0		✓
Bore 19-4.0		✓
Bore 19-5.0		✓
R1		✓
R2		✓
R3		✓
R4		✓
TS1		✓
TS4		✓
TB4		✓
Bore 1 - [TRIPLICATE]-0.1		✓
Bore 15 - [TRIPLICATE]-0.1		✓
M1	✓	
M2	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 249251-A

Client Details

Client	Douglas Partners Canberra
Attention	
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	109 soil, 1 18, 3 water, 2 material
Date samples received	14/08/2020
Date completed instructions received	21/08/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	28/08/2020
Date of Issue	25/08/2020

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Identifier:
Authorised by Asbestos Approved Signatory:
Results Approved By
, Asbestos Supervisor

Authorised By
, Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - materials			
Our Reference		249251-A-116	249251-A-117
Your Reference	UNITS	M1	M2
Depth		-	-
Date Sampled		05/08/2020	10/08/2020
Type of sample		material	material
Date analysed	-	25/08/2020	25/08/2020
Mass / Dimension of Sample	-	45x40x4mm	80x40x5mm
Sample Description	-	Beige fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2029214**		
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: peter.storey@douglaspartners.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 103028.01 Jerrabomberra	Page	: 1 of 3
Order number	: ----	Quote number	: EM2017DOUPAR0002 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jerrabomberra		
Sampler	:		

Dates

Date Samples Received	: 19-Aug-2020 18:15	Issue Date	: 20-Aug-2020
Client Requested Due Date	: 27-Aug-2020	Scheduled Reporting Date	: **27-Aug-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 12.6 - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 6 / 6

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Issue Date	:	20-Aug-2020
Page	:	2 of 3
Work Order	:	ES2029214 Amendment 0
Client	:	DOUGLAS PARTNERS PTY LTD

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EP035SF (solids) Total Phenol by Segmented Flow Analyser	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2029214-001	11-Aug-2020 00:00	RR5	✓	✓	✓	✓
ES2029214-002	11-Aug-2020 00:00	RR6	✓	✓	✓	✓
ES2029214-003	11-Aug-2020 00:00	RR7	✓	✓	✓	✓
ES2029214-004	11-Aug-2020 00:00	RR5		✓		
ES2029214-005	11-Aug-2020 00:00	RR6		✓		
ES2029214-006	11-Aug-2020 00:00	RR7		✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Issue Date	:	20-Aug-2020
Page	:	3 of 3
Work Order	:	ES2029214 Amendment 0
Client	:	DOUGLAS PARTNERS PTY LTD

Requested Deliverables

ACCOUNTS BRISBANE

- A4 - AU Tax Invoice (INV)	Email	brisbane@douglaspartners.com.au

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	accounts@douglaspartners.com.au
- *AU Certificate of Analysis - NATA (COA)	Email	@douglaspartners.com.
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	@douglaspartners.com.
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	@douglaspartners.com.
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	@douglaspartners.com.
- Chain of Custody (CoC) (COC)	Email	@douglaspartners.com.
- EDI Format - ENMRG (ENMRG)	Email	@douglaspartners.com.
- EDI Format - ESDAT (ESDAT)	Email	@douglaspartners.com.
- EDI Format - XTab (XTAB)	Email	@douglaspartners.com.
- *AU Certificate of Analysis - NATA (COA)	Email	@douglaspartner
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	@douglaspartner
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	@douglaspartner
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	@douglaspartner
- Chain of Custody (CoC) (COC)	Email	@douglaspartner
- EDI Format - ENMRG (ENMRG)	Email	@douglaspartner
- EDI Format - ESDAT (ESDAT)	Email	@douglaspartner
- EDI Format - XTab (XTAB)	Email	@douglaspartner

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager:	[redacted]	**Sampler:** [redacted]	**Attn:** [redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]	**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** [redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
1 RR5	—	11/08/20	S	G	x									Please send to third party lab
2 RR6	—	11/08/20	S	G	x									Please send to third party lab
3 RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes**

Environmental Division
Sydney
Work Order Reference
ES2029214

Telephone : + 61-2-8784 8555

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

Relinquished by EDS SYD [redacted]
19/8/20 1030 AM

249251

Rec- Soffian [redacted]
19/8/20 1815 12 CK

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Analytes: Hold	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Notes/preservation
R6	98	11/08/20		P		x								
R7	99	11/08/20		P		x								
4 RR5	—	11/08/20		P		x								Please send to third party lab
5 RR6	—	11/08/20		P		x								Please send to third party lab
6 RR7	—	11/08/20		P		x								Please send to third party lab
R1	107			P		x								
R2	108			P		x								
R3	109			P		x								
R4	110			P		x								
Bore 19/0.1	100	05/08/20	S	P	x									
Bore 19/0.5	101	05/08/20	S	P		x								
Bore 19/1.0	102	05/08/20	S	P		x								
Bore 19/2.0	103	05/08/20	S	P		x								
Bore 19/3.0	104	05/08/20	S	P		x								
Bore 19/4.0	105	05/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes**

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No: 249251

Total number of samples in container:

Relinquished by: SDG

Transported to laboratory by: TNT

Send Results to: Douglas Partners Pty Ltd

Address [redacted]@douglaspartners.com.au

Phone:

Fax:

Signed:

Received by:

Date & Time:

Relinquished by EDS Syd [redacted]
19/8/20 1000
CM

Rec - 60 for 5 days
19/8/20 1815
12°C

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2029214**	Page	: 1 of 8
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: [redacted]	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020 18:15
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020 16:52
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

Page	:	2 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Page	:	3 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		18.8	25.4	10.8	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	----	----
Asbestos (Trace)	1332-21-4	5	Fibres		No	No	No	----	----
Asbestos Type	1332-21-4	-	--		-	-	-	----	----
Sample weight (dry)	----	0.01	g		12.6	9.31	21.0	----	----
APPROVED IDENTIFIER:	----	-	--		A. SMYLIE	A. SMYLIE	A. SMYLIE	----	----
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	----	----
Organic Fibre	----	0.1	g/kg		No	No	No	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		15	21	19	----	----
Copper	7440-50-8	5	mg/kg		<5	10	5	----	----
Lead	7439-92-1	5	mg/kg		12	<5	8	----	----
Nickel	7440-02-0	2	mg/kg		<2	7	3	----	----
Zinc	7440-66-6	5	mg/kg		10	7	6	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	1	mg/kg		<1	<1	<1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

Page	:	4 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		101	102	107	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		112	106	116	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		103	88.0	107	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		88.4	82.8	86.9	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		90.6	83.9	88.0	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		75.1	64.2	77.1	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	94.8	96.3	----	----
Anthracene-d10	1719-06-8	0.5	%		99.7	94.8	94.7	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		97.3	89.8	91.2	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		83.3	87.0	97.8	----	----
Toluene-D8	2037-26-5	0.2	%		91.8	96.6	103	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		96.6	97.1	100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	RR5 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR6 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR7 - 11-Aug-2020 00:00	Mid brown soil.

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2029214**	Page	: 1 of 11
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3213117)									
ES2029214-001	RR5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	10	43.7	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	9	27.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	8	21.7	No Limit
EP035SF: Total Phenol by Segmented Flow Analyser (QC Lot: 3214015)									
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
ES2029214-003	RR7	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3213120)									
ES2029124-003	Anonymous	EA055: Moisture Content	----	0.1	%	63.6	69.2	8.35	0% - 20%
ES2029215-001	Anonymous	EA055: Moisture Content	----	0.1	%	14.0	14.0	0.00	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3213116)									
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-001	RR5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3210880)									
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-002	RR6	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878)									
ES2028391-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878) - continued									
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2029214-002	RR6	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877) - continued									
ES2028391-001	Anonymous	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES2029215-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	116	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	84.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	123	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	113	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	113	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	107	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	109	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)								
EP035SF: Phenols (Total)	----	1	mg/kg	<1	20 mg/kg	101	60.0	102
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	97.4	70.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	110	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.3	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	79.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	64.0	122

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.2	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	90.5	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	85.9	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	75.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	86.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.6	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.9	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	109	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	106	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	95.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	99.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	93.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	97.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	106	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.5	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	103	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	92.5	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	83.4	68.4	128
EP080: BTEXN (QCLot: 3212269)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	89.2	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	100	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.0	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)							
ES2029124-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	94.1	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	96.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.1	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	98.0	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)							
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	20 mg/kg	102	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)							
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	78.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)							
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	116	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	117	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	118	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	87.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	90.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	105	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	82.7	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.3	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	77.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	79.5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)							
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	101	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	104	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	112	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	127	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	118	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	115	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	116	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	123	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70.0	130
EP080: BTEXN (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	104	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	82.9	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.5	70.0	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 3212269) - continued							
ES2029196-002	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	83.9	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.0	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	82.5	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2029214**	Page	: 1 of 6
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Site	: Jerrabomberra	Issue Date	: 27-Aug-2020
Sampler	: ----	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

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Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Total Metals by ICP-AES	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**21-Aug-2020**	25-Aug-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200)							
RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**24-Aug-2020**	07-Feb-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	07-Feb-2021	✓	**25-Aug-2020**	07-Feb-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	08-Sep-2020	✓	**25-Aug-2020**	08-Sep-2020	✓
EP035SF: Total Phenol by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EP035SF)							
RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**24-Aug-2020**	25-Aug-2020	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓

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Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	30-Sep-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓

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Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✘ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**10.00**	✘	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Total Phenol By Discrete Analyser	EP035SF	SOIL	In house: Referenced to ISO 14402. Phenols are extracted in 1M NaOH. The extract is diluted by 10 and then in-line-distilled at pH 1- 4. The distillate, containing steam-volatile phenolic compounds is then oxidised by hexacyanoferrate(III). The resulting quinones react with 4-aminoantipyrine forming red condensation products, which are measured spectrometrically in a flow spectrometer at 505 nm. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions

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Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Extraction for Total Phenols in soil	EP035-PR	SOIL	In house: Soil sub-sample is extracted in 1M NaOH by tumbling for between 6 and 16 hours. The resulting extract is diluted 10 times with reagent grade water prior to analysis.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Appendix H

Data Quality Assessment

DATA QUALITY ASSESSMENT

Q1. Data Quality Objectives

The Detailed Site Investigation was prepared with reference to the seven step data quality objective (DQO) process which is provided in Appendix B, Schedule B2 of the *National Environment Protection (Assessment of Site Contamination) Measure* 1999 as amended 2013 (NEPC, 2013). The DQO process is outlined as follows:

- Stating the Problem;
- Identifying the Decision;
- Identifying Inputs to the Decision;
- Defining the Boundary of the Assessment;
- Developing a Decision Rule;
- Specifying Acceptable Limits on Decision Errors; and
- Optimising the Design for Obtaining Data.

The DQOs have been addressed within the report as shown in Table Q1.

Table Q1: Data Quality Objectives

Data Quality Objective	Report Section where Addressed
State the Problem	S1 Introduction
Identify the Decision	S14 Conclusions and Recommendations
Identify Inputs to the Decision	S1 Introduction S2 Scope of Work S3 Site Identification and Description S5 Site History S8 Potential for Contamination S9 Conceptual Site Model S11 Site Assessment Criteria S12 Results of the Investigation S13 Revised Conceptual Site Model
Define the Boundary of the Assessment	S3 Site Identification and Description Drawing 1 – Appendix B
Develop a Decision Rule	S11 Site Assessment Criteria
Specify Acceptable Limits on Decision Errors	S10 Field Work, Analysis and Quality Assurance/Quality Control S11 Site Assessment Criteria QA/QC Procedures and Results – Sections Q2, Q3
Optimise the Design for Obtaining Data	S2 Scope of Work S9 Conceptual Site Model

	S10 Field Work, Analysis and Quality Assurance/Quality Control QA/QC Procedures and Results – Sections Q2, Q3

Q2. FIELD AND LABORATORY QUALITY CONTROL

The field and laboratory quality control (QC) procedures and results are summarised in Tables Q2 and Q3. Reference should be made to the fieldwork and analysis procedures in Section 11 and the laboratory results certificates in Appendix H for further details.

Table Q2: Field QC

Item	Frequency	Acceptance Criteria	Achievement
Intra-laboratory replicates	5% primary samples	RPD <30% inorganics), <50% (organics)	yes[1]
Inter-laboratory replicates	5% primary samples	RPD <30% inorganics), <50% (organics)	yes[1]

NOTES: 1 qualitative assessment of RPD results overall; refer Section Q2.1

Table Q3: Laboratory QC

Item	Frequency	Acceptance Criteria	Achievement
Analytical laboratories used		NATA accreditation	yes
Holding times		In accordance with NEPC (2013) which references various Australian and international standards	yes
Laboratory / Reagant Blanks	1 per lab batch	<PQL	yes
Laboratory duplicates	10% primary samples	Laboratory specific [1]	
Matrix Spikes	1 per lab batch	70-130% recovery (inorganics); 60-140% (organics); 10-140% (SVOC, speciated phenols)	yes
Surrogate Spikes	organics by GC	70-130% recovery (inorganics); 60-140% (organics); 10-140% (SVOC, speciated phenols)	yes
Control Samples	1 per lab batch	70-130% recovery (inorganics); 60-140% (organics); 10-140% (SVOC, speciated phenols)	yes

NOTES: 1 ELS: <5xPQL – any RPD; >5xPQL – 0-50%RPD
Mgt: <10xPQL – any RPD; 10-20xPQL – 0-50%RDP; >20xPQL – 0-30%RPD

In summary, the QC data is considered to be of sufficient quality to be acceptable for the assessment.

Q2.1 Intra-Laboratory Replicates

Intra-laboratory replicates were analysed as an internal check of the reproducibility within the primary laboratory Envirolab and as a measure of consistency of sampling techniques. The comparative

results of analysis between original and intra-laboratory replicate samples are summarised in Tables Q4 – Q5.

Note that, where both samples are below LOR/PQL the difference and RPD has been given as zero. Where one sample is reported below LOR/PQL, but a concentration is reported for the other, the LOR/PQL value has been used for calculation of the RPD for the less than LOR/PQL sample.

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Table Q4: Relative Percentage Difference Results – Intra-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Metals										PAH				TRH				BTEX			
					As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Fe	Mn	total	BaP TEQ	BaP	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40	Benzene	Toluene	Ethylbenzene	xylene
Envirolab	R5	11/08/2020	Soil	mg/kg	<4	<0.4	50	8	30	<0.1	5	20	-	-	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Envirolab	Bore 12/ 0.5	11/08/2020	Soil	mg/kg	<4	<0.4	52	10	15	<0.1	6	14	-	-	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				mg/kg	0	0	2	2	15	0	1	6	-	-	0	0	0	0	0	0	0	0	0	0	0	0
RPD				%	0%	0%	4%	22%	**67%**	0%	18%	**35%**	-	-	0%	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%

Notes: - not applicable, not tested

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Table Q4 continued: Relative Percentage Difference Results – Intra-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Phenol	OCPs									OPPs	PCBs
					Phenol	DDT +DDD +DDE	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Total OCPs	Total	Total
Envirolab	R5	11/08/20	Soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Envirolab	Bore 12/ 0.5	11/08/20	Soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				Difference	0	0	0	0	0	0	0	0	0	0	0	0
RPD				RPD	0	0	0	0	0	0	0	0	0	0	0	0

Notes: - not applicable, not tested

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Table Q5: Relative Percentage Difference Results – Intra-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Metals										PAH				TRH				BTEX			
					As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Fe	Mn	total	BaP TEQ	BaP	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40	Benzene	Toluene	Ethylbenzene	xylene
Envirolab	R6	11/08/2020	Soil	mg/kg	<4	<0.4	52	20	10	<0.1	14	19	-	-	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Envirolab	Bore 7/ 0.1	11/08/2020	Soil	mg/kg	<4	<0.4	34	10	24	<0.1	7	37	-	-	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				mg/kg	0	0	18	10	14	0	7	18	-	-	0	0	0	0	0	0	0	0	0	0	0	0
RPD				%	0%	0%	**42%**	**67%**	**82%**	0%	**67%**	**64%**	-	-	0%	0%	0%	0%	0%	0%	0	0%	0%	0%	0%	0%

Notes: - not applicable, not tested

Table Q5 continued: Relative Percentage Difference Results – Intra-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Phenol	OCPs									OPPs	PCBs
					Phenol	DDT +DDD +DDE	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Total OCPs	Total	Total
Envirolab	R6	11/08/2020	Soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Envirolab	Bore 7/ 0.1	11/08/2020	Soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				Difference	0	0	0	0	0	0	0	0	0	0	0	0
RPD				RPD	0	0	0	0	0	0	0	0	0	0	0	0

Notes: - not applicable, not tested

The calculated RPD values were within the acceptable range of ± 30 for inorganic analytes and ± 50% for organics with the exception of the ones in bold. However, this is not considered to be significant because most of the recorded concentrations being at/ close to the practical quantitation limit; the majority of RPD within a replicate pair being within the acceptable limits and All other QA/QC parameters met the DQIs.

Overall, the intra-laboratory replicate comparisons indicate that the sampling techniques were generally consistent and repeatable.

Q2.2 Inter-Laboratory Analysis

Inter-laboratory replicates were analysed as an internal check of the reproducibility within the primary laboratory Envirolab Services Pty Ltd (Envirolab) and the secondary laboratory ALS Laboratory Services Pty Ltd (ALS) and as a measure of consistency of sampling techniques. The comparative results of analysis between original and intra-laboratory replicate sample are summarised in Tables Q6 – Q8.

Note that, where both samples are below LOR/PQL the difference and RPD have been given as a zero. Where one sample is reported below LOR/PQL, but a concentration is reported for the other, the LOR/PQL value has been used for calculation of the RPD for the less than LOR/PQL sample

.

Table Q6: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Metals								PAH				TRH			
					As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Total	BaP TEQ	BaP	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40
ALS	RR5	11/08/2020	soil	mg/kg	<PQL	<PQL	15	<5	12	<PQL	<PQL	10	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
ALS	Bore 12/0.5	11/08/2020	soil	mg/kg	<PQL	<PQL	52	10	15	<PQL	6	14	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				mg/kg	0	0	37	5	3	0	0	4	0	0	4	0	0	0	0	0
RPD				%	0	0	**110 %**	**67%**	22%	0**%**	0 %	**33**%	0	0	**33%**	0	0	0	0	0

Notes: - not applicable, not tested

Table Q6 continued: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	BTEX				Phenol	OCPs									OPPs	PCBs
					Benzene	Toluene	Ethylbenzene	xylene	Phenol	DDT +DDD +DDE	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Total OCPs	Total	Total
ALS	RR5	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
ALS	Bore 12/0.5	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RPD				RPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: - not applicable, not tested

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Table Q7: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Metals								PAH				TRH			
					As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Total	BaP TEQ	BaP	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40
ALS b	RR6	11/08/2020	soil	mg/kg	<PQL	<PQL	21	10	<PQL	<PQL	7	7	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
ALS	Bore 7/0.1	11/08/2020	soil	mg/kg	<PQL	<PQL	34	10	24	<PQL	7	37	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				mg/kg	0	0	13	0	0	0	0	4	0	0	30	0	0	0	0	0
RPD				%	0	0	**47%**	0%	0%	0%	0%	**33%**	0	0%	**136%**	0	0	0	0	0

Notes: - not applicable, not tested

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Table Q7 continued: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	BTEX				Phenol	OCPs									OPPs	PCBs
					Benzene	Toluene	Ethylbenzene	xylene	Phenol	DDT +DDD +DDE	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Total OCPs	Total	Total
ALS	RR6	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
ALS	Bore 7/0.1	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RPD				RPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: - not applicable, not tested

Table Q8: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	Metals								PAH				TRH			
					As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Total	BaP TEQ	BaP	Naphthalene	C6-C10	>C10-C16	>C16-C34	>C34-C40
ALS	RR7	11/08/2020	soil	mg/kg	<PQL	<PQL	19	5	8	<PQL	3	6	<PQL	<PQL	<PQL	<PQL	<PQL	52	190	<PQL
ALS	Bore 1/0.1	11/08/2020	soil	mg/kg	5	<PQL	78	10	14	<PQL	8	14	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				mg/kg	0	0	59	5	6	0	5	8	0	0	0	0	0	0	0	0
RPD				%	0	0	**122 %**	**67%**	**55%**	0%	**91 %**	**80%**	0	0%	0%	0	0	0	0	0

Notes: - not applicable, not tested

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Table Q8 continued: Relative Percentage Difference Results – Inter-laboratory Replicates

Lab	Sample ID	Date Sampled	Media	Units	BTEX				Phenol	OCPs									OPPs	PCBs
					Benzene	Toluene	Ethylbenzene	xylene	Phenol	DDT +DDD +DDE	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Total OCPs	Total	Total
ALS	RR7	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
ALS	Bore 1/0.1	11/08/2020	soil	mg/kg	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL
Difference				Difference	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RPD				RPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: - not applicable, not tested

The calculated RPD values were within the acceptable range of ± 30 for inorganic analytes and± 50% for organics with the exception of the ones in bold. However, this is not considered to be significant because most of the recorded concentrations being at/ close to the practical quantitation limit; the majority of RPD within a replicate pair being within the acceptable limits and All other QA/QC parameters met the DQIs.

Overall, the intra-laboratory replicate comparisons indicate that the sampling techniques were generally consistent and repeatable.

Q3. Data Quality Indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQIs):

- Completeness – a measure of the amount of usable data from a data collection activity;
- Comparability – the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- Representativeness – the confidence (qualitative) of data representativeness of media present on-site;
- Precision – a measure of variability or reproducibility of data; and
- Accuracy – a measure of closeness of the data to the 'true' value.

The DQIs were assessed as outlined in the following Table Q5.

Table Q9: Data Quality Indicators

Data Quality Indicator	Method(s) of Achievement
Completeness	Planned systematic and selected target locations sampled; Preparation of field logs, sample location plan and chain of custody (COC) records; Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody; Samples analysed for contaminants of potential concern (COPC) identified in the Preliminary Conceptual Site Model (CSM); Completion of COC documentation; NATA endorsed laboratory certificates provided by the laboratory; Satisfactory frequency and results for field and laboratory QC samples as discussed in Section Q2.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project; Works undertaken by appropriately experienced and trained DP environmental scientist / engineer; Use of NATA registered laboratories, Satisfactory results for field and laboratory QC samples.
Representativeness	Target media sampled; Spatial and temporal distribution of sample locations; Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQOs; Samples were extracted and analysed within holding times;

	Samples were analysed in accordance with the analysis request.
Precision	Acceptable RPD between original samples and replicates; Satisfactory results for all other field and laboratory QC samples.
Accuracy	Satisfactory results for all field and laboratory QC samples.

Based on the above, it is considered that the DQIs have been complied with. As such, it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

Appendix I

EIL Calculation Spreadsheets

Inputs
Select contaminant from list below
As
Below needed to calculate fresh and aged ACLs
Below needed to calculate fresh and aged ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs		
Land use	Arsenic generic EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	20	40
Urban residential and open public spaces	50	100
Commercial and industrial	80	160

Inputs
Select contaminant from list below
Cr_III
Below needed to calculate fresh and aged ACLs
Enter % clay (values from 0 to 100%)
62
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
1
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Cr III soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	110	240
Urban residential and open public spaces	310	740
Commercial and industrial	500	1200

Inputs
Select contaminant from list below
Cu
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
20
Enter soil pH (calcium chloride method) (values from 1 to 14)
6.5
Enter organic carbon content (%OC) (values from 0 to 50%)
1
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
1
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Cu soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	60	85
Urban residential and open public spaces	120	230
Commercial and industrial	170	320

Inputs
Select contaminant from list below
DDT
Below needed to calculate fresh and aged ACLs
Below needed to calculate fresh and aged ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs		
Land use	DDT generic EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	3	3
Urban residential and open public spaces	180	180
Commercial and industrial	640	640

Inputs
Select contaminant from list below
Naphthalene
Below needed to calculate fresh and aged ACLs
Below needed to calculate fresh and aged ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs		
Land use	Naphthalene generic EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	10	10
Urban residential and open public spaces	170	170
Commercial and industrial	370	370

Inputs
Select contaminant from list below
Ni
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
20
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
1
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Ni soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	20	50
Urban residential and open public spaces	90	270
Commercial and industrial	170	460

Inputs
Select contaminant from list below
Pb
Below needed to calculate fresh and aged ACLs
Below needed to calculate fresh and aged ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs		
Land use	Lead generic EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	110	470
Urban residential and open public spaces	270	1100
Commercial and industrial	440	1800

Inputs
Select contaminant from list below
Zn
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
20
Enter soil pH (calcium chloride method) (values from 1 to 14)
6.5
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
1
or for aged ABCs only
Enter State (or closest State)
NSW
Enter traffic volume (high or low)
low

Outputs		
Land use	Zn soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	70	210
Urban residential and open public spaces	240	670
Commercial and industrial	370	1000

Appendix J

Results Tables

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Table J1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

			Metals								TRH						BTEX				PAH		
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10) - BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ
		PQL	4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1	1	1	0.05	0.5
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bore 1	0.1 - 0.1 m	11/08/2020	5 3000 NC	<0.4 900 NC	78 3600 1200	10 2400 320	14 1500 NC	<0.1 730 NC	8 6000 460	14 4000 1000	<25 NC NC	52 NC 170	<25 310 215	52 NC 215	190 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
RR7	0 m	11/08/2020	<5 3000 NC	<1 900 NC	19 3600 1200	5 2400 320	8 1500 NC	<0.1 730 NC	3 6000 460	6 4000 1000	<10 NC NC	<50 NC 170	<10 310 215	<50 NC 215	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<0.5 NC 185	<0.5 NC 95	<1 NC NC	<0.5 NC 14	<0.5 40 NC
Bore 2	0.1 - 0.1 m	4/08/2020	4 3000 NC	<0.4 900 NC	42 3600 1200	23 2400 320	60 1500 NC	<0.1 730 NC	10 6000 460	120 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 215	100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 2	0.5 - 0.5 m	4/08/2020	<4 3000 NC	<0.4 900 NC	48 3600 1200	14 2400 320	20 1500 NC	<0.1 730 NC	10 6000 460	42 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 215	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 3	0.1 - 0.1 m	6/08/2020	4 3000 NC	<0.4 900 NC	28 3600 1200	12 2400 320	72 1500 NC	<0.1 730 NC	7 6000 460	57 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 215	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 4	0.1 - 0.1 m	6/08/2020	5 3000 NC	<0.4 900 NC	45 3600 1200	14 2400 320	36 1500 NC	<0.1 730 NC	8 6000 460	27 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 4	3 - 3 m	4/08/2020	<4 3000 NC	<0.4 900 NC	49 3600 1200	8 2400 320	6 1500 NC	<0.1 730 NC	14 6000 460	52 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 5	0.1 - 0.1 m	6/08/2020	<4 3000 NC	<0.4 900 NC	56 3600 1200	9 2400 320	12 1500 NC	<0.1 730 NC	6 6000 460	12 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 6	0.1 - 0.1 m	4/08/2020	4 3000 NC	<0.4 900 NC	31 3600 1200	11 2400 320	26 1500 NC	<0.1 730 NC	6 6000 460	28 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 6	1 - 1 m	4/08/2020	5 3000 NC	<0.4 900 NC	46 3600 1200	17 2400 320	9 1500 NC	<0.1 730 NC	16 6000 460	31 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 7	0.1 - 0.1 m	11/08/2020	<4 3000 NC	<0.4 900 NC	34 3600 1200	10 2400 320	24 1500 NC	<0.1 730 NC	7 6000 460	37 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
RR6	0 m	11/08/2020	<5 3000 NC	<1 900 NC	21 3600 1200	10 2400 320	<5 1500 NC	<0.1 730 NC	7 6000 460	7 4000 1000	<10 NC NC	<50 NC 170	<10 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<0.5 NC 185	<0.5 NC 95	<1 NC NC	<0.5 NC 14	<0.5 40 NC
R6	0 m	11/08/2020	<4 3000 NC	<0.4 900 NC	52 3600 1200	20 2400 320	10 1500 NC	<0.1 730 NC	14 6000 460	19 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 8	0.1 - 0.1 m	4/08/2020	<4 3000 NC	<0.4 900 NC	40 3600 1200	7 2400 320	15 1500 NC	<0.1 730 NC	6 6000 460	13 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 9	0.1 - 0.1 m	6/08/2020	7 3000 NC	<0.4 900 NC	38 3600 1200	10 2400 320	23 1500 NC	<0.1 730 NC	5 6000 460	33 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 9	0.5 - 0.5 m	6/08/2020	7 3000 NC	<0.4 900 NC	32 3600 1200	12 2400 320	13 1500 NC	<0.1 730 NC	6 6000 460	16 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 10	0.1 - 0.1 m	4/08/2020	5 3000 NC	<0.4 900 NC	35 3600 1200	16 2400 320	37 1500 NC	<0.1 730 NC	10 6000 460	120 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 10	1 - 1 m	4/08/2020	6 3000 NC	<0.4 900 NC	51 3600 1200	20 2400 320	15 1500 NC	<0.1 730 NC	17 6000 460	40 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 11	0.1 - 0.1 m	7/08/2020	<4 3000 NC	<0.4 900 NC	29 3600 1200	10 2400 320	14 1500 NC	<0.1 730 NC	9 6000 460	16 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 12	0.1 - 0.1 m	11/08/2020	<4 3000 NC	<0.4 900 NC	52 3600 1200	10 2400 320	15 1500 NC	<0.1 730 NC	6 6000 460	14 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
RR5	0 m	11/08/2020	<5 3000 NC	<1 900 NC	15 3600 1200	<5 2400 320	12 1500 NC	<0.1 730 NC	<2 6000 460	10 4000 1000	<10 NC NC	<50 NC 170	<10 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<0.5 NC 185	<0.5 NC 95	<1 NC NC	<0.5 NC 14	<0.5 40 NC
R5	0 m	11/08/2020	<4 3000 NC	<0.4 900 NC	50 3600 1200	8 2400 320	30 1500 NC	<0.1 730 NC	5 6000 460	20 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 13	0.1 - 0.1 m	5/08/2020	<4 3000 NC	<0.4 900 NC	39 3600 1200	8 2400 320	9 1500 NC	<0.1 730 NC	16 6000 460	16 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 13	4 - 4 m	5/08/2020	<4 3000 NC	<0.4 900 NC	45 3600 1200	14 2400 320	7 1500 NC	<0.1 730 NC	13 6000 460	46 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 14	0.1 - 0.1 m	5/08/2020	<4 3000 NC	<0.4 900 NC	17 3600 1200	7 2400 320	2 1500 NC	<0.1 730 NC	23 6000 460	11 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	240 NC 2500	150 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	3.9 NC 14	11 40 NC
Bore 15	0.1 - 0.1 m	5/08/2020	<4 3000 NC	<0.4 900 NC	36 3600 1200	12 2400 320	12 1500 NC	<0.1 730 NC	8 6000 460	31 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 15	0.5 - 0.5 m	5/08/2020	<4 3000 NC	<0.4 900 NC	59 3600 1200	21 2400 320	12 1500 NC	<0.1 730 NC	15 6000 460	19 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 16	0.1 - 0.1 m	5/08/2020	<4 3000 NC	<0.4 900 NC	36 3600 1200	14 2400 320	21 1500 NC	<0.1 730 NC	10 6000 460	56 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 17	0.1 - 0.1 m	10/08/2020	<4 3000 NC	<0.4 900 NC	24 3600 1200	13 2400 320	28 1500 NC	<0.1 730 NC	10 6000 460	55 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 17	1 - 1 m	10/08/2020	<4 3000 NC	<0.4 900 NC	35 3600 1200	14 2400 320	6 1500 NC	<0.1 730 NC	13 6000 460	18 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 18	0.1 - 0.1 m	10/08/2020	<4 3000 NC	<0.4 900 NC	41 3600 1200	17 2400 320	35 1500 NC	<0.1 730 NC	11 6000 460	52 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	120 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 19	0.1 - 0.1 m	5/08/2020	5 3000 NC	<0.4 900 NC	52 3600 1200	19 2400 320	23 1500 NC	<0.1 730 NC	12 6000 460	42 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC
Bore 19	2 - 2 m	5/08/2020	<4 3000 NC	<0.4 900 NC	43 3600 1200	14 2400 320	34 1500 NC	<0.1 730 NC	10 6000 460	58 4000 1000	<25 NC NC	<50 NC 170	<25 310 215	<50 NC 170	<100 NC 2500	<100 NC 6600	<0.2 4 95	<0.5 NC 135	<1 NC 185	<1 NC 95	<1 NC NC	<0.05 NC 14	<0.5 40 NC

Lab result

HIL/HSL value EIL/ESL value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report **Blue** = DC exceedance

Bold = Lab detections NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable NAD = No asbestos detected at the reporting limit

Notes:

HIL/HSL/DC	NEPC, Schedule B1 - HIL D (undefined), HSL D (undefined), DC HSL D (undefined)
EIL/ESL	NEPC, Schedule B1 - EIL C/Ind (undefined), ESL C/Ind (undefined)
ML	NEPC, Schedule B1 - ML C/Ind (undefined)
a	QA/QC replicate of sample listed directly below the primary sample
b	Reported naphthalene laboratory result obtained from BTEXN suite
c	Criteria applies to DDT only

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Table J2: Summary of Laboratory Results – Phenol, OCP, OPP, PCB

			Phenol	OCP																OPP	PCB								
			Phenol	DDT+DDE+DDD [c]	DDD	DDE	DDT	Aldrin &Dieldrin	Aldrin	Dieldrin	Total Chlordane	Total Endosulfan	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Chlorpyriphos	Arochlor 1016	TotalPCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
		PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bore 1	0.1 - 0.1 m	11/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
RR7	0 m	11/08/2020	<1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	NT	<0.1	NT	NT	NT	NT	NT	NT	NT
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 2	0.1 - 0.1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 2	0.5 - 0.5 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 3	0.1 - 0.1 m	6/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 4	0.1 - 0.1 m	6/08/2020	<5	**0.2**	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 4	3 - 3 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 5	0.1 - 0.1 m	6/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 6	0.1 - 0.1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 6	1 - 1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 7	0.1 - 0.1 m	11/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
RR6	0 m	11/08/2020	<1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	NT	<0.1	NT	NT	NT	NT	NT	NT	NT
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
R6	0 m	11/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 8	0.1 - 0.1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 9	0.1 - 0.1 m	6/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 9	0.5 - 0.5 m	6/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 10	0.1 - 0.1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 10	1 - 1 m	4/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 11	0.1 - 0.1 m	7/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 12	0.1 - 0.1 m	11/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
RR5	0 m	11/08/2020	<1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	NT	<0.1	NT	NT	NT	NT	NT	NT	NT
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
R5	0 m	11/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 13	0.1 - 0.1 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 13	4 - 4 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 14	0.1 - 0.1 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 15	0.1 - 0.1 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 15	0.5 - 0.5 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 16	0.1 - 0.1 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 17	0.1 - 0.1 m	10/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 17	1 - 1 m	10/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 18	0.1 - 0.1 m	10/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 19	0.1 - 0.1 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC
Bore 19	2 - 2 m	5/08/2020	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			660 NC	3600 NC	NC NC	NC NC	NC NC	45 NC	NC NC	NC NC	530 NC	2000 NC	NC NC	NC NC	NC NC	100 NC	50 NC	80 NC	2500 NC	2000 NC	NC NC	7 NC	NC NC	NC NC	NC NC	NC NC	NC NC	NC NC

Lab result
HIL/HSL value EIL/ESL value

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report **Blue** = DC exceedance

Bold = Lab detections NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable NAD = No asbestos detected at the reporting limit

Notes:

HIL/HSL/DC	NEPC, Schedule B1 - HIL D (undefined), HSL D (undefined), DC HSL D (undefined)
EIL/ESL	NEPC, Schedule B1 - EIL C/Ind (undefined), ESL C/Ind (undefined)
ML	NEPC, Schedule B1 - ML C/Ind (undefined)
a	QA/QC replicate of sample listed directly below the primary sample
b	Reported naphthalene laboratory result obtained from BTEXN suite
c	Criteria applies to DDT only

Table J3: Summary of Laboratory Results – Complete PAH suite

			Complete PAH suite													
			Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b&j)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
		PQL	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bore 1	0.1 - 0.1 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
RR7	0 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 2	0.1 - 0.1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 2	0.5 - 0.5 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 3	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 4	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 4	3 - 3 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 5	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 6	0.1 - 0.1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 6	1 - 1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 7	0.1 - 0.1 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
RR8	0 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
R8	0 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 8	0.1 - 0.1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 9	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 9	0.5 - 0.5 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 10	0.1 - 0.1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 10	1 - 1 m	4/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 11	0.1 - 0.1 m	7/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 12	0.1 - 0.1 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
RR5	0 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
R5	0 m	11/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 13	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 13	4 - 4 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 14	0.1 - 0.1 m	5/08/2020	<0.1	1.3	0.6	0.7	1.0	0.6	1.2	0.8	0.9	0.1	0.2	0.3	1.3
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 15	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 15	0.5 - 0.5 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 16	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 17	0.1 - 0.1 m	10/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 17	1 - 1 m	10/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 18	0.1 - 0.1 m	10/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 19	0.1 - 0.1 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Bore 19	2 - 2 m	5/08/2020	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Lab result
HIL/HDL EIL/ESL
ML DC/NC

HIL/HSL exceedance EIL/ESL exceedance HIL/HSL and EIL/ESL exceedance ML exceedance ML and HIL/HSL or EIL/ESL exceedan

Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report Blue = DC exceedance

Bold = Lab detections NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable NAD = No asbestos detected at the reporting limi

Notes:

HIL/HSL/DC	NEPC, Schedule B1 - HIL D (undefined), HSL D (undefined), DC HSL D (undefined)
EIL/ESL	NEPC, Schedule B1 - EIL C/Ind (undefined), ESL C/Ind (undefined)
ML	NEPC, Schedule B1 - ML C/Ind (undefined)
a	QA/QC replicate of sample listed directly below the primary sample
b	Reported naphthalene laboratory result obtained from BTEXN suite
c	Criteria applies to DDT only

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Table J4: Summary of Laboratory Results – PFAS

			PFAS							
			Perfluorohexanesulfonic acid - PFHxS	Perfluorooctanesulfonic acid - PFOS	Perfluorooctanoic acid - PFOA	6:2 Fluorotelomer sulfonic (FTS) acid	8:2 Fluorotelomer sulfonic (FTS) acid	Total Positive PFHxS & PFOS	Total Positive PFOS & PFOA	Total Positive PFAS
		PQL	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Sample ID	Depth	Sample Date	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Bore 1	0.1 - 0.1 m	11/08/2020	0.4 20000 NC	1.8 20000 1000	0.7 50000 10000	<0.1 NC NC	<0.2 NC NC	2.2 20000 NC	2.5 NC NC	2.9 NC NC
Bore 3	1.0-1.0m	6/08/2020	<0.1 20000 NC	0.6 20000 1000	0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	0.6 20000 NC	0.7 NC NC	0.7 NC NC
Bore 6	2.0-2.0m	4/08/2020	<0.1 20000 NC	<0.1 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	<0.1 20000 NC	<0.1 NC NC	<0.1 NC NC
Bore 7	0.5 - 0.5m	11/08/2020	<0.1 20000 NC	0.2 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	0.2 20000 NC	0.2 NC NC	0.2 NC NC
Bore 8	5.0 - 5.0 m	4/08/2020	<0.1 20000 NC	<0.1 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	<0.1 20000 NC	<0.1 NC NC	<0.1 NC NC
Bore 10	2.0 - 2.0 m	4/08/2020	<0.1 20000 NC	<0.1 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	<0.1 20000 NC	<0.1 NC NC	<0.1 NC NC
Bore 12	0.1 - 0.1 m	11/08/2020	0.2 20000 NC	0.4 20000 1000	0.2 50000 10000	<0.1 NC NC	<0.2 NC NC	0.6 20000 NC	0.6 NC NC	0.8 NC NC
Bore 14	5.0 - 5.0 m	5/08/2020	<0.1 20000 NC	<0.1 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	<0.1 20000 NC	<0.1 NC NC	<0.1 NC NC
Bore 17	1 - 1 m	10/08/2020	<0.1 20000 NC	<0.1 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	<0.1 20000 NC	<0.1 NC NC	<0.1 NC NC
Bore 19	0.1 - 0.1 m	5/08/2020	<0.1 20000 NC	0.9 20000 1000	<0.1 50000 10000	<0.1 NC NC	<0.2 NC NC	0.9 20000 NC	0.9 NC NC	0.9 NC NC

Lab result
HIL value IESV direct exposure value

Bold = Lab detections NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable NAD = No asbestos detected at the reporting limit

Notes:

HIL/HSL/DC	NEPC, Schedule B1 - HIL D (undefined), HSL D (undefined), DC HSL D (undefined)
EIL/ESL	NEPC, Schedule B1 - EIL C/Ind (undefined), ESL C/Ind (undefined)
ML	NEPC, Schedule B1 - ML C/Ind (undefined)
a	QA/QC replicate of sample listed directly below the primary sample
b	Reported naphthalene laboratory result obtained from BTEXN suite
c	Criteria applies to DDT only

Table J5: Summary of Laboratory Results – Asbestos

			Asbestos			
			Asbestos ID in soil >0.1g/kg	Trace Analysis	Asbestos ID (g)	Asbestos Material ID
		PQL				
Sample ID	Depth	Sample Dated				
Bore 1	0 - 0.1 m	11/08/2020	NAD	NAD	NAD	NT
Bore 2	0 - 0.1 m	4/08/2020	Detected	NAD	Detected	NT
Bore 2	0 - 0.5 m	4/08/2020	NAD	NAD	NAD	NT
Bore 3	0 - 0.1 m	6/08/2020	NAD	NAD	NAD	NT
Bore 4	0 - 0.1 m	6/08/2020	NAD	NAD	NAD	NT
Bore 4	0 - 3 m	4/08/2020	NAD	NAD	NAD	NT
Bore 5	0 - 0.1 m	6/08/2020	NAD	NAD	NAD	NT
Bore 6	0 - 0.1 m	4/08/2020	NAD	NAD	NAD	NT
Bore 6	0 - 1 m	4/08/2020	NAD	NAD	NAD	NT
Bore 7	0 - 0.1 m	11/08/2020	NAD	NAD	NAD	NT
Bore 8	0 - 0.1 m	4/08/2020	NAD	NAD	NAD	NT
Bore 9	0 - 0.1 m	6/08/2020	NAD	NAD	NAD	NT
Bore 9	0 - 0.5 m	6/08/2020	NAD	NAD	NAD	NT
Bore 10	0 - 0.1 m	4/08/2020	NAD	NAD	NAD	NT
Bore 10	0 - 1 m	4/08/2020	NAD	NAD	NAD	NT
Bore 11	0 - 0.1 m	7/08/2020	NAD	NAD	NAD	NT
Bore 12	0 - 0.1 m	11/08/2020	NAD	NAD	NAD	NT
Bore 13	0 - 0.1 m	5/08/2020	NAD	NAD	NAD	NT
Bore 13	0 - 4 m	5/08/2020	NAD	NAD	NAD	NT
Bore 14	0 - 0.1 m	5/08/2020	NAD	NAD	NAD	NT
Bore 15	0 - 0.1 m	5/08/2020	Detected	NAD	Detected	NT
Bore 15	0 - 0.5 m	5/08/2020	NAD	NAD	NAD	NT
Bore 16	0 - 0.1 m	5/08/2020	NAD	NAD	NAD	NT
Bore 17	0 - 0.1 m	10/08/2020	NAD	NAD	NAD	NT
Bore 17	0 - 1 m	10/08/2020	NAD	NAD	NAD	NT
Bore 18	0 - 0.1 m	10/08/2020	NAD	NAD	NAD	NT
RB	0 m	11/08/2020	NAD	NAD	NAD	NT
RB	0 m	11/08/2020	NAD	NAD	NAD	NT
Bore 19	0 - 0.1 m	5/08/2020	NAD	NAD	NAD	NT
Bore 19	0 - 2 m	5/08/2020	NAD	NAD	NAD	NT
M1	0 m	05/08/2020	NT	NAD	NAD	Positive
M2	0 m	10/08/2020	NT	NAD	NAD	Positive

Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report **Blue** = Material Positive

Bold = Lab detections NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable NAD = No asbest

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Table QA2: Trip Blank Results - Soils (mg/kg)

Sample ID	TRH C_6-C_{10}	F1 (TRH C_6-C_{10} less BTEX)	Naphthalene	Benzene	Toluene	Ethylbenzene	m+p-Xylene	o-Xylene
PQL	25	25	1	0.2	0.5	1	2	1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TB1	<25	<25	<1	<0.2	<0.5	<1	<2	<1
TB2	<25	<25	<1	<0.2	<0.5	<1	<2	<1
TB3	<25	<25	<1	<0.2	<0.5	<1	<2	<1
TB4	<25	<25	<1	<0.2	<0.5	<1	<2	<1

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Table QA3: Trip Spike Results – Soils (% Recovery)

Sample ID	Benzene	Toluene	Ethylbenzene	m+p-Xylene	o-Xylene
TS2	110	115	112	113	114
TS3	103	105	106	107	108
TS1	97	94	97	96	97
TS4	109	112	112	111	112